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EVALUATION OF THE
RESOURCES FOR AWARENESS OF POPULATION IN DEVELOPMENT
(RAPID II) PROJECT

August 1985

by

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PREFACE

This evaluation was carried out from May through August 1985; it included interviews with 100 persons and examination of many hundreds of pages of documents. Both USAID and the institutions which execute RAPID II were uniformly helpful to the panel while executing its task. Most staff members kindly completed a brief questionnaire that provided information on their work. Field visits to Cameroon, the Dominican Republic, Ecuador, and Liberia were greatly aided by local officials and staffs of institutions in those countries cooperating with the RAPID II project. Visits to the staffs of the Population Reference Bureau, Research Triangle Institute, and the Universities of Michigan and North Carolina were cordially received.

The work of the evaluation panel was carried out by a division of labor that recognized specific skills of the panel members. Mr. Bergman visited Cameroon and Liberia and contributed particularly to Chapter VI. Mr. Godwin visited the Dominican Republic and Ecuador and contributed particularly to chapters IV through IX. Mr. Sanderson reviewed modeling activities; the results of his analysis are reported in Chapter IV and an annex. Mr. McGreevey coordinated preparation of the report.

RAPID presentations have been well known in the population field for nearly a decade. They have proven to be a useful resource to USAID in its continuing effort to bring the consequences of rapid population growth to the attention of policy-makers in developing countries. In some instances these presentations are believed to have been decisive in inducing decision-makers to introduce more effective population policies.

The evaluation took for granted the ongoing contributions of the RAPID II project to promotion of effective population policies. This report does not dwell on the successes, which are reported in the semiannual reports of the RAPID II project; instead, it identifies areas for improvements in project execution in light of a careful review of experience with the project in its first two years of operations. The intent of the review was to explore areas where improvements can be made rather than simply to applaud the areas of satisfactory performance. This document is thus a diagnosis of some problem areas that can be addressed in the remaining life of the project.

The evaluation panel is especially grateful to Mr. H. Cross, USAID/S&T/POP/PDD, who played a major role in assembling the evaluation team and helped provide a clear analysis of USAID's objectives in funding this area of population assistance.

William Paul McGreevey
August 11, 1985

GLOSSARY

AWARDS	Awards Program of Population Council
CEPAR	Centro de Estudios sobre Population y Paternidad Responsable (Center for Studies on Population and Responsible Paternity - Ecuador)
CONADE	Ministry of Planning (Ecuador)
CONAPOFA	Consejo Nacional de Poblacion y la Familia (National Council on Population and the Family - Dominican Republic)
DHS	Demographic Data for Health Services project
DDD	Demographic Data for Development project
DLPP	Development Law and Population Policy project
D.R.	Dominican Republic
IPDP	Predecessor to INPLAN
INPLAN	Population and development planning project, RTI
IUSSP	International Union for the Scientific Study of Population
LDC	Less developed country
NAS	National Academy of Sciences
OECD	Organisation for Economic Co-operation and Development
PDP	Population and Development Policy Program, Battelle Memorial Institute
POP	Office of Population, AID
POP/PDD	Policy Development Division, Office of Population, AID
PRB	Population Reference Bureau
RAPID	Resources for Awareness of Population in Development

RAPID I	Predecessor project to RAPID II; operated 1978-83
RAPID II	Project under review; combined activities of RAPID I & PDP
RTI	Research Triangle Institute
TFG	The Futures Group, prime contractor for RAPID II
UMI	University of Michigan
UNFPA	United Nations Fund for Population Activities
UNC	University of North Carolina
USAID	United States Agency for International Development
WPS	World Population Society

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

1. A cost reimbursement contract in the amount of \$8.9 million was signed between USAID and The Futures Group (TFG) on May 13, 1986 for TFG to conduct RAPID II and became effective immediately. Estimated completion date was May 12, 1988. The first sentence of the contract states

The objective of this five year contract is to assist those involved in development planning to better understand the relationship between population growth and socioeconomic development and thereby increase LDC commitment to efforts designed to reduce rapid rates of population increase.

As this evaluation began on June 18, 1985, the project had been underway for 25 of its projected 60 months. During that time the objective of RAPID II has been to make contacts, organize collaboration, prepare analyses, construct programs, solicit audiences, make presentations, answer questions and provide follow-up to motivate movement toward the purposes of the project. Expenditures through May 31, 1985 were \$3.3 million. This evaluation examines the performance of the contractor during 25 months of project execution. The objective is to offer guidance on ways to improve performance in the remaining period of the contract. It may also be desirable to propose changes in the work plan on the basis of findings about the productivity of various project activities. The evaluation addresses the following questions:

- Have the results of actions undertaken to date been adequate to justify the time and money spent on them?
- Can we find ways to improve the efficiency and effectiveness of program efforts?

2. The findings of this review of RAPID II activities were generally positive. USAID officials in Washington and in the field described the project as being of continuing utility in helping to create a climate favorable to more effective population policies. The project was deemed to be useful in a number of countries of Sub-Saharan Africa and Latin America, both those visited by the evaluation panel members and others as well. Because of the evidence of satisfactory performance in the field, the evaluation concentrated on certain differences between plan and midterm results, with a view toward suggesting course corrections that can improve project performance.

3. The functional distribution of RAPID II expenditures was substantially different from what had been anticipated in the contract bid: TFG staff and overhead expenses were \$0.5 million

more than anticipated; expenditure on less developed country (LDC) subcontracts was \$0.2 million less than anticipated, and expenditure through U.S.-based subcontractors was \$0.3 million less than anticipated. The pattern of expenditures permitted the prime contractor, TFG, to load the front end of the contract period with heavier-than-anticipated effort by its staff while the initial subcontracting institutions, especially the University of Michigan (UMI) and the University of North Carolina (UNC), worked at lighter-than-anticipated levels of effort, and progress on LDC subcontracting was disappointing. Progress toward achievement of project goals has been greatest in the area of RAPID-style presentations, and least in the area of policy analyses based on the work of LDC subcontractors.

4. Whereas three-quarters of project effort to date has been devoted to RAPID-style presentations, for the balance of the contract only one-fifth of project effort can be devoted to that account. Eighty percent of future project effort will be devoted to the analysis of population policy issues. This balance will still leave adequate resources for RAPID-style presentations.

RAPID-style Presentations and Country Visits

5. RAPID II staff traveled to 32 countries (or country groups as in the case of the Eastern Caribbean and REDSO/Africa) during its first two years of operation. The project experienced a high degree of change from its initial priorities. Of countries visited (32), only half were on the planned list for travel in the first two years of the contract. A dozen countries were visited but were not on the initial travel list, and four were scheduled to be visited only in the later years of the project. Overall, travel occurred to "too many" countries relative to initial plans, and many of the trips were too short to achieve project objectives. The wide-ranging traveling schedule led to a dissipation of resources. In the policy analyses component of the project, the travel schedule was not well designed to achieve project objectives.

6. RAPID II staff spent 22 percent of project time in LDCs and one-third of all project labor costs were applied to specific country activities. Only four persons spent half or more of time billed to the project in the field (Lacey, Barlow, Freymann, Rens). A "travel-driven" project such as RAPID II needs more persons who can maximize time in the field offering direct technical assistance or doing related project work.

Which Countries?

7. About three-fifths of staff days spent in countries were spent in the seven countries to which 100 or more staff days were allocated: Nigeria, Cameroon, Somalia, Burundi, Zimbabwe,

Liberia, and Sudan. Since all are in sub-Saharan Africa, the project has achieved its objective to emphasize work in that region. There is a notable gap, however, between the intensity of effort in some of these seven countries, and the absence of follow-up activities implicit in a well developed program of LDC subcontracts.

8. The above-mentioned countries, along with Brazil, Mexico, and Ecuador, are the ten in which there has been the most progress to date. There are ten other countries or areas in which there has been modest progress (Bangladesh, the Eastern Caribbean, Chad, the Dominican Republic, Kenya, Peru, Senegal, Sierra Leone, Turkey, and Zaire). Five other countries or areas (Guatemala, Ivory Coast, Mali, Niger, and REDSO/Africa) have high Policy Development Division/Office of Population (POP/PDD) priority but in which there have been fewer than 30 days of staff time spent in the country and no subcontracts.

9. Finally, there are 21 countries either initially identified or beneficiaries of at least one visit, but which do not rank high on the POP/PDD priority listing. These groupings suggest some bases for selecting countries for concentration during the remaining life of the project (see recommendations below).

Policy Analyses and LDC Subcontracts

10. Commitments to LDC subcontracts are farther behind schedule than any other major element of the contract. Commitments in the form of signed contracts total less than \$0.4 million after 25 months. The pipeline for future signings is also inadequate in relation to the rate of development necessary to achieve activity and disbursement on schedule. The inordinate delays in disbursement of contract funds to LDC subcontractors is partly to blame. It is essential that this problem be solved. One solution is for TFG to borrow funds for advance to its subcontractors. If TFG agrees to incur these costs, USAID may wish to consider some means to compensate. It is the obligation of the contractor to propose effective solutions to this major problem to which USAID would add its concurrence.

The Need for Management Effort

11. There should be a detailed analysis, and presentations of its results to POP/PDD, concerning the staff-time requirements and staff-time allocations that will be needed to deliver policy analyses. The evaluation team's analysis of the link between staff time and subcontracts in LDCs strongly suggests that better management is needed in allocating staff to this priority activity. Efficiency has been low in developing LDC subcontracts for policy analysis. It has been necessary to spend far more than a dollar on contractor staff to spend a dollar on work done

in a country for policy analysis. Better management of staff resources and clearer guidance will be essential to achieve improved productivity in this regard.

12. There have been distinct differences in the level of productivity of staff members. The most productive have been Mr. Skipp, Mr. Cross ^{1/}, Ms. Lacey, Ms. Rens, Mr. Freymann, and Mr. McDevitt, all of whom helped produce more than \$1 of subcontract work for each \$1 of their own time. It is a cause for concern that several of the more productive persons are unlikely to be available to RAPID II in the future. Work on Latin America has been more productive than work on Sub-Saharan Africa. Project management may wish to consider giving more emphasis to Latin America where the population policy problems are serious, and the absorptive capacity is more than adequate.

13. Project management must now emphasize the requirement that work by all project staff contribute to policy analyses. Those disposed to concentrate on activities other than effectively nurturing work in the target countries should not continue to be supported by project resources. In the remaining years of the project, management should transfer much more of the action to developing country persons.

RAPID Model and its Presentation

14. 1,335 persons have viewed presentations of the RAPID model in the 1983-85 period under this contract; these include nearly one hundred persons at a ministerial level or higher in the governments of fifteen countries. Assuming \$2.5 million spent for these activities, divided by 1,335, yields a cost per viewer of \$1,872. All observers agreed on the desirability of reducing costs per viewer.

15. Most persons in the donor community have found the RAPID presentations to be useful. The management of the Office of Population expressed its general satisfaction with this component of the RAPID II project during the evaluation. Despite its successes there is room for improvement of RAPID operations. It is essential to develop a user-friendly software program that can be taken over by personnel within countries. To that end, remaining resources for presentations should be preferentially devoted to this narrowly-focused form of software development. Resources are adequate to pursue this objective yet not exclude additional presentations as needed by POP/PDD.

1/ Mr. Cross worked with the project during part of the first year of operations. He subsequently joined USAID and has shared responsibilities with other members of the staff of POP/PDD in the monitoring of RAPID II activities.

16. A considerable amount of work remains to get the models into a form in which they could be used successfully by LDC personnel. The programs as they stand now are usable only if a trained person runs them. In none of the four countries visited by the evaluation team does the model currently run without programming errors nor are local personnel able to correct the errors in the program. The impacts of the programs are far below their potential.

17. A moratorium on program development will permit managers to develop a statement of their goals and assess which programming efforts are needed to meet them. Program creators will need about three months to consider ways of making the programs easier to run. All RAPID programs should then be written in the same programming environment.

18. Certain parts of the economic-demographic relationship need to be eliminated from the program until the assumptions underlying this section of the model can be made more realistic. The basic economic model in RAPID II is too simplified to be useful or instructive, and most of the economic projections need to be removed until this is corrected.

19. The TARGET model is a creative idea that points the way to the kind of programming that can be done within the RAPID framework. Nevertheless, the model shares many of the faults of the demographic projection model: it is not user friendly; it is too easy to crash, and it needs more internal documentation. The cost/benefit model (Bangladesh) is not on strong enough intellectual grounds to justify the inclusion in a RAPID model at this time. The socioeconomic determinants model is, at present, a set of ideas in the process of coalescing. Continuation of this line of research is clearly in order, with emphasis on the single country model approach. It will, nonetheless, prove difficult to incorporate this work within the RAPID project.

Country Visits by the Evaluation Team

Dominican Republic

20. Perhaps no country better exemplifies what RAPID II can do than does the Dominican Republic (D.R.). The personnel at Consejo Nacional de Poblacion y la Familia (CONAPOFA) have done an excellent job of utilizing the RAPID model and reaching both middle and high levels of decision-makers within the governmental bureaucracy. In June 1985, a subcontract was signed between TFG and CONAPOFA which established an inter-ministerial working group which reviews, updates and presents RAPID/D.R. on an ongoing basis. This working group also prepares hard-copy materials from the RAPID model to disseminate to larger groups. The inter-

ministerial group includes personnel from CONAPOFA and the ministries of Agriculture, Education, Planning, Statistics, and Public Health, and the Institute of Population and Development. In all cases the persons representing their ministries are at the Secretary or Assistant Secretary level. Members of this group utilize the model to initiate discussion concerning demographic changes and planning issues and they make presentations on population and development issues to members of their own bureaucracies and to various groups in both the public and private sectors in the D.R.

21. RAPID has made a substantial impact on public policy in the D.R. It has been used to stimulate discussion and shown the importance of integrating demographic considerations in almost every major sector of the government's planning process. The model has educated the elite on the number and types of interactions between demographic variables and a wide range of issues, and the model has been useful in showing the interactions among various economic sectors.

22. The ability of RAPID to generate interest among educated and committed individuals shows the importance of developing a more general software model that can be used in almost any country where the data are available.

Ecuador

23. Ecuador demonstrates how difficult the introduction of RAPID can be. TFG and its subcontractors have made a concerted effort to enhance population awareness using the RAPID model. Some individuals within the Ministry of Planning (CONADE) are not sympathetic to the population issue. Because of CONADE's position on the relationship between population and development, TFG has been forced to work with a private organization, the Centro de Estudios sobre Poblacion y Paternidad Responsable (CEPAR). This organization is primarily a research and research dissemination institution and does not have effective contacts with the Planning ministry. In addition, CEPAR has a small staff, which lacks sufficient expertise in statistics and economics to carry out substantial policy analysis.

24. Ecuador also demonstrates how difficult using the RAPID model can be if the computer program has either data or programming problems. RAPID was first introduced into Ecuador in 1979 under RAPID I. Six years later, the complete model and accompanying booklet are still not ready. Three changes are needed: (1) the RAPID model must be made user-friendly; (2) longer visits with frequent follow-up calls are necessary to work out the bugs in the programs and to make sure the policy analysis subcontracts are on schedule, and (3) much larger LDC subcontracts need to be

signed to give CEPAR a sufficient incentive to produce the work and to make the presentations in a timely fashion.

25. Ecuador also demonstrates the difficulty that RAPID II has had in preparing policy analyses for its priority countries. Although a country strategy paper was written, this paper did not identify the steps necessary to convince key personnel to use the RAPID model, nor did it indicate what alternative personnel might be contacted should CEPAR and CONADE personnel be unavailable. Because the strategy paper did not set intermediate goals or deadlines, TFG did not have guidelines to determine when it would be best to stop spending resources in the country.

Cameroon

26. An active interest in the economic and social consequences of population change and a desire to refine and expand the knowledge about it are fixed in important sectors of the Cameroon decision making system. Despite the traditional cultural barrier to population limitation, political leaders and their senior advisors must be credited with a sensitivity to the adverse consequences of excessive population growth. Although the Cameroonians discovered this issue on their own, RAPID has aided them in bringing it into focus.

27. In a small country (about 8.5 million) with a small bureaucracy and research community, the RAPID activities brought in a display and outside specialists who could function as catalysts and provide some technical assistance and financial support, and with them provided an incentive for research on population and development. Four key segments of the policymaking system are involved in RAPID-related activities: 1) The Ministry of Planning and Regional Affairs (government focal point for population issues); 2) the Ministry of Agriculture (agricultural development and food production is the priority in the government's development planning); 3) the Ministry of Health; and 4) the Center for Economic and Demographic Research in the Institute of Human Sciences (the government's principal source of policy research). By making possible activities in these institutions, RAPID is responsible for creating some policy changes.

28. RAPID has created awareness in Cameroon and no longer needs to seek out political audiences at the highest level. The next phase of the project, or its successor, would involve expanding and deepening information about the development/demographic relationships among other audiences. This phase should include the utilization of persons in the educational community and the provision of tools and skills that will enable LDC personnel to investigate the linkages between demographic issues and development.

Liberia

29. RAPID in Liberia can be classified as a success story in an environment of economic distress and political instability. USAID population activities in Liberia now are poised to move beyond RAPID in the form of a bilateral family planning project for FY 1987. Although factors other than RAPID have contributed to the atmosphere in which expanded family planning program assistance becomes a realistic program target, the extended awareness that RAPID has facilitated among Liberian officials is a significant contribution.

30. The tangible achievements of RAPID over these two years include: 1) presentations to groups of senior bureaucrats; 2) the creation of a Population Committee as an intergovernmental clearinghouse for population research activities; 3) the assumption of leadership in population matters by an informed and energetic Deputy Minister of Planning and Economic Affairs; and, 4) the launching of four research projects on social and economic dimensions of population change.

31. These achievements suggest the ingredients required for the success of a RAPID country project. (Surprisingly, a major commitment by the political leadership is not one of them.) The key components are interest and skill in key places within the senior ranks of the host country bureaucracy and interest in the research community there, an enterprising USAID population officer; and an energetic and uninhibited subcontractor representative.

32. With the mission commitment to an expanded family planning project and Liberian bureaucrats and the Family Planning Association interested in this expansion of effort, the mission of RAPID as an awareness project aimed at influentials is concluded. Awareness now has to be directed to a grassroots constituency with different techniques and materials.

The Future of Population Policy Development

33. RAPID presentations were designed to change the minds of policymakers; most countries have now taken the initial steps toward a population policy. It may thus be unnecessary to continue supporting, for many more years, these kinds of presentations. The creation of a user-friendly software package, accompanied by some technical assistance, may be adequate. This issue should be reexamined in about two years in light of demand for presentations, particularly in sub-Saharan Africa.

34. A more technical and economically sophisticated package of activities will be needed to deal with those countries which have policies but which do not have really effective programs; Bangladesh, Pakistan, and Brazil are examples. Simulation model approaches to the negative consequences of population growth are ineffective in at least two of those countries. The Population and Development Planning project (INPLAN) may be a better base on which to build such work. Its intent is to reach this more sophisticated audience with technically superior analyses.

Major Problems, Potential Resolutions

The Overhead Cap

35. Both the overhead rate and a total overhead charge (\$1.6 million) were fixed in the contract for RAPID II. After the contract was signed, AID allowed The Futures Group to charge audited and authorized overhead rates, which were higher than initially estimated. Since the overhead is capped at \$ 1.6 million, The Futures Group has less labor available to it than appears in the contract. The contract budgets TFG labor at \$947,445, while the present overhead rates accommodate a labor expenditure of only \$859,973. TFG has expended about 60 percent of its labor (and overhead) in only the first forty percent (two years) of the expected life of the project. This expenditure pattern is quickly exhausting resources for RAPID presentations and could restrict future presentation activities. A moratorium on modeling activities was recommended in Chapter IV; that change can help considerably. Additionally, the subcontractors can contribute to the RAPID-style presentations, in part because TFG has transferred some of its staff to subcontractor payrolls.

Delays in Regional Seminars

36. RAPID II has not yet conducted the regional seminars in Asia, Africa or South America provided for in the contract. This is a serious omission; the regional seminars in Latin America and Africa should be held at the earliest possible dates.

The Fellows Program

37. RAPID II sponsored one meeting of program fellows in conjunction with the 1985 Population Association of America meeting. It was very successful according to all accounts. The program should be continued and expanded to the limit permitted by contract provisions. More broadly, POP/PDD should fund more programs of this type as they bring together a highly selected group that should learn more about population issues.

The 1984 Management Evaluation

38. POP/PDD conducted a management evaluation of RAPID II in August 1984. The results were conveyed to project management shortly thereafter. Many small but important issues remain unresolved and still need to be addressed by project management. Part of these difficulties have been created by the fact that project personnel are at four institutions in five locations. Many of the problems, however, could be overcome with a different management structure: (1) Strengthen the regional coordinators for Latin America, Anglophone Africa and Francophone Africa, and eliminate the subcontractor coordinator roles; (2) consolidate Principal Investigator and Project Director roles in a single person and provide that person with a deputy from among the regional coordinators.

Principal Subcontractors

Population Reference Bureau (PRB)

39. PRB will continue to concentrate on those aspects of the project that are nearer to the end of the pipeline, particularly the dissemination of findings incorporated in the reports of RAPID II. These reports include the presentations made in the countries by project staff, special reports on population policy that may occasionally be prepared by project staff, and the reports based on LDC subcontract work. In general, PRB will concentrate on printed products, but it will also be called upon to help organize seminars and to perform such other tasks as fit both the project scope of work and the work program of PRB. The addition of Mr. Goliber to PRB's staff will enhance PRB capacity to contribute to project goals.

University of Michigan

40. Some staff changes leave UMI weaker now than it was in the first two years of the project. Thus it is prudent to reduce staff time initially assigned to UMI. UMI staff should conclude modeling work on those tasks identified by TFG to put together the transmissible software package described elsewhere in the report. Travel would be limited to LDCs for identification and preparation of LDC subcontracts within the general provisions of the contract.

University of North Carolina

41. Several members of the UNC staff were among the more productive persons in generating LDC subcontracts; the program should continue to build on their successes and help them increase their productivity. As with the coordinator role at PRB and UMI, we suggest elimination of this function at UNC as well.

The savings in staff time should be applied to generation and management of LDC subcontracts.

Summary of Recommendations

42. This report contains many recommendations both in the preceding executive summary and in the main text. The following list is only a summary of some of the principal recommendations; we urge interested readers to review the whole text. Most important to recall is that nearly three years and more than \$5 million are still available for this project to fulfill its initial goals.

Shift of Emphasis to Policy Analyses

43. The contractor, to fulfill the provisions of the contract, must shift emphasis to policy analyses carried out by LDC subcontractors. The evaluation team concluded that this course is the best use of remaining project resources. By September 1, 1985, the contractor should develop a plan for execution, commitment and disbursement of the full sum of \$1.5 million on LDC subcontracts by December 31, 1987. This plan should fully describe the pipeline or critical path needed to achieve this goal; it should specify targets with respect to interim dates. USAID should review progress in about six months to see whether the contractor is on the critical path. If not, USAID should cut back on funds for policy analyses, and for the related staff time of TFG and contractors.

44. Staff may need to take somewhat longer trips to fewer countries under tightly-defined terms of reference specifying what work must be accomplished in the realm of policy analyses. Preferential use of staff should be accorded to proven producers willing to spend significant time in the field and able to bring back solid products in the form of LDC subcontracts and policy analyses. The contractor should estimate the staff requirements and related efficiencies that will be essential to the execution of the plan. All subcontractor staff need to be fully informed, and be brought into accord with, plans to deploy resources to achieve the specific goals identified. Staff who have not proven able to accomplish project goals should not be sent to field in the future.

Selection of countries

45. Policy analyses were meant to be conducted in at most 15 countries; there is no reason to exceed that number, and it may be advantageous to focus on fewer. The first and second groups in Table 2.5 offer an adequate list from which to choose priority countries for the remainder of the life of the project: Nigeria,

Liberia, Somalia, Burundi, Cameroon, Sudan, Brazil, Ecuador, Mexico, Zimbabwe, Turkey, Senegal, Bangladesh, Peru, Eastern Caribbean, Zaire, Sierra Leone, Kenya, Dominican Republic, and Chad. No countries beyond the 46 listed in Table 2.5 should even be considered for further work under this project. None in the third and fourth grouping should be considered for further visits unless they are found to merit higher priority by POP/PDD.

Remaining RAPID-style presentations

46. USAID must assist The Futures Group in turning down all but a few RAPID presentations in unscheduled countries. The evaluation team suggests that these presentations be limited to a maximum of four per year.

47. RAPID II should concentrate its computer expertise on making the basic RAPID II presentation model user-friendly. One possibility would be creation of a package of diskettes and manuals for operations that could be operated without technical assistance in LDCs. It should terminate work on controversial areas such as benefit-cost analysis of births averted and support further work on the socioeconomic determinants of fertility only if it can be shown that such work can contribute to presentations that will be made in 1986 and 1987.

Management changes

48. For effective management, the functions of Principal Investigator and Project Director should be consolidated. Since Mr. Claxton will shift to the World Population Society, his role as Principal Investigator could shift to Mr. Cole.

49. To enhance the quality of the documents submitted to USAID (especially trip reports and semiannual reports), one of the regional coordinators could be assigned the additional duties of transmitting all documents sent by project staff to USAID. This task is critical because of the decline in staff availability in USAID to monitor and supervise project work. TFG should provide to POP/PDD quantitative, dated progress indicators showing minimum accomplishments by March 1, 1986. POP/PDD should decide at that point whether progress is adequate. If it is not adequate, then those components of the program not advancing on schedule should be terminated. As appropriate, funds could then be redeployed for execution under other projects in the POP/PDD portfolio.

50. The regional coordinators for Latin America, Anglophone Africa, and Francophone Africa should absorb the duties initially programmed for the coordinators assigned to PRB, UNC and UMI. The regional coordinators will have primary responsibility, under

the project director's supervision, of implementing the recommendations concerning LDC subcontracts and timetables.

Subcontractor specialization

51. PRB should concentrate on those dissemination activities included within RAPID II that are consistent with its overall mission. Mr. Goliber should continue to execute the important role of regional coordinator for Anglophone Africa.

52. UMI should prepare for a reduction of effort consonant with changing project priorities and UMI staff capabilities. Work on general models of the population policy process should be suspended.

53. UNC should build on the strength of staff who have successfully generated subcontracts in Africa. The role of the RAPID II coordinator at UNC can be eliminated and the staff-time savings allocated to generation and management of LDC subcontracts.

Regional seminars and Fellows program

54. Regional seminars in Latin America and Africa should be planned at the earliest possible dates. The first of these seminars should occur no later than March 1986; the other two, prior to the end of August 1986. POP/PDD should broaden the base of the Fellows program as it offers a highly selected group that should learn about population policy issues. The payoff in this area could be very large.

General issues

55. Until now, POP/PDD programs have been aimed at raising consciousness about population problems; in the future, it may also be worthwhile to improve technical aspects of population planning in LDCs, even among those countries that already have effective population policies and accept the urgency of action to slow population growth.

56. A more technical and economically sophisticated package of activities will be needed to deal with those countries that have policies but do not have really effective programs. INPLAN may be a better base on which to build such work.

I. The Development Assistance Context

1.1 International population assistance amounts to nearly \$500 million annually, equal to about two percent of Organisation for Economic Co-operation and Development (OECD) aid. At its peak a few years ago, the population assistance share of aid was a larger 2.2 percent of OECD aid. The United States is the main donor, accounting for about 40 percent of total population assistance.

Donor Contributions

1.2 About one-quarter of U.S. population aid is administered through more than twenty nongovernmental organizations in the United States, particularly universities and research institutions. They cooperate with organizations in developing countries (hereafter, LDCs) in service delivery; training; information, education, and communication; population policy development; data collection and analysis; special projects, and biomedical and operations research. The RAPID II project brings together several U.S.-based institutions for such assistance.

1.3 The budget of the United Nations Fund for Population Activities (UNFPA) is about \$140 million annually, of which about half supports family planning service delivery and the other half covers a range of activities including population and development planning, an area of effort to which RAPID II contributes. Assistance for population and development planning is about \$5 million annually. UNFPA devotes a somewhat smaller share of its resources to this area than does USAID, although UNFPA support is expanding rapidly for this work.

1.4 The level of official development assistance as a percentage of OECD countries' GNP is today far below what it was in the 1960s (see WDR 85, page 208). For the U.S. the assistance share of GNP fell from 0.58 percent in 1965 to 0.23 percent in 1984, whereas for most other donors the current share is comparable to that of the past (Japan, Germany, France) or even higher than it was (Norway, Italy, Netherlands). But the U.S. remains the predominant donor, giving twice as much as the second country, Japan.

1.5 The official flows of assistance are small relative to need and to past effort (in the United States at least). The squeeze on assistance has so far not had an adverse impact on population programs only because they are so small a part of the total. Staffing cuts have made it difficult for USAID to deliver assistance as well as in the past; one result is that USAID has had to ask intermediaries to shoulder a growing share of the burden of

management and administration of the population assistance program.

External Technical Assistance for Population Policy

1.6 USAID administers its program of population assistance through its Office of Population (POP) and its regional bureaus and missions. Much of the work of POP is in turn administered through a network of contractors undertaking specific projects within the framework of USAID policy and activities. The dollar volume of USAID population assistance is nearly \$290 million in FY85, of which \$117 million is centrally funded by the Office of Population.

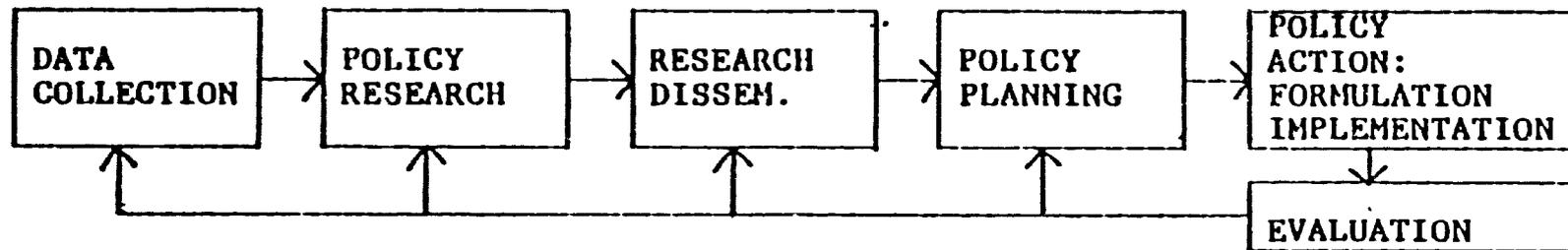
1.7 One of the goals of U.S. population assistance is to help LDCs develop more effective population policies. Figure 1.1 on the following page, now somewhat outdated, presents a schematic diagram of the policy development process which guides this work. The Policy Development Division of POP (POP/PDD) administers this program. It now includes ten ongoing projects which are being executed under thirteen contractual agreements. Moreover, three additional projects are expected to start before the end of FY 85. The program as a whole generates annual expenditures on the order of \$16 million. This amount thus constitutes less than six percent of annual USAID population assistance.

1.8 As noted above, UNFPA also devotes some of its resources (a major share of which come to it through USAID) to policy development. A recent estimate found that UNFPA assistance to population and development planning was \$18.5 million in the years 1981-84, or somewhat less than \$5 million annually. The annual assistance in this area has been increasing substantially since the early 1970s and is programmed to increase further over the next few years (Siddiqui 1985, 3). Thus UNFPA contributes about one-third as much resources to this area of assistance as does USAID directly through POP/PDD.

1.9 At the end of the 1960s there were two organizations providing services to USAID for the modeling of population and development interactions. One was the GE TEMPO projects which yielded a number of economic-demographic models that simulate the impact of alternative population growth rates on variables of major concern to development planners, especially the rate of growth of per capita income and product. The other, based at the University of Illinois, used the principles underlying these models for didactic purposes. The PLATO models were less sophisticated but did generate the early visual materials that proved eventually to be an attractive way to present the model outputs to higher-level officials. RAPID I built on these early experiences and combined them to enhance the technological sophistication of the simulation model. RAPID II has gone even

FIGURE I.1

SCHEMATIC FOR POLICY DEVELOPMENT PROCESS



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further, adding to the intellectual depth and range of the modeling efforts yet at the same time introducing the model to audiences in sub-Saharan Africa that were previously antithetic to arguments demonstrating the adverse consequences of rapid population growth.

RAPID II Within the POP/PDD Portfolio

1.10 RAPID II began on May 13, 1983; estimated completion date was May 12, 1988. The first sentence of the contract states:

The objective of this five year contract is to assist those involved in development planning to better understand the relationship between population growth and socioeconomic development and thereby increase LDC commitment to efforts designed to reduce rapid rates of population increase.

As this evaluation began on June 18, 1985, the project had been underway for 25 months of its projected 60 months of activity. During that time the objective of RAPID II has been to make contacts, organize collaboraton, prepare analyses, construct programs, solicit audiences, make presentations, answer questions and provide followup to motivate movement toward attainment of the purposes of the project.

1.11 The review of RAPID II activities was generally positive. USAID officials in Washington and in the field described the project as being of continuing utility in helping to create a climate favorable to more effective population policies. The project was deemed to be useful in a number of countries of Sub-Saharan Africa and Latin America, both those visited by the evaluation panel members and others as well. Because of the evidence of satisfactory performance in the field, the evaluation concentrated on certain differences between plan and midterm results with a view toward suggesting course corrections that can improve project performance.

1.12 In considering Figure 1.2, it is worth noting that every project overlaps in some respect with every other project, particularly in the phase of the policy development process referred to as research dissemination. This overlap is intentional inasmuch as a major objective of POP/PDD is to reach the relevant publics with the results of work which it sponsors. RAPID II covers four of the five phases: policy research, research dissemination; policy planning; and policy action, formulation and implementation. Only one other project, INPLAN, covers as many as four phases of the policy development process. This broad coverage may cause problems of focusing effort on activities which in fact merit the highest priority attention.

FIGURE I.2

PDD PROJECT CONTRIBUTIONS TO POLICY DEVELOPMENT PROCESS

PROJECT	DATA COLLECTION	POLICY RESEARCH	RESEARCH DISSEM.	POLICY PLANNING	POLICY ACTION/EVALUATION	
DIS	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
DD	X X X X X X XXXXXXXXXXXXXXX					
AWARDS	X X X X X X XXXXXXXXXXXXXXX					
NAS		XXXXXXXXXXXX				
IUSSP		XXXXXXXXXXXX				
PRB			XXXXXXXXXXXX			
INPLAN		XX				
RAPID		X X X X X X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX X X X X X				
DLPP				XXXXXXXXXXXX X X X X X		

KEY: PRIME EMPHASIS: **XXXXX** ; SECOND EMPHASIS: **X X X** ; THIRD EMPHASIS:

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1.13 Population policy development is an inherently fuzzy field of activity. As noted elsewhere in this report (see Chapter VI), it has not been possible to draw clear lines between specific policy-development activities and policy change in particular countries. Nonetheless, there has been an undoubted improvement in the environment for population programs in LDCs. In the period since Bucharest (1974), the change is particularly notable in sub-Saharan Africa and some countries in Latin America. Policy development efforts by major population donors (USAID and UNFPA) have probably contributed to the change. We do not consider it necessary to ascribe this change to specific projects such as RAPID II but instead assume that the project could have contributed to this process if it was well managed, if it was present in at least some of the environments which changed, and if it prosecuted its tasks with efficiency and effectiveness. Thus the task of this evaluation is not to show whether RAPID II did or did not change a country's policy; the task is to examine the internal efficiency and effectiveness of the technical services delivered.

1.14 In terms of annual expenditures among the 13 contractual agreements included in the POP/PDD portfolio, RAPID II has in the past year ranked second behind DHS. Only the Demographic Data for Development project (DDD) (one project with three agreements at the U.S. Census Bureau, East West Population Institute and Westinghouse Health Systems), Population and Development Planning project, RTI, INPLAN and AWARDS are also of a scale to require annual expenditures above \$1 million; the other four are considerably smaller. There is considerable overlap of responsibilities between the RAPID II project and several other elements in the portfolio. This overlap is most notable in the case of the INPLAN project. Both involve use of high-technology machinery and software. Both require interaction with important persons in developing countries. One USAID official noted that the two projects have, over time, moved toward a similar middle-level clientele though the two projects began at different target levels. RAPID I addressed its attention to the highest possible officials in a country, but RAPID II has increasingly sought to deal with more technical personnel who are key advisors to these higher-level decisionmakers. IPDP, and its successor, INPLAN, began dealing with university researchers and have, over time, come to concentrate more on persons working in planning offices in developing countries as their best audience.

1.15 Experience of the staff of POP/PDD demonstrates that they spend considerably more time managing RAPID II than any other of their 13 projects. Because of recent reductions in staff in POP, it is essential that some management efficiencies be found which can reduce the allocation of POP/PDD time to management of RAPID II.

1.16 Several points merit emphasis. Projects near the end of the process pipeline are distinctly more sensitive. They involve more contact with higher-level officials than do the somewhat more mundane tasks of data collection and data development which characterize the front end of the pipeline. It is natural therefore that the time intensity of management is greater at the back end of the policy pipeline where most RAPID II activities are situated.

Recommendations

1.17 There is general but not specific coordination between POP/PDD and the UNFPA program of assistance for population and development analysis. The population planning units sponsored by UNFPA in about thirty countries could be main consumers of the results of the policy analyses emerging from RAPID II. POP/PDD should initiate an effort for more effective coordination.

1.18 It may be feasible to consolidate and recombine contractual agreements in functional groupings. Microcomputer technology may offer one functional division that could lead to the combining of aspects of RAPID II with INPLAN. Policy analyses currently executed under RAPID II might usefully be combined with some other program such as the current Population Council grants program.

1.19 The allocation of less than six percent of USAID population assistance to the policy development process may not be adequate. Once more effective management by contractors such as the contractor for RAPID II has proven itself, POP should consider allocation of more assistance in this area.

1.20 Until now, POP/PDD programs have been aimed at raising consciousness about population problems; in the future, it may also be worthwhile to improve technical aspects of population planning in LDCs, even among those countries which already have effective population policies and accept the urgency of action to slow population growth.

II. RAPID II Operations, 1983-85

2.1 A cost reimbursement contract in the amount of \$8.9 million was signed between USAID and the Futures Group for conducting RAPID II on May 13, 1983 and became effective immediately. As this evaluation began on June 18, 1985, the project had been underway for 25 months of its projected 60 months of activity. Total project expenditures through 31 May 1985 were \$3.3 million, an amount about equal to the sum projected at the time of contract signing (see Table 2.1). Thus at the time this mid-term evaluation began, 42 percent of the time initially contemplated for the life of the project had been completed and an equal percentage of the total estimated contract cost had been expended. As will be shown below, however, there were significant differences between planned and actual expenditures under the several sub-categories of project expenditure.

2.2 This chapter examines the performance of the contractor during these 25 months of project execution. The objective is to offer guidance on ways to improve performance in the remaining period of the contract. It may also be desirable to propose changes on the basis of findings about the productivity of various project activities. To the extent possible this chapter will restrict itself to objective performance criteria.

Expected and Actual Budget and Staffing

2.3 The contract provides for specific time applications of four key personnel. These personnel, specified applications, and actual applications during the first two years of the contract are as follows:

<u>Name</u>	<u>Planned</u>	<u>Actual</u>
Philander Claxton	75 %	93 %
Henry Cole	70	79
John Stover	70	65
George Simmons 2/	20	20

The project paid for more time inputs for two of the four key personnel than might have been predicted for the first two years of the project. However, the applications are assumed to be

2/ Data originally made available to the evaluation panel showed application of 44 percent of Mr. Simmons's time. Different data was provided later. Timekeeping procedures at UMI may bear further examination.

TABLE 2.1
RAPID II: Budgeted and Actual Expenditures, 1983-1985

DRAFT RAPID II ESTIMATES AS OF 6/06/85

RII BUDGET	BID TO 5/13/85	ACTUAL TO 5/31/85	DIFF ACT - BID	RATIO DIF/BID
DIRECT LABOR	331843	496532	164689	0.50
OVERHEAD ON LABOR	307619	611474	303855	0.99
TOTAL OH (LABOR + G/A)	594708	916039	321331	0.54
CONSULTANTS	107871	29703	-78168	-0.72
TRAVEL	242139	225298	-16841	-0.07
EQUIPMENT	45696	123250	77554	1.70
ODCS	61737	109824	48087	0.78
LDC SUBCONTRACTS	466000	258866	-207134	-0.44
SUBCONTRACTS				
MICHIGAN	634561	500221	-134340	-0.21
NORTH CAROLINA	589253	429473	-159778	-0.27
DISC	203535	185189	-18346	-0.09
PBR COUNCIL		14000	14000	ERR
IRIS		19846	19846	ERR
WPS	0	0	0	ERR
DISC-6	0	0	0	ERR
ZZ			0	ERR
SUBTOTAL	1427349	1119331	-278018	-0.19
TOTAL COST (LESS G/A)	2990254	3004278	14024	.00
G/A				
SUBTOTAL	287089	304564	17475	0.06
TOTAL COSTS	3277343	3308844	31501	0.01
FEE @ 7.5%	0	0	0	ERR
— (OVERHEAD TOTAL) —	594708	419383	-175325	-0.29
TOTAL COSTS AND FEE	3277343	3308846	31503	0.01

averages over the life of the project; thus it is anticipated that applications for Messrs. Claxton, Cole, and Simmons would diminish, whereas that for Mr. Stover would increase in the remaining life of the project. However, projections for Mr. Stover show a decline to 60 percent in 1986-87 and 27 percent in 1987-78. Because Mr. Stover's technical skills are a decided asset to the project, POP/PDD may wish to call on TFG to adjust their plans to meet this key personnel application requirement. The prospective application of time by Mr. Claxton (who recently switched to a World Population Society subcontract) and, according to one estimate, Mr. Simmons, exceed planned applications and could be adjusted downward. As Mr. Claxton will no longer be a direct employee of the prime contractor, he could properly relinquish his role at principal investigator, and Mr. Cole could take up that responsibility, as well as continuing as project manager. Some of the implications of such changes are discussed in a broader context in Chapter VIII below.

2.4 RAPID II total expenditures in the first two years of the project equalled budgeted expenditures when the contract was signed. However, the distribution of expenditures by category was substantially different from what had been anticipated, the main differences being the following:

- TFG staff and overhead expenses were \$0.5 million more than anticipated;
- Expenditures on LDC subcontracts were \$0.2 million less than anticipated;
- Expenditures through U.S.-based subcontractors were \$0.3 million less than anticipated;
- In smaller but offsetting amounts than the above, the project spent less on consultants and more on equipment than was foreseen.

The pattern of expenditures permitted the prime contractor, TFG, to load the front end of the contract period with heavier-than-anticipated effort by its staff while the initial subcontracting institutions, especially UMI and UNC, worked at lighter-than-anticipated levels of effort. Work effort by group is shown in Table 2.1A; TFG employed far more days than any of its subcontractors.

2.5 Because the contract provides for no TFG overhead charges on its subcontracted work, there was little financial incentive to

Table 2.1A

Total Staff Days Spent on Project, by Organization of Employment
1983-85

<u>Org. Unit</u>	<u>Total Days</u>
TFG Staff	3,165
TFG Consultants	332
UNC Staff	1,339
U Michigan Staff	1,674
DISC/PRB Staff	875
DISC II Staff	28
WPS Staff	21
Population Council Staff	75
IRIS Staff	33
Total Staff Days	7,542
<u>Field Days</u>	
Total Staff Days	= 22 %

prosecute subcontractor work with the same vigor as work carried out by the direct labor of TFG staff. 3/

2.6 As a consequence of the above-described pattern of expenditures, forward progress toward achievement of project goals has been greatest in the area of RAPID-style presentations, and least in the area of policy analyses based on the work of LDC subcontractors. The evaluation panel estimates that \$2.5 million, 75 percent of project expenditures in the first two years of operations, was devoted to the RAPID-style presentations and only 25 percent to policy analyses. 4/

2.7 POP/PDD staff, in its initial orientation session for the evaluation panel, described the project as being distributed with 60 percent of funds for policy analyses and 40 percent for RAPID-style presentations. These percentages thus suggest that the structure of expenditures in the remaining life of the project will have to be distinctly different from what it was in the past two years. The following table shows how project funds are allocated for the life of the project, actual spending in the first two years, and the required distribution of effort in the remaining three years:

<u>Period of Expenditure</u>	<u>RAPID-style</u>		<u>Policy Anal.</u>		<u>Total</u>
Life of Project, \$m, % 100 percent	\$3.5	40%	\$3.3	60%	\$8.9
Past, 1983-85 37 percent	2.5	75	0.8	25	3.3
Future, 1985-88 63 percent	1.1	20	4.5	80	5.6

3/ TFG staff disagreed with this conclusion of the evaluation panel and noted particularly that overhead on salaries, although it is an indirect, rather than a direct, cost, offers no particular incentive to the prime contractor. In a meeting in POP/PDD offices on July 26, 1985, the Project Director did, however, acknowledge that the observed pattern of project expenditures is consistent with the hypothesis expressed in the text.

4/ Note that much of the time spent by PRB and UMI staff contributed to development of the RAPID modeling environment and not to policy analyses so that the share attributable to presentations may be even greater than 75 percent. The functional distribution of expenditures was provided by POP/PDD.

Whereas three-quarters of past project effort was devoted to RAPID-style presentations, in the future only one-fifth of project effort can be devoted to that account. Eighty percent of future project effort will be devoted to policy analyses. The implications of these differences between past and future is discussed further in Chapter VIII.

2.8 Chapter IV is devoted specifically to a review and critique of the RAPID model and its presentation. Here it may be useful to review the allocations of staff time during RAPID II to the actual presentations of the model and discuss the likely effectiveness of the effort.

The Futures Group and RAPID Presentations

2.9 RAPID II, like many projects aimed at delivering external technical assistance, is travel-driven, i.e., it is travel to countries that justifies and requires a large share of total staff time inputs and use of related resources. The travel schedule is in turn driven by the initial and subsequently changing priorities and needs of USAID. All contractors share a similar burden of needing to respond to these changing priorities, often referred to as taking advantage of targets of opportunity. In the first two years of the project RAPID II staff spent a large share of all project effort on preparing for, working in, and reporting the results of travel to specific target countries. USAID's system of organization provides for cross-cutting authority on functional and geographical lines; a good deal of project effort must be devoted to getting into a country, i.e., securing a favorable response from the USAID country mission that a project staff member or team travel to the country in order to undertake the work which has, in general, been allocated to the contracting organizations based in the U.S. RAPID II shares with many other projects the difficult task of establishing a niche for its activities in each of the countries in which it may seek to work. Past success of the RAPID presentations has eased access somewhat, but the vagaries of political change have dictated many deviations from initial project plans.

RAPID II Staff Travel

2.10 RAPID II staff traveled to 32 countries (or country groups) during its first two years of operation. The project has experienced a high degree of change from its initial priorities. The contract provides for a travel schedule. It states, however, that "the countries provided in the schedule are purely illustrative." Despite this caveat it is remarkable how large, after only two years of operation, is the difference between the list of countries in the contract and the list of countries to which RAPID II staff have traveled. This can be demonstrated in

Table 2.2. It shows the number of countries on the contract list in years 1 and 2, on the travel list in years 1 and 2, and those distinguished by whether travel occurred to the country or not. A chi-square test would show no significant relationship between the contract list and the travel list. The lack of a statistical relationship is of course not necessarily a sign of management failure since changed priorities always require some changes in activities. Nonetheless, the difference between the two lists would seem to be a cause for concern.

2.11 Of countries on the travel list (32) only half were on the contract list for travel in the first two years of the contract. Some four were visited in the first two years of the contract which were programmed for visits only in years 3, 4, or 5. A dozen countries were visited and were not on the initial travel list. Overall, travel occurred to too many countries relative to initial plans. By traveling to countries not included on the initial list, the contractor expanded the potential total of countries which might feasibly have been visited to 46. This number is, in the evaluation panel's opinion, far too large. Thus a more targeted approach, involving intensive activities in fewer countries is essential.

2.13 Many of the trips were, in the evaluation panel's opinion (supported by staff comments as well), too short to achieve project objectives. This wide-ranging traveling schedule probably led to a dissipation of project resources. In the policy-analysis component of the project, the travel schedule was not well-designed to achieve project objectives. Too often, staff traveling to a country changed and thus lost continuity. The relatively successful efforts in Somalia and Burundi demonstrate the advantages of continuity and more intensive application of effort to a limited range of countries.

2.14 RAPID II staff spent 1,737 days in the field out of a total of 7,542 applied in the first two years of the contract.^{5/} Twenty-two percent of staff time was spent in LDCs and perhaps one-third of all project labor costs were applied to specific country activities. Table 2.3 shows the applications of staff time (in days) by staff member and the name of the country to which time was applied, if spent in that country. This table provides the best guide to staff activities as they relate to countries, but it is somewhat difficult to interpret. Table 2.3A

5/ Another 824 days were spent in the US in preparation or debriefing associated with country-specific travel. However, a number of staff members reported no days in this activity so that it was not possible to use this information in making comparisons between staff members in the application of time to specific countries.

Table 2.2.

Two-way Table Showing Number of Countries on/off Contract and Travel Lists, Years 1 and 2

On Contract List, Years 1 and 2				
	Yes	No	Total	
On Travel List	Yes	16 <u>a/</u>	16 <u>b/</u>	32
	No	12 <u>c/</u>	2 <u>d/</u>	14
	Total	28	18	46

Source: Contract and travel schedule.

a/ Includes Nigeria, Ivory Coast, Burundi, Sierra Leone, Sudan, Bangladesh, India, Pakistan, Mali, Zimbabwe, Morocco, Honduras, Senegal, Turkey, Brazil and Peru.

b/ Cameroon, Chad, REDSO/West Africa, Liberia, Niger, Somolia, Zaire, Egypt, Jordan, Dominican Republic, Ecuador, Guatemala, Mali, Eastern Caribbean, Sri Lanka.

c/ Includes Haiti, Togo, Ghana, Rwanda, Zambia, Burma, Philippines, Tanzania, Botswana, Lebanon, Tunisia, and Guyana.

d/ Includes El Salvador and Malawi which are on the list in years 3, 4, or 5 but not on the list in years 1 or 2.

Table 2.3A

RAPID II staff ranked by estimated aggregate salary payments received; days in country, total days, and percentage days in country, 1983-85.

Staff Members by Expenditures	Days in Country	Total Days	Percent of days in country
Claxton	61	435	14
Cole	65	371	18
Stover	31	301	10
Goliber	139	365	38
Bouvier	48	282	17
Bilsborrow	40	332	12
Middleberg	91	429	21
Barlow	117	205	57
Rens	232	360	64
McDevitt	105	372	28
Freymann	116	185	62
McIntosh	36	300	12
Simmons	38	204	19
Bernstein	0	339	0
Abel	112	338	33
Lacey	108	219	49
Cross*	38	158	24
Skipp	60	207	28
VanDerValle	69	290	23
Yamashita	46	134	34

Source: Based on timesheets and questionnaire response; adjusted in cases of some errors. There are some inconsistencies in underlying data sources. Only twenty largest aggregate recipients included.

* Employed by The Futures Group during part of the first year of RAPID II (May 83 - May 84).

based on Table 2.3, ranks selected staff members by aggregate salary receipts from the project account and shows their application of effort with respect to days in country, total days on the project, and percentage of project days spent in LDCs.

2.15 There are substantial differences between staff members in the percentage of days spent in the field, ranging from zero (Bernstein) to half or more (Lacey, Barlow, Freymann, Rens). One might have expected the project to have had an even higher rate of country-specific days of activity. 6/ A travel-driven project such as RAPID II probably needs relatively more of persons who can maximize time in the field offering direct technical assistance or doing related project work in countries. Of course, being there is not enough: Field visits must also produce results in the form of effective presentations in the RAPID style, or LDC subcontracts that result in policy analyses contributing to population policy development. At the least, however, it seems axiomatic that being there is a critical minimum input to receive an adequate product.

Which Countries?

2.16 Country emphasis of the project to date is shown in Table 2.4. It ranks countries by the number of staff days spent in each country. It does not include days spent in the U.S. in preparation or debriefing. About three-fifths of all staff days spent in countries were spent in the seven countries to which 100 or more staff days were allocated: Nigeria, Cameroon, Somalia, Burundi, Zimbabwe, Liberia, and Sudan. Since all are in sub-Saharan Africa, the project objective to emphasize work in that region must certainly have been achieved.

2.17 There is a notable gap, however, between the intensity of effort in some of these seven countries, and the absence of secure follow-up activities implicit in a well-developed program of LDC subcontracts. It is hard to imagine how RAPID-style presentations per se can justify the large expenditures of staff time in the field in such countries as Nigeria. 7/ The alterna-

6/ Some staff members (Stover, Bouvier, McIntosh, and Bilsborrow are examples) spent two or more days in the U.S. on country-specific work for each day in the field. Others (Cole, Yamashita, Rens, McDevitt, Lacey and Freymann) allocated few or no days in the U.S. to country preparation or debriefing. These differences merely reflect lack of common approaches to time allocation.

7/ It did not seem proper to the evaluation panel to attribute change in population policy in Nigeria to the work of the RAPID II project. The staff of the project undoubtedly had

Table 2.4.

Ranking of Countries by Staff Days in Country
LDC Subcontracts through June 30, 1985, in \$

Name of country	Staff days in country	Subs Signed
Nigeria	220	\$11,000
Cameroon	169	60,000
Somalia	155	58,000
Burundi	144	30,000
Zimbabwe	118	0
Liberia	114	56,000
Sudan	103	3,000
Ecuador	65	9,000
Bangladesh	64	0
Senegal	57	17,000
Kenya	51	0
Eastern Caribbean	44	0
Turkey	35	0
Dominican Republic	34	0
Peru	34	0
Zaire	34	0
Brazil	32	87,000
Sierra Leone	32	0
Chad	30	0
REDSO/West Africa	26	n.a.
Mexico	24	55,000
Morocco	24	0
Pakistan	24	0
Niger	21	0
Guatemala	20	0
Egypt	19	0
Jordan	18	0
Mali	10	0
Sri Lanka	7	0
India	6	0
Ivory Coast	4	0
Honduras	1	0
TOTAL	1,667	386,000

Note: Proposals received and funded through other contractors in several countries, including Morocco, Senegal, and Somalia.

Additional data were provided for Table 2.4 by RAPID II staff in early August and were added at that time. Changes were thus introduced that may not be accurately reflected in some of the companion tables.

tive model of offering continuing and large-scale external technical assistance has not been shown in the past to be the most effective means to help develop effective population policies.

2.18 Table 2.5 provides an estimate by the evaluation panel of progress to date in the 46 countries originally scheduled for inclusion or visited during the first two years of the project. The criteria used to distinguish the four groups include the number of staff days already spent in country; whether subcontracts are already in place, and whether the country ranks high on POP/PDD priorities for population policy development.

2.19 Ten countries rank among those in which there has been the most progress to date; ten more among those in which there has been less, but some, progress, i.e., those in which 30 to 100 staff days in country have been used but in which there are no subcontracts yet signed. The third group consists of five countries in which there have been fewer than 30 days of staff time in the country, no subcontracts but with high POP/PDD priority. Finally, there are 21 countries either initially identified, or beneficiaries of at least one visit but not ranking high on the POP/PDD priority listing.

2.20 These groupings suggest some bases for selecting countries for concentration during the remaining life of the project.

- The most intensive effort should go to put subcontracts in place in the first group of countries with a view to bringing initial investments to yield;
- Some of the second group of countries should be developed further if there are reasonable prospects of success;
- Countries in the third and fourth groupings should be left to others unless a compelling argument can be advanced beyond the usual target-of-opportunity theme.

In Chapter VIII we address the more specific application of selection criteria to help set priorities for the remaining life of the project.

some favorable impact, but there have been so many actors on the scene in Nigeria that no one of them can be credited singly with the change. It is as likely that falling oil prices brought policy changes as some external group brought it about.

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Table 2.5

Ranking of countries into four levels of progress through June 1985: Significant progress; modest progress; start-up activities completed; little or no progress.

Significant Progress = 10 (subs; or >100 days)	Nigeria Somalia Cameroon Brazil Mexico	Liberia Burundi* Sudan* Ecuador Zimbabwe
Modest Progress = 10 (30 to 100 days in country; no subs)	Turkey Bangladesh E. Caribbean Sierra Leone Chad	Senegal a/ Peru Zaire Kenya Dominican Republic
Start-up Activities = 5 (no subs; <30 days in country, but high USAID priority)	Guatemala Mali Ivory Coast REDSO/Africa	Niger
Little or No Progress = 21 (No subs; <30 days; low USAID priority, or no travel completed)	El Salvador Morocco Honduras Egypt India Togo Rwanda Burma Tanzania Lebanon Guyana	Malawi Pakistan Sri Lanka Jordan Haiti Ghana Zambia Philippines Botswana Tunisia

TOTAL = 46

* Prospects limited for political reasons.

a/ Additional data on a subcontract in Senegal was provided too late to incorporate in the arrangement of this table.

Recommendations

- 2.21 The contractor should ensure that staff planning is consistent with provisions for staff commitments in the key personnel clause of the contract.
- 2.22 Emphasis in the project must shift predominantly to policy analyses (80 percent of remaining funds) and carefully use RAPID-style presentation resources (20 percent) for only the highest-priority requests.
- 2.23 Staff may need to take somewhat longer trips to fewer countries under tightly-defined terms of reference specifying what work must be accomplished in the realm of policy analyses. Preferential use of staff should be accorded to proven producers willing to spend significant time in the field and able to bring back solid products in the form of LDC subcontracts and policy analyses. Staff who have not proven able to accomplish project goals should not be sent to field in the future.
- 2.24 Policy analyses were meant to be conducted in at most 15 countries; there is no reason to exceed that number, and it may be advantageous to focus on fewer. The first and second groups in Table 2.5 offer an adequate list from which to choose priority countries or regions for the remainder of the life of the project: Nigeria, Liberia, Somalia, Burundi, Cameroon, Sudan, Brazil, Ecuador, Mexico, Zimbabwe, Turkey, Senegal, Bangladesh, Peru, Eastern Caribbean, Zaire, Sierra Leone, Kenya, The Dominican Republic, and Chad.
- 2.25 No countries beyond the 46 listed in Table 2.5 should even be considered for further work under this project. None in the third and fourth grouping should be considered for further visits unless they are found to merit higher priority by POP/PDD.

III. Policy Analyses and LDC Subcontracting

3.1 RAPID II was developed in the early 1980s as a project aimed at combining under one contract work that had previously been executed under two or more contracts from USAID. It had two work zones: (1) RAPID-style model presentations and (2) LDC policy analyses. The Futures Group, latest in a series of POP/PDD contractors to develop the modeling work, won the contract for work in both areas. Some persons who had worked in the LDC policy analyses area with Battelle Memorial Institute became employees or consultants to the RAPID II project, thus easing the transition and helping TFG to execute work in a new area for that firm.

3.2 In the event, a major problem for the project, already discussed briefly in the preceding chapter, has been unexpectedly slow development of the policy-analyses portion of the contract. That work requires a sustained effort at hands-on technical assistance in which LDC personnel are encouraged to take the lead in policy-development activities with the financial and technical assistance of the U.S.-based contractor. It has not been easy for TFG to identify persons capable of doing this work.

3.3 The policy-analyses branch of the RAPID II project began in 1972 when USAID supported a project of the Smithsonian Institution (1972-77). Later contracts were executed by Battelle Memorial Institute (1977-83). Those projects also had their share of problems in executing the assigned tasks. Over time, however, each successive project built on knowledge gained by its predecessors. Through that evolution two findings seem especially pertinent:

- Work carried out by LDC personnel in their own countries has a greater prospect for positive impact on the policy process than work done by U.S.-based staff;
- Management of policy-based analyses is a difficult task greatly facilitated by a concentration of personnel in one office in the Washington DC area.

RAPID II enjoyed some benefits from the learning experience of its predecessors; but the difficulties of uniting two functions probably outweighed the advantages of prior experience.

3.4 This chapter discusses some problems with the efficiency of use of RAPID II staff time in the management, identification, execution, and monitoring of LDC subcontracts for policy analyses. Eighty percent of remaining project resources will be devoted to this and broadly-related project goals (seminars, fellows program, dissemination); thus it deserves special emphasis and consideration in future management of the project.

Efficient Use of Staff Time?

3.5 POP/PDD, in preparing the evaluation panel for its work, raised the question of the efficiency of RAPID II staff in the execution of the policy analysis component of the project. Although lacking a fixed standard or indicator of staff efficiency, POP/PDD staff feel that LDC subcontracts are not being put in place as expeditiously as possible. As a means to compare program efficiency with other, similar efforts, the following data show the staff inputs in days, value of contracts signed, and dollars per day of staff input for RAPID II and Battelle PDP I:

Indicator	PDP I	RAPID II
Staff days for policy analyses	534	1,885*
Value of subcontracts (\$000 omitted)	\$379	\$259
\$ subcontracts per staff day	\$710	\$137

Sources: Battelle PDP II proposal (1980, 249); RAPID II project data

* Assumes 25 percent of total staff days allocated to policy analyses.

These data confirm the impression of POP/PDD staff: the efficiency of RAPID II staff in putting subcontracts in place is only about 20 percent as great as in PDP I, a project supported by USAID in the past. These data also suggest that greater efficiencies are feasible as well as desirable in the execution of these activities in the remaining years of the project.

Scheduling Delays for LDC Subcontracts

3.6 Commitments to LDC subcontracts are farther behind schedule than any other major element of this contract. With a planning period of five years for disbursement of all funds under the contract, one would expect that, at the least, the contractor would have committed \$0.3 million in each of the first two years of the contract for a total of \$0.6 million in commitments. In fact, commitments in the form of signed contracts total somewhat less than \$0.3 million after 25 months. There are of course a number of activities in the pipeline for signing. These are, however, inadequate in relation to the rate of development necessary to achieve disbursement on schedule.

3.7 No problem received more frequent mention by project staff than the inordinate delays in disbursement of contract funds to

LDC subcontractors. Nonprofit firms are permitted under current regulations to advance money to the LDC subcontractor at the time of signing of subcontracts by both parties. These initial advances against expenses proved, in the past, to be essential to rapid prosecution of subcontract tasks. Regulations prevent a profitmaking firm, such as TFG, from advancing funds to a subcontractor until funds have been disbursed. This contracting anomaly has caused grave problems. It has significantly slowed progress by the subcontractors. It has led to unfortunate misunderstandings. It has further been associated with logistical delays in the transmission of payment orders from the United States to the account of LDC subcontractors in the several countries in which work occurs.

3.8 It is essential that this administrative-logistical problem be solved if LDC subcontract work is to go forward as planned. One solution is for TFG to borrow funds for advance to its subcontractors on receipt of signed contracts. Assuming the subcontractors would need about sixty days to turn around their actual disbursements for payment by TFG under contract terms, such a practice could be assumed to cost TFG a maximum of two months' interest on \$1.2 million, or about \$36,000. If TFG agrees to incur these costs, USAID may wish to consider some means to compensate the organization for this unanticipated expense.

3.9 The foregoing discussion is not meant to approve or foreclose any options with respect to a solution to the generic problem of administrative and logistical delays. It is the obligation of the contractor to propose effective solutions to which USAID would add its concurrence.

The Need for Management Effort

3.10 Because of problems to date, it seems reasonable to demand an unusual management effort to assure compliance with the provisions of the contract. For example, there should be a detailed analysis, and presentations of the results thereof, concerning the staff-time requirements and staff-time allocations that will be needed to achieve this provision. Such a management analysis would begin with results of the recent questionnaire requested by the evaluation team. One of the questions asked all staff (at TFG, PRB, UMI, UNC) to estimate the amount of subcontract work they had succeeded in putting in place as well as the number of the days they spent in the field and at their home duty station in generating those subcontracts. This indicator will help the project managers distinguish those staff most capable of advancing work in this area. Further, this indicator will demonstrate what efficiencies in the use of staff time and travel may be required to achieve project objectives. It is already apparent that relatively little project time can be

allocated to RAPID II presentations and that relatively more must be devoted to policy analyses. The analysis of the link between staff time and subcontracts in LDCs further refines the management task of allocating staff to this priority activity.

3.11 Table 3.1 shows the productivity of selected staff members concentrating on policy analyses. The first column shows the number of days that person spent in LDCs. It does not differentiate effort spent on LDC subcontract development from work on RAPID-style presentations. The second column shows estimated aggregate payments received from the project budget by the staff member. This number was estimated by the project director and is not necessarily reflective of salary, compensation, or wage rate. The third column shows the amount of subcontracts signed with LDC subcontractors in countries visited by that staff member. For example, the \$58,000 subcontract in Somalia is attributable to both McDevitt and Freymann. The last column then shows the ratio of subcontracts signed per salary payment dollar. This last figure would be a reasonable measure of productivity if in fact all staff effort had been devoted to subcontract development. That is not the case for several persons listed, but the evaluation panel does not have available to it data necessary to make further refinements. It is also worth noting that a number of useful projects developed in Morocco, Cameroon, and Senegal will be supported from other USAID sources.

3.12 The main conclusion to be drawn from Table 3.1 is that overall efficiency has been low in development of LDC subcontracts for policy analysis. It has been necessary to spend far more than a dollar on contractor staff in order to spend a dollar on work done in a developing country for policy analysis. Better management of staff resources and clearer guidance will be essential to achieve improved productivity in this regard.

3.13 Another conclusion is that there have been distinct differences in the level of productivity of various staff. The most productive have been Mr. Skipp, Mr. Cross, Ms. Lacey, Ms. Rens, Mr. Freymann, Mr. Barlow and Mr. McDevitt, all of whom helped produce more than \$1 of subcontract work for each \$1 of their own time. The productivity of the regional coordinators is more difficult to estimate. It is a cause for concern that several of the more productive persons are unlikely to be available to RAPID II in the future.

3.14 Table 3.1 also shows that work on Latin America has been more productive than work on Sub-Saharan Africa. This finding is not surprising, given the widely-acknowledged difficulties in working in the latter area. It does suggest that the project management may wish to consider giving somewhat more emphasis to Latin America: the population policy problems are serious, and the absorptive capacity is more than adequate.

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Table 3.1

Productivity of selected staff members concentrating on policy analyses by travel days; aggregate payments, LDC subcontracts attributable, subs per salary payment dollar.

Name of Person	Trav	Total Payments	Subs (000)	Subs/Salary \$
<u>Regional Coordinators</u>				
Middleberg	91	50	90	1.80
Goliber	90	56	56	1.00
Yamashita	46	21	151	7.19
<u>Country Specialists</u>				
Rens	242	42	\$ 90	\$ 2.13
McDevitt	127	43	58	1.35
Barlow a/	117	47	90	1.91
Freymann	116	35	58	1.66
Lacey	108	25	56	2.24
McIntosh	86	35	0	0
Skipp	54	24	87	3.63
Bilsborrow	40	51	9	0.18
Cross	38	24	64	2.67

Note: All subs in a country attributed to all persons who visited that country. Ratios for regional coordinators are thus higher than for country specialists.

a/ Developed projects in Morocco and Senegal subsequently set up the funding by INPLAN. Questionnaire response shows estimate of \$300,000 in subcontracts generated. Data on subcontract in Senegal made available to evaluation team only in August, 1985.

3.15 The evaluation panel members recognize that not all project staff are ideally suited to the task of identifying LDC institutions and personnel who can contribute to development or effective population policies in their countries. A two-year shake down period in which to find those who can do this work does, however, seem adequate. Thus project management must now emphasize a virtually absolute requirement that work by all project staff contribute to this activity. Those disposed to concentrate on activities other than nurturing work in the target countries should not continue to be supported by project resources.

3.16 Despite our sympathy with the understandable desire to maintain project staff at work on those activities which they have already developed, the evaluation panel strongly urges that in the remaining years of the project, that the management emphasize work by in-country persons. Notably, this view need not imply any change whatever in the plan of the contract, only a more deliberate respect for its terms.

Recommendations

3.17 RAPID II should develop a travel schedule for the remainder of the life of the project with a significantly reduced number of countries to be visited. The number of countries should not exceed fifteen and should probably be fewer. This decision would obviously cut back on the flexibility of the program in terms of offering RAPID presentations. This problem is addressed, however, by the decision to develop a software package which can be used without extended technical assistance from project staff.

3.18 The contractor should develop a plan for execution, commitment and disbursement of the full sum of \$1.5 million on LDC subcontracts by December 31, 1987. This plan should fully describe the pipeline or critical path needed to achieve this goal; it should specify targets with respect to interim dates. USAID should review progress in about six months to see whether the contractor is on the critical path. If not, USAID should cut back on funds for policy analyses, and for the related staff time of TFG and contractors.

3.22 The contractor should estimate the staff requirements and related efficiencies that will be essential to the execution of the plan. All subcontractor staff need to be fully informed, and be brought into accord with, plans to deploy resources to achieve the specific goals identified.

3.23 TFG should enter into contact as soon as possible with the contractor for the dissemination project to be awarded by POP/PDD with a view to effective use of the results of the LDC subcontracts funded.

3.24 The contractor should propose an effective solution to contracting delays agreeable to USAID by September 1, 1985.

IV. RAPID Model and its Presentation

4.1 RAPID II staff estimate that 1,335 persons have viewed presentations in the 1983-85 period under this contract (see Table 4.1). These include nearly 100 persons at a ministerial level or higher in the governments of fifteen countries. 8/ More than half of all presentations have been given to the category, other government officials. These include technical staff of operative and planning ministries who are involved in the planning and execution of population policies and programs. 9/

4.2 One crude indicator of the cost-effectiveness of the RAPID II program is the simple division of total program costs devoted to such presentations, i.e., all expenses not directly attributable to policy analyses, by the number of persons who have viewed them. Assuming \$2.5 million spent for these activities, divided by 1,335, yields a cost per viewer of \$1,873. (see paragraph 2.7 above).

4.3 Whether one regards the above cost per viewer as expensive depends on the efficacy of the presentations. Those who believe that rapid population growth seriously diminishes prospects for achieving reasonable standards of living may readily conclude that this level of expenditure can, if effective, purchase large improvements in standards of living, particularly in Sub-Saharan Africa. Nonetheless, virtually all observers would agree on the desirability of reducing costs per viewer.

4.4 Most persons in the donor community have found the RAPID presentations to be useful.

8/ One member of the evaluation panel was present for a presentation to the Minister of Health of Jordan as it was given by Mr. Stover at the World Bank. This presentation was evidently not included in the data for Table 4.1. The table also does not include information on the recent presentations in Nigeria, Mali, and Senegal. There may be other omissions as well.

9/ RAPID II staff noted that data in Table 4.1 do not necessarily include presentations by persons in LDCs who have been trained by TGF staff. Furthermore, "RAPID II has trained Nigerian presenters and computer operators and promoted presentations to several hundred policy-level officials in all federal ministries. Such presentation will soon take place to two to three thousand officials and other influential people in all 19 states."

TABLE 4.1

Number of Persons Who Have Viewed RAPID Presentations 1963-85, by Country and Structural Classification

(Note that all presentations are in-country and only include presentations made by RAPID II)

COUNTRY	Ministerial Level or Higher	Other Government	LDC Private	Other Donors	TOTAL
Chad	14		5	16	35
Dominican Rep.			36		36
East. Carib.	30	51	85	11	177
Ecuador		10		4	14
Egypt			11	55	66
Ivory Coast				76	76
Jordan		50	40		120
Kenya	5	27			32
Liberia	7	53	6	51	127
Mexico		52			52
Niger	8	72	25	3	108
Pakistan	15	65			80
Sierra Leone		37	9	18	64
Sudan	3	19			22
Tanzania	14	277		33	324
TOTAL	96	753	219	267	1335

- RAPID presentations are believed to have had some impact on the senior management of the World Bank in favor of a more active role on population matters;
- USAID's Desk Officer for Pakistan noted that RAPID modeling plays a small but significant role in mission planning in population and agriculture;
- Population specialists in the Latin America and Africa bureaus expressed satisfaction with the results of RAPID presentations;
- USAID/Haiti is using the RAPID model for agricultural and forestry planning;
- World Bank project planning in Nigeria is making use of RAPID modeling as part of sector work and identification of possible operations.

The evaluation team has no doubt that many other positive results of RAPID activities worth citing could be listed. There is also evidence of significant improvements in the presentation during the past two years. Most dramatic is the adaptation for use with the IBM-PC, a microcomputer now widely in use. The graphics have also been improved.

4.5 Despite its successes two broad areas for improvement of RAPID operations are needed. 10/ First, a program must be

10/ An earlier evaluation of RAPID I made recommendations broadly similar to those included here. Of 21 recommendations, the following are worth quoting in part:

"3. In-country collaboration has improved since the contract was revised in 1980..., but increased effort would be useful.

"4. A greater effort should be made to contact and involve official government data-collection agencies in the preparation of country analyses.... Staff should spend more time with local sources of data.

"7. In-country presentation should be made in collaboration with a host-country sponsoring organization or interested individuals, and not as independent presentation by a U.S. organization.

"10. RAPID is intended primarily for policymakers and political and national leaders, not planners and budget experts.

"11. TFG should continue to try to identify local institutions involved in social and economic planning and training that are willing to do follow-up.

"12. Training of host-country nationals...should be strengthened to enable local personnel to modify the basic presentation...

"13. Additional in-country collaboration may cost more, but it

developed which is user-friendly and can be taken over by personnel within countries; second, remaining resources for the RAPID-style presentations component of the project (approximately \$1.1 million in the remaining life of project) should be preferentially devoted to this aim over further staff presentations. As a refinement on earlier evaluations we now believe it is possible to define much more limited priorities, and that such definition is essential to achievement of project goals.

4.6 The following section of this chapter summarizes a technical evaluation of the RAPID computer-based presentation activities. 11/ It demonstrates several important points. First, the model as it exists is not user-friendly. Second, despite many millions of dollars of expenditure, it is not yet possible to put a package directly into the hands of LDC personnel so that they can make demographic-economic presentations. Such presentations would have an impact on the broader publics beyond the offices of ministers and other senior officials. Third, staff time has been spent unproductively on development of sub-models which, in some cases, have dubious value to the main purpose of influencing opinion leaders and not technicians (see Recommendation 10 in footnote 10). Finally, without clear and limited guidelines for future activities there is the danger of dissipating limited resources on too many unrelated activities.

4.7 The RAPID project is still at an early stage of development in the sense that a considerable amount of work remains to get the models into a form in which they could be used successfully by LDC personnel. The computer programs as they stand now are usable if a trained person runs them. 12/ When the trained person goes home, the program will be, for the most part, inaccessible to the people whom AID wishes to help. For example,

can be financed by adjusting, if necessary the total number of country analyses. The team recommends that this action be taken to increase collaboration."

11/ See the annex; its principal finding is that the model is useful to bring population matters to the attention of policy-makers. Its author, however, does have reservations about the directions taken in recent development of the model. He offers an extended discussion of technical details that leads to the conclusion that the model cannot currently be put into the hands of people outside the project staff for presentation to LDC audiences. The eventual utility of the model is unduly restricted unless it can be made more accessible.

12/ In fact, several RAPID personnel in the U.S. feel uncomfortable making presentations if another person is not present to handle the computer portion of the presentation.

in none of the four countries visited by the evaluation team does the model currently run without programming errors nor are local personnel able to correct the errors in the program (see chapter 5 below). This means that the impacts of the programs are far below their potential.

4.8 TFG staff can present the model to the Prime Minister, but there are many other people in the country who could benefit from seeing the show as well. These people may be lower level officials in the capital or administrators in various outlying cities. The Futures Group workers cannot be around to show the model to everyone. If the model is to be a useful tool to initiate interest and discussion, local people will have to run the model for other local people.

4.9 A moratorium on program development should be called and the producers of the programs be asked to develop a statement of their goals and how their programs will help them meet these goals.

4.10 The relationship between the goals of the RAPID project and its outputs is not clear; the modeling effort should thus take a short breather of three months or so while the program creators consider ways of making the programs easier to run. All RAPID programs should then be written in the same programming environment.

4.11 Certain parts of the economic-demographic relationship need to be eliminated from the program until the assumptions underlying this section of the model can be made more realistic. The basic economic model in RAPID II is too simplified to be useful or instructive, and most of the economic projections need to be removed until this is corrected.

4.12 The TARGET model is a creative idea that points the way to the sorts of programming that can be done within the RAPID framework. Nevertheless, the model shares many of the faults of the demographic projection model: It is not user-friendly; it is too easy to crash, and it needs more internal documentation.

4.13 The creators of the cost/benefit model (Bangladesh) have not done the cost-benefit modeling correctly; the measurement of the benefits of births prevented is not on strong enough intellectual grounds to justify the inclusion in a RAPID model at this time. ^{13/} Most of the community of scholars gave up the idea of

^{13/} Compare observations in Section 5 of the annex with those included in a 1974 review of work by some of the same authors who contributed to the cost-benefit model research funded under RAPID II:

estimating the value of births averted sometime between the early 1970s and the 1980s. They did so because of the philosophical problems that surround treatment of the welfare of those included (excluded) when a birth was permitted (averted). There is no denying the very considerable interest which many analysts have in this area of investigation. Nonetheless, it is puzzling that a program aimed principally at presenting the findings of well-established and widely-accepted research would devote its resources to an area abandoned by mainstream research workers.

4.14 The socioeconomic determinants model is, at present, a set of ideas in the process of coalescing. Continuation of this line of research is clearly in order, with emphasis on the single country model approach. It will, nonetheless, prove difficult to incorporate this work within the RAPID project.

Recommendations

4.15 The limited model-building resources which remain to the project should be devoted to producing a user-friendly system of computer software usable on either IBM-PC or Macintosh hardware. One possibility would be a package of diskettes and manuals for operations which should be submitted in an adequate number of copies, perhaps 200-500 to USAID not later than

Simmons undertakes a different approach to estimating birth averted. He asserts that, in the Indian context, there is little reason to believe that significant social and economic changes have occurred which could lead to lower fertility. Using Potter's method, (Behrman, Corsa and Freedman 1969, 413-34), he estimates the number of birth prevented by IUDs and sterilization, but he observes that the "potential fertility of the IUD adoptors is difficult to estimate" (Simmons 1971, 52). Undeterred, he goes on to estimate not only how many births were averted, but how much each averted birth was worth (7,800 rupees at 1967-68 price levels) and thus the total benefits of the program. His calculation leads to the conclusion that the return to expenditure in 1969-70 was of the order of 40 times the cost of the program (Simmons 1971, 93).

One wonders how a program which is alleged to have yielded such returns could come under any criticism; the contrast between Simmons' findings and those of micro-level analyses, such as the Khanna Study, certainly brings his conclusions into question. Consistent with the difficulties of this approach is the fact that most investigators are more cautious (W. McGreevey and N. Birdsall, The Policy Relevance of Recent Social Research on Fertility, Washington, D.C.: The Smithsonian Institution, 1974, 48-9).

December 31, 1986 for distribution to missions and LDC beneficiaries. The software package should be reviewed by USAID before accepting delivery, and USAID should make use of skilled technical consultants to review the package and suggest changes or improvements in it. It may also prove desirable to produce the materials in languages other than English and to assure compatibility of diskettes with clones produced in other countries.

4.16 RAPID II should suspend support for work using controversial research methods such as those aimed at estimating the economic gains from births averted.

4.17 RAPID II should support further work on the socioeconomic determinants of fertility only if it can be shown that such work can contribute to presentations that will be made in 1986 and 1987; longer-term experimentation should be supported from other sources aimed at more basic research; or, if it is a part of the LDC policy analyses and is done by or in collaboration with LDC researchers.

V. Country Visits by the Evaluation Team

5.1 As part of the evaluation of RAPID II, two members of the evaluation panel made field visits to countries in which activities are currently underway. The purpose of these field visits was to assess progress and to identify problems and possible solutions. Mr. Bergman visited Liberia and Cameroon; Mr. Godwin visited the Dominican Republic and Ecuador. They have prepared separate trip reports of their visits which are provided for under terms of their contract with ISTI. The discussion included in this chapter summarizes their findings.

Dominican Republic

5.2 Perhaps no country better exemplifies what RAPID II can do than does the Dominican Republic. In 1983 Ms. Connie Carrino visited the D.R. to initiate RAPID discussions and describe the RAPID model to personnel within CONAPOFA (the population unit within the Ministry of Health). In March, 1984, Ms. Carrino and Mr. Ed Abel visited the D.R. for 12 days to provide training to CONAPOFA personnel. Since that time, only a single visit by Mr. David Skipp for two days has taken place.

5.3 Despite this low level of inputs by TFG into the country, the personnel at CONAPOFA have done an excellent job of utilizing the RAPID model and reaching both middle and high levels of decision-makers within the governmental bureaucracy. In June 1985, a subcontract was signed between TFG and CONAPOFA establishing an inter-ministerial working group that reviews, updates, and presents RAPID/D.R. on an ongoing basis. This working group also prepares hard-copy materials from the RAPID model to disseminate to larger groups. ^{14/} The inter-ministerial group includes personnel from CONAPOFA and the ministries of Agriculture, Education, Planning, Statistics, Public Health, and the Institute of Population and Development. In all cases the persons represent-

14/ The evaluation panel reviewed a bulletin concerning the relationship between population and the production of food and nutritional levels in the Dominican Republic. This brief publication, prepared by the Institute of Population and Development, is one of seven reports which show projections concerning the impact of differing rates of population growth on various sectors of the economy and on service delivery. One can readily see how the graphics from the RAPID model have been utilized in the preparation of this bulletin. For all seven substantive areas for which reports have been prepared, three separate publications were produced--a brief 4-6 synthesis, a 15-20 page report which gives more detail, and a 50-70 page report which examines the issue in depth.

ing their ministries are at the Secretary or Assistant Secretary level. Members of this group utilize the model to initiate discussion concerning demographic changes and planning issues and they make presentations on population and development issues to members of their own bureaucracies and to various groups in both the public and private sectors in the D.R.

5.4 RAPID has made a substantial impact on public policy in the D.R. It has been used to stimulate discussion and shown the importance of integrating demographic considerations in almost every major sector of the government's planning process. RAPID II did not bring about a favorable attitude toward fertility reduction policies in the D.R., both the current and previous presidents of the country supported such policies before the introduction of the RAPID model. The model has educated the elites concerning the number and types of interactions between demographic variables and a wide range of issues and the model has been useful in showing the interactions among various economic sectors.

5.5 The interest in and success of RAPID in the D.R. indicates how useful the model can be in a location where both interest and expertise on population issues already exist. Leovigildo Baez, the Director for Research and Evaluation within CONAPOFA, and Nelson Ramirez, Director of the Institute for Population and Development, are both extremely competent persons who have extensive organizational and research talent.

5.6 The ability of RAPID to generate interest among educated and committed individuals shows the importance of developing a more general software model that can be used in almost any country where the data are available to input into the model.

Ecuador

5.7 Just as the D.R. exemplifies how useful the RAPID model can be under the best of circumstances, Ecuador demonstrates how difficult the introduction of RAPID can be in other situations. Because Ecuador was designated by USAID as a "priority country," TFG and its subcontractors have made a concerted effort to establish a population awareness using the RAPID model. To a large degree, however, these efforts have been thwarted by individuals within the Ministry of Planning (CONADE) who are not sympathetic to the population issue.

5.8 Only one of the candidates for the presidency of the country was supportive of fertility reduction policies, and the current president appears indifferent to the issue. Supporters of population policies missed an excellent opportunity to strengthen their efforts when Francisco Huerta, the candidate who was supportive, failed in his electoral bid and no one from RAPID II

or its collaborative institution attempted to recruit Mr. Huerta as a senior presenter. As a previous member of the Cabinet, a person long noted for his support of health programs and a popular politician, he would have been an effective addition to the project and a spokesperson for RAPID activities.

5.9 Because of CONADE's position on the relationship between population and development, TFG has been forced to work with a private organization, the CEPAR. This organization is primarily a research and research dissemination institution and does not have effective contacts with the planning ministry. In addition, CEPAR has a small staff that lacks sufficient expertise in statistics and economics to effectively carry out substantial policy analysis in the absence of outside assistance either from TFG or other consultants whom CEPAR can hire on a contract basis.

5.10 Ecuador also demonstrates how difficult using the RAPID model can be if the computer program has either data or programming problems. RAPID was first introduced into Ecuador in 1979 under RAPID I. Six years later, the complete model and accompanying booklet are still not ready. The first major difficulty occurred when the data in the Ecuador model appeared to be unrealistic. After that there were a series of programming difficulties and then still later, when most of these mistakes had been ironed out, the three population projections using the new data showed no significant differences between the impacts of growth rates A, B and C. 15/

5.11 The difficulties which TFG and its subcontractors have had in Ecuador demonstrate many of the changes that need to be made in the RAPID contract. First, as Warren Sanderson has demonstrated in his analysis of the basic RAPID model, the model is not as user-friendly as it should be if it is to be an effective tool for persons who are not trained in demography or computers. Second, longer visits with frequent follow-up calls are necessary to work out the bugs in the programs and to make sure that the policy analysis subcontracts are on schedule. 16/ And third, much larger LDC subcontracts need to be signed to give the LDC institution sufficient incentive to produce the work and

15/ The length of time and numerous delays are not solely the fault of RAPID personnel in the U.S. CEPAR lacks the staff and expertise to adequately use the model or to revise it when data or programming errors occur.

16/ An example of the absence of follow-up is also seen in the Dominican Republic where seven months after CONAPOFA reported an error in the graphics subroutine TFG had still not corrected this error and line graphs could not be produced for many of the model's sectors.

to make the presentations. Most countries do not have the entrepreneurial and organizational talent devoted to population issues demonstrated in the Dominican Republic; incentives must be offered to attract and keep trained and effective personnel. The cost reimbursement provisions of the RAPID II contract have created substantial difficulties for CEPAR and have made it more likely that RAPID will be the lowest priority activity within the organization.

5.12 Ecuador also demonstrates the difficulty that RAPID II has had in preparing policy analyses for RAPID's priority countries. Although a country strategy paper was written, this paper did not identify the steps necessary to convince key personnel to utilize the RAPID model nor did it indicate what alternative personnel might be contacted should CEPAR and CONADE personnel be unavailable or unacceptable. Without this information, TFG did not have a fall-back position. Because the strategy paper did not set intermediate goals or deadlines, TFG did not have guidelines to determine when it would be best to stop spending resources in the country.

5.13 Finally, Ecuador illustrates the key role that the USAID mission officer plays in a country and in the RAPID projects. The AID population officer in Quito is a strong supporter of CEPAR and appears to have been reluctant to recruit alternative institutions or to encourage RAPID II to recruit other supporters. The absence of an effective policy map (see Section VI) or strategy paper which identified potential supporters and means of recruiting them when combined with a population officer with definite preferences has meant that significant opportunities for greater success have been missed. Even under the best of circumstances, Ecuador would be a difficult country; the oil boom overshadows other issues. It encourages qualified social scientists to work in petroleum related areas, and it leads elites to worry less about potential resource shortages.

5.14 RAPID presentations were designed to change the minds of policy-makers; most countries have now taken the initial steps toward a population policy. It may thus be unnecessary to go on supporting, for many more years, these kinds of presentations. The creation of a user-friendly software package, accompanied by some technical assistance, should be adequate.

5.15 A more technical and economically sophisticated package of activities will be needed to deal with those countries which have policies but which do not have really effective programs (Bangladesh, Pakistan, Brazil). Simulation model approaches to the negative consequences of population growth are ineffective in at least two of those countries. INPLAN may be a better base on which to build such work.

5.16 Future policy analyses should combine the best possible ingredients of U.S.-based external technical assistance with work done in LDCs by competent analysts. In the choice to pay for a day of effort by a U.S. national, and a day of effort by an LDC national, POP/PDD should opt where possible for the latter. U.S. personnel should be selected from those persons who are comfortable in subordinating their own interests to those of the LDC persons and institutions with which they must work.

Cameroon

5.17 An active interest in the economic and social consequences of population change, and a desire to refine and expand the knowledge, is fixed in important sectors of the Cameroon decisionmaking system. Despite the traditional cultural barrier to population limitation, political leaders and their senior advisors must be credited with a sensitivity to the adverse consequences of excessive population growth in a country that can make it with wise planning and decisionmaking. The Cameroonians discovered the issue on their own. But RAPID has aided them in bringing it into focus.

5.18 In a small country (about 8.5 million) with a small bureaucracy and research community, the RAPID activities brought in a display and outside specialists who could function as catalysts and provide some technical assistance and financial support--and an incentive for more organized research and reflection on the population dimensions of priority national development issues. Four key segments of the policymaking system--information providers and consumers--are involved in activities directly related to or supported by the RAPID project. These are: 1) the Ministry of Planning and Regional Affairs (governmental focal point for population issues); 2) Center for Economic and Demographic Research in the Institute of Human Sciences (the government's principal source of policy research); 3) the Ministry of Agriculture (agricultural development and food production is the number 1 priority in the government's development planning); and 4) the Ministry of Health (location of the maternal/child health program that will carry a family planning component). By making possible activities in these institutions, RAPID is responsible for creating some ripples in the policy structure. With the concepts accepted and the activities proceeding, the question is where to go from here, because the first half of RAPID is concluded.

5.19 The Cameroonian political system is another variation of the prevailing African model, with a single party and a single leader. But there are some important differences determined by the personality and predilections of the leader and the economic circumstances of the country. Unlike other African countries afflicted with primordial economic distress, Cameroon enjoys the

resources and capabilities to make it. The economic vital signs are robust, and though oil revenues exaggerate them, they would be sound without the oil. The country can feed itself, and is a net food exporter. The regime is committed to agriculture as the dominant economic base and determined to avoid the "boomerang" impact of oil that it has observed in Nigeria and Gabon. Under the circumstances, there is optimism and realism, which contribute to political tranquility.

5.20 The president functions as the nation's decisionmaker. But instead of doing so at the top of a pyramid, his leadership style has been characterized as the hub of a wheel, whose spokes extend out to his ministers and advisors. Their inputs are mediated by an effective secretariat in the presidency, which does the screening in and out. But the president is reachable.

5.21 The technocrats in the bureaucracy play an important role as framers of the policy agenda and principal providers of information to the political leadership. Because of their information role, on which the leadership is highly reliant, and of which they are accepting, the technocrats enjoy considerable influence on the policy agenda. They not only respond to decisions; they pose the issues for decisionmaking. The key man in the government on population matters expresses satisfaction that he and his colleagues are paid attention to by the politicians and claims they are influential in the process.

5.22 Most of the participants in RAPID presentations have been mid- and senior-level technocrats. A number of ministers, including Ahidjo's last prime minister, have also seen it. But the actual eyes-on involvement of the politicians is not a critical requirement. In fact the government's population advisor resents what he considers RAPID's fixation on playing to that audience. He recommends a concentration on the technocracy, who are best positioned to assimilate the information and utilize it to advise their principals.

5.23 Under the circumstances, RAPID has accomplished the initial awareness job in Cameroon and no longer needs to seek out blue-ribbon political audiences. The next phase of the project, or its successor, would involve expanding and deepening information about the development/demographic relationships, which are fully acknowledged as relevant, among individuals and institutions that are positioned to contribute a better-informed population consciousness to policymaking about development issues. Though this effort would involve presentations of RAPID models to selected groups, the show-and-tell phase of RAPID is over. The awareness phase now can be succeeded by the utilization phase.

5.24 The utilization phase of RAPID in Cameroon involves expanding information about population/social economic linkages important to the country, training more people who can develop and pass along the information, and providing tools and skills to enable them to do so. For these purposes, USAID could harness individuals, skills, and institutions already in the country. As examples, both the Ministry of Planning and the Center for Economic and Demographic Research emphasized their need for training in demography, and in fundamental computer use. They were interested in more computers too, but the USAID population officer said that once the institutions have trained personnel who can use computers, there will be ample incentive for the governmental institutions to purchase them with their own budgets. USAID does not have to be a supplier of personal computers in this country. Meanwhile, equipment USAID has supplied (for example, the Apple to the Ministry of Planning) is underutilized for lack of trained users and lack of elementary software (they do not even have a spreadsheet program to construct RAPID-type designs).

5.25 These gaps are easily and economically correctible. Some elementary computer-use tutorials--such as those given in U.S. user groups--would sufficiently familiarize the potential users. From the tutorials, they could move on to menu-driven commercial software--such as MultiPlan or Lotus 1-2-3--to perform most of the tasks they would find profitable. They do not have to be transformed into programmers or modeling experts. If they need any fancy stuff, they can turn to some of the professionals who operate the government's mainframes. But this elementary capability would enable Cameroonians to construct and test their own population/development models.

5.26 Beyond the training in computer use, there is the longer-term training in population studies to provide governmental institutions with an enlarged cadre of specialists to perform analytical functions. Such training could be considered in U.S. institutions for degree programs (for the time being, master-level programs are adequate), and short and refresher courses and seminars designed for interchanges among RAPID researchers. As for the regional demographic studies centers as facilities for courses, the existing ones in Accra and Yaounde did not elicit high ratings (Yaounde because of its Francophone bias).

5.27 The tasks involved in the utilization phase reflect an early maturation of RAPID II. But to exploit the breakthroughs the project has made in Cameroon, a series of midcourse corrections and reallocations of resources that address the actual needs expressed by Cameroonians and Americans here should be considered. (Similar alterations were suggested by the Liberian experience, see below.) These changes include management style and structure of the RAPID contract. If they could be accom-

plished, USAID's investment would increase in value, and Cameroon would profit. Some of these changes will be specified in a more general discussion of what was learned in visits to the programs.

5.28 In sum, Cameroon is ready for, and indeed needs, the follow-up to RAPID that would best serve its requirements. A relatively modest investment by USAID would go a long way in responding to the requirements. And because of the favorable economic and political climate, Cameroon is a good bet for the investment.

Liberia

5.29 RAPID in Liberia is a success story. This is a particularly notable accomplishment because it happened in the environment of economic distress and political instability that pervades Liberia. USAID population activities in Liberia now are poised to move beyond RAPID in the form of a bilateral family planning project proposed in May by an assessment team and accepted by the mission as a program target for FY 1987. Although factors other than RAPID have contributed to the atmosphere in which expanded family planning program assistance becomes a realistic program target, the extended understanding and awareness that RAPID facilitated among Liberian officials and researchers are credited. It is, of course, impossible to measure the RAPID contribution, but everybody involved in the activity, Liberians and USAID people, give it credit.

5.30 The tangible achievements of RAPID over these two years meet the goals established : (1) two presentations of the model to groups of senior officials (bureaucrats, not political leaders), the most recent of which was in a two-day conference on population issues; (2) the creation of a population committee as an intergovernmental clearinghouse for population research activities and preparatory body for a more formal governmental commission (this would not have been done without at least tacit political concurrence); (3) the assumption of leadership in population matters by an informed and energetic Deputy Minister of Planning and Economic Affairs (this ministry is the local counterpart to our Office of Management and Budget, though without the direct political influence); (4) the launching of four research projects in the Ministry of Planning and at the University of Liberia on social and economic dimensions of population change, conducted by professionally credentialed researchers; (5) the installation of two Apple IIe computers in the Ministry of Planning and at the university, both of which are in demand for project research, computer training, and other functions (the one at Planning is used to maintain the Liberian consumer price index with VisiCalc software); (6) involvement and support by the departing USAID population officer and the expression of interest and support by the incoming one; and

(7) the active monitoring and backstopping by the representative of the University of North Carolina subcontractor.

5.31 These achievements suggest the ingredients of a critical mass required for the success of a RAPID country project. Surprisingly, at least in this case, a major commitment by the political leadership is not one of them. Whatever their understanding of population issues, the Liberian leaders are currently preoccupied with matters more critical to them, not the least of which is their own survival. But the key components of this critical mass seem to be, on the host-country side, some interest and skill in key places and senior ranks of the bureaucracy and some interest and incentive in the research community; and, on the AID side, an enterprising USAID population officer and an energetic and uninhibited subcontractor representative. Without these key elements, a successful RAPID project could not be imagined, even in a supportive political environment. Beyond the overall administrative backstopping and the unique charismatic quality of the subcontractor representative, it is difficult to identify the singular role of TFG in this critical mass.

5.32 With the mission commitment to an expanded family planning project, and Liberian bureaucrats and family planning association interested in doing it, the mission of RAPID as an awareness project aimed at "influentials" is concluded. Awareness now has to be directed to a grassroots constituency, with different techniques and materials.

5.33 Two of the management issues raised by the Liberia RAPID experience are (1) the desirability of a full-time RAPID coordinator in the field to cover a group of projects--the USAID people in Monrovia felt this would be helpful; and (2) simplification of the clearance process for research proposals to one responsible point, most logically the subcontractor who would be held accountable for conformance to project objectives and results--contrasted to the existing three-level clearance involving TFG and AID, in addition to the subcontractor. Payment delays to researchers was also an annoying issue here. These three management issues should be resolved as soon as possible.

VI. Population Policy Development: What Works?

6.1 A critical problem in the area of population policy development is that we still do not know what works. AID has by now sponsored more than a dozen separate projects calling on skills in the social sciences to contribute to understanding how governments come to decide to institute population policies; yet none of these projects has successfully identified a recipe for action to bring about policy change. A standard recipe for inducing action does not exist because population policymaking, like policymaking in any sector, is imbedded in the unique political system of each country. The limitations in each of these systems, ranging from traditional cultural values to what elites must do for political survival, determine the conditions of policymaking. Under the circumstances, AID must recognize the limitations on its efforts, however well-designed.

6.2 It is perhaps only the perceived urgency of the population problem which has led AID officials to continue work in such a difficult area. The specific successes of policy change have been few, and after about 15 years of effort, there are still no clearly identified guidelines for policy impact. Neither can there be precise assessments of the determinants of policy changes, where they have occurred. But AID's involvement has contributed both to raising awareness about the role of population change in development and to improving the quality of information available to do so. The encounter with the reality of population change, fostered by information and communication, has provided a sobering experience for political leaders in a number of developing countries. It has been a key factor in the shift from the rhetoric of the 1970s to a more reasoned assessment of population's role in development in the 1980s.

6.3 The International Conference on Population in Mexico City in 1984 provided solid evidence of this transition. Contrasted with its Bucharest counterpart 10 years earlier, where ideological third world rhetoric dominated the proceedings, the Mexico City meeting confronted the realities of population changes in third world development. By 1985 virtually all governments in the developing world had changed their positions in favor of, at the least, a permissive attitude toward active family planning programs. And some governments in East Asia had gone much farther than even the donor nations in terms of incentives to slow population growth.

6.4 In a January 1985 review of activities in population and development planning, a UNFPA-sponsored seminar concluded that there had been considerable progress in bringing population issues to the fore in national debates and in integrating population planning into the core of development planning activities in many countries. It is not possible to attribute

to any specific investments or projects the overallly change in the population policy environment. In such regions as sub-Saharan Africa, however, the change is dramatic. Just a few years ago, most governments were unwilling to tolerate family planning activities in the organized private sector (through IPPF affiliates, for example), even when those activities were principally defended as contributing to improved maternal and child health. Despite the continued dominance of the large family norm in these countries, most of their governments openly acknowledge the legitimacy of family planning for health and family welfare and economic reasons. In Liberia, Cameroon, and others, the governments have approached AID for assistance in creating programs that address these goals.

What We Know About What Works

6.5 Despite success in the large, the failure of policy analyses to identify what actions are working is notable. RAPID II sponsored preparation of an overview paper, Population Policy Formulation: An Analytical Framework, by C. Alison McIntosh of UMI, to help identify what works. The summary of that paper begins with these words:

"Despite 20 years of effort to regulate population growth, there is little systematic knowledge of the processes through which policies are formulated and implemented. As a result, national and international agencies are formulated and implemented. As a result, national and international agencies lack guidance on how best to introduce policy initiatives and move them through the political system to adoption and implementation (McIntosh 1984, p. 1).

Not only is it discouraging to find such a conclusion at the start of a review, but both the approach employed to examine policymaking, and the conclusion itself, are faulty. This bad start clearly is a factor in the failure to produce the policymaking maps that were called for in the RAPID II contract.

6.6 A general theory of policymaking is likely to be just as elusive as the general theory of politics to which political scientists have aspired for the past 30 years. Whatever academic merit the quest may have, it is irrelevant to the portrayal of policymaking systems that would be useful for RAPID II. Essentially the information required for purposes of RAPID involves: 1) who has the clout, and 2) how is it exercised, and 3) how might population programs fit with the objectives of those in power. During its four-country field visits, the team was able to collect this information easily by employing nothing more elaborate than conventional methods of investigative journalism,

and it was immediately helpful in assessing the prospects for population policymaking in the countries.

6.7 It is our view that comparable information is required for the countries in which RAPID is operating, and particularly as an ingredient in deciding where it will continue to operate during the next two and a half years. The information does not have to be collected under the umbrella of an elaborate or sophisticated design; simple case studies describing the actors and the action are quite adequate.

6.8 RAPID presentations were designed to change the minds of policy-makers; most countries have now taken the initial steps toward a population policy. It may thus be unnecessary to go on supporting, for many more years, these kinds of presentations. The creation of a user-friendly software package, accompanied by some technical assistance, should be adequate.

6.9 A more technical and economically sophisticated package of activities will be needed to deal with those countries which have policies but which do not have really effective programs (Bangladesh, Pakistan, Brazil). Simulation model approaches to the negative consequences of population growth are ineffective in at least two of those countries. INPLAN may be a better base on which to build such work.

6.10 Future policy analyses should combine the best possible ingredients of U.S.-based external technical assistance with work done in LDCs by competent analysts. In the choice to pay for a day of effort by a U.S. national, and a day of effort by an LDC national, POP/PDD should opt where possible for the latter. U.S. personnel should be selected from those persons who are comfortable in subordinating their own interests to those of the LDC persons and institutions with which they must work.

VII. Some Major Problems, Potential Resolutions

7.1 This chapter discusses several major problems identified in the course of the evaluation. Some of these problems arise from the initial terms of the contract, others from practices of the contracting organizations, still others from the complications that arise from trying to conduct a single project with four institutions at five locations. It also reviews progress in responding to a management evaluation conducted in August 1984. Finally, this chapter identifies some areas for possible expansion, especially seminars and the Fellows Program.

The Overhead Cap

7.2 TFG bid the RAPID contract with estimated provisional overhead rates of 92.7 percent on labor and 23.9 percent on general and administrative expenses (G&A). These estimated rates were less than TFG at the time of the award. The AID Office of Contracts accepted these lower provisional rates and placed a ceiling on the total dollar amount of overhead chargeable to the project. In this manner, AID sought to eliminate any potential financial gain to TFG which might result from winning the competition through the lower provisional rates. The overhead cap or ceiling was fixed in the contract at \$1.6 million. The contract, then, has two unalterable line items: the overhead at \$1.6 million and the total cost at \$ 8.9 million.

7.3 After the contract was signed, AID allowed TFG to charge its audited and authorized overhead rates of 110 percent on labor and 25 percent on G&A. In the second year of the contract, TFG was permitted by AID to raise its overhead charges to 190 percent on labor while eliminating the G&A component. The overall effect of these overhead adjustments is that TFG now charges more overhead per unit of labor than under the provisional rates stated in the contract. Since the overhead is capped at \$1.6 million, TFG has less labor available to it than appears in the contract. The contract budgets TFG labor at \$947,445, while the present overhead rates accommodate a labor expenditure of only \$859,973.

7.4 The principal activities of TFG staff in the RAPID project involve modelling and presentations. These activities have been accelerated in the first two years of the contract because of requests from the field and because of the intensive efforts of TFG to generate demand in this area. At the same time modelling activities were accelerated, the amount of labor available to TFG declined. The result is that TFG has expended about 60 percent of its labor (and overhead) in only the first forty percent (two years) of the expected life of the project. This expenditure pattern is quickly exhausting resources for RAPID presentations and could restrict future presentation activities. A moratorium

on modeling activities was recommended in Chapter IV; that change can help considerably. Additionally, the subcontractors can contribute to these activities.

7.5 As provided in the contract, TFG charges no overhead on subcontracts. To conserve its scarce labor resources to carry out and manage the remainder of the contract, TFG has had to transfer some of its staff to subcontractor payrolls. The majority of project activities for the final years of the contract will be executed by subcontractor staff.

Delays in Regional Seminars

7.6 RAPID II has not conducted regional seminars in Asia, Africa or Latin America as provided in the contract. This is a serious omission. Project management has forfeited the opportunity to have LDC personnel exchange ideas and identify common difficulties with the project. In the four countries visited by evaluation team members several common problems were identified and if RAPID II project personnel met with participants from sets of countries it would provide the project an opportunity to identify and resolve such difficulties. Travel involved in such seminars may be less expensive than having U.S. country personnel go to the LDCs or having LDC personnel travel to the United States. Travel opportunities to discuss the RAPID presentations and common research opportunities are likely to be viewed as a benefit of being involved in RAPID; they can provide a fertile ground for the development of policy related projects by the participants and their institutions.

7.7 Regional seminars in Latin America and Africa should be planned as soon as possible. About three persons from each priority country, and possibly some non-priority countries as well, should attend these meetings. Participants would include a programmer (the individual in each country with primary responsibility for handling the computer portion of the RAPID presentations), the senior presenter, and one social science researcher. The first of these seminars should occur no later than March 1986; the other two seminars should take place prior to the end of August 1986.

The Fellows Program

7.8 RAPID II sponsored one meeting of program fellows in conjunction with the 1985 Population Association of America meeting. It was very successful according to all accounts. The program should be continued and expanded to the limit permitted by contract provisions.

7.9 More broadly, POP/PDD should fund more programs of this type. They bring together a highly selected elite group that

should be brought into the population arena. Support in this area should not be restricted to demographers but should reach out to students at PhD level in other social sciences, especially economics. POP/PDD might try to draw in MBA candidates at U.S. universities from target countries. The payoff in this area could be very large.

The 1984 Management Evaluation

7.10 POP/PDD conducted a management evaluation of RAPID II in August 1984. The results were conveyed to project management shortly thereafter. The following paragraphs review progress in responding to the 10 issues raised in that evaluation, identifying the issue (I), the recommendation made (R), and progress toward dealing with the issue (P) achieved by July 1985.

7.11 Issue 1. Administrative burden on POP/PDD and TFG.

I: There is considerable administrative burden on some of the project's key staff.

R: Continue to encourage open communications and streamlined procedures. Regular meetings of the Executive Committee have been requested by PDD. Policy analysis meeting requested.

P: Policy analysis meeting held in November 1984. Staff interviews with contractor and subcontractor staff indicate open communications but procedures need further improvement.

7.12 Issue 2. Administrative support and personnel.

I: TFG has only part-time assistance; there is an unnecessary burden on central project management staff who become involved in administrative details that sometime detract from more important work.... Subcontractor staff somewhat unresponsive due to teaching and other university duties.

R: Have full-time administrative assistant (AA) at TFG; reallocate time between contractor and subs in light of areas of strength, needs for coordination.

P: A full-time AA is in place. Some subcontractor staff reductions planned. Responsiveness by TFG still unsatisfactory to USAID. Responsiveness of subcontractor staff still an issue.

7.13 Issue 3. Management information.

- I: USAID found reporting inadequate on such matters as semi-annual summary of activities, technical progress on LDC subcontracts, and country updates.
- R: TFG should prepare accurate quarterly updates and submit them on time. PDD should monitor information flow and suggest improvements.
- P: Evaluation team found reporting to be inadequate: much data, little information. Project manager has agreed to add a deputy charged with improving the quality of reports. Panel provided verbal and written suggestions for improvement which were broadly acceptable to RAPID II management.

7.14 Issue 4. Budget implications of high demand for RAPID presentations.

- I: Field requests beyond expectations with no add-on funding provision under fixed \$8.9 million contract.
- R: New requests should be fit into budget by programming at a later date than has been requested, i.e., in 1985 or 1986.
- P: Evaluation team heard of only one unfilled request: for a presentation in Haiti. Thus excess demand may not be a serious problem. POP/PDD staff acknowledged their responsibility in supporting mission requests for presentations, agreed to be sensitive to the need to meet project goals and to avoid dissipation of resources.

7.15 Issue 5. Lead time required to fund LDC subcontracts.

- I: No starter funds made available to LDC institutions due to prime contract limitations.
- R: PDD staff to obtain advance funds for subprojects via FM and SER/CM.
- P: No resolution of this serious problem, but this report includes pertinent suggestions. Cost to TFG would be \$36,000 to advance funds; USAID could find a way to compensate in exchange for cooperation.

7.16 Issue 6. Size of LDC subcontracts too small.

- I: Original contract provided for 15 subs at \$100,000; those signed through August 1984 were 20 at \$8,000.

R: New subs should be larger and hence more efficient to administer.

P: RAPID II staff acknowledges the problem and is preparing to respond.

7.17 Issue 7. Is the RAPID approach effective?

I: TFG does work in U.S., shows it to audiences in LDCs with a view to policy change. There are often dead periods following the show, indicating possible loss of momentum. There is insufficient collaboration with host-country nationals.

R: Increase collaboration by local researchers and policy-makers. Produce outputs (books, pamphlets) on local presses with local imprints where possible. Some achievements along lines of Mexico and Ecuador cases needed in other countries.

P: PRB produced booklets on Nigeria and Sierra Leone under the subcontract but with the names of local organizations. This technique is cost-effective but local impact has not been verified.

7.18 Issue 8. Retarded implementation of regional seminars and Fellows program.

I: No seminars scheduled in first year of project; little accomplished to implement Fellows program.

R: Plan for seminars to be developed by end of October 1984; Fellows program to be initiated for FY 85.

P: Fellows met as scheduled at Boston PAA meeting in April 1985; program proceeding satisfactorily. No evidence of progress on seminars. Further meetings of Fellows need to be scheduled.

7.19 Issue 9. Assessing project impact.

I: Little attention given to measuring outputs and outcomes of first year of RAPID II project.

R: POP/PDD and TFG will develop specific indicators of progress and impact; staff will report on these indicators in trip reports and semiannual reports.

P: No evidence of these indicators was given to the evaluation panel; several indicators were developed in the course of the evaluation, including costs per RAPID viewer, LDC subcontract dollar per dollar of staff time expenditure, staff-

time per country, and the like. Because there are as yet no outputs from the LDC subcontracts it is not yet feasible to develop indicators to measure the adequacy of the policy analyses.

7.20 Issue 10. Quality of work.

- I: Quality of reports, particularly the semiannual reports but also the written outputs of the microcomputer models, submitted by TFG to USAID, inadequate. Time-consuming and inappropriate for USAID staff to provide editorial guidance for reporting to TFG staff.
- R: USAID will provide technical guidance to TFG during 1984-85 to help upgrade reports. USAID will review and circulate technical papers for comments, encourage TFG to transfer microcomputer models to LDC institutions. Subcontractor staff encouraged to help upgrade quality of models. USAID's PDD will continue to be an active partner in project management.
- P: Most recent semiannual report has some useful materials but could be improved in coverage and clarity. USAID has recently undergone staff reductions that diminish capacity to be an active partner in project management. TFG staff changes should improve the quality of reporting.

Project Management

7.21 Many of the issues and difficulties identified in the 1984 RAPID II Management Review (August 1984) continue. Our interviews with USAID staff in Washington found unanimity in their difficulty in obtaining scheduled progress reports and other information necessary to monitor the project. Part of these difficulties was the fact that project personnel are at four institutions in five locations. In addition, the project may have suffered from certain ambiguities of leadership that arise from the fact that the Principal Investigator and day-to-day manager are two different people. Many of the problems noted elsewhere in this report could be overcome with a clearer management structure that gives responsibility and authority to the head of the project. That responsible manager could then outline a definite set of goals and timetables for each country where RAPID II will generate policy analyses.

7.22 Members of the evaluation team met with senior management of TFG and suggested some changes in the project structure that TFG management agrees will be useful:

- Mr. Claxton will shift to the World Population Society,

so his role as Principal Investigator could shift to Mr. Cole;

- To enhance the quality of the documents submitted to POP/PDD (especially trip reports and semiannual reports), one of the regional coordinators could perform the additional duty, under the direction of Mr. Cole, of transmitting all documents sent by project staff to POP/PDD;
- The regional coordinators for Latin America, Anglophone Africa, and Francophone Africa could absorb the duties initially programmed for the coordinators assigned at PRB, UNC and UMI;
- To ensure more effective and efficient use of resources in generating LDC subcontracts, the regional coordinators will have to expand their monitoring activities.

The regional coordinators must implement the recommendations concerning LDC subcontracts and timetables specified elsewhere in this report. Limiting the number of countries where subcontracts will be generated should make the tasks of the regional coordinators manageable. The specifics of these changes in duties are contained in documents under preparation by TFG.

Recommendations

7.23 Regional seminars and the Fellows program should proceed as noted earlier in the text.

7.24 Management changes outlined should be put into place as quickly as possible so that other decisions with respect to the future work program can be implemented soon.

7.25 RAPID II staff should review progress in responding to the management evaluation and comply with remaining incomplete actions.

VIII. RAPID II activities, 1985-88

8.1 RAPID II has expended about forty percent of the time and money available under its original contract. Much has been accomplished with those resources. Most notable has been project responsiveness to the needs for effective RAPID-style presentations in sub-Saharan Africa. Ample resources, more than \$1 million, remain to continue this work. Emphasis must shift to policy analyses organized by RAPID II staff but carried out by LDC personnel. Substantial resources, about \$4.5 million according to paragraph 2.7 above, remain to execute this work. If these resources are used effectively, they can yield results contributing to project goals.

8.2 The evaluation panel sensed the urgency felt by project staff and in POP/PDD to move forward to achieve project goals. Activities completed in the first two years of the project have used more TFG staff time than had been anticipated in the initial budgeting process. The reason is that demand for completion of RAPID II presentations proved to be somewhat greater than anticipated. As a result there is less TFG staff time available for the remaining three years of the project than was used in its initial two years. As was indicated above, project management has already devised some adjustments to this changing situation of staff-time availability. This chapter discusses some adjustments in staff-time allocations by institution that derive from the shift of project emphasis toward policy analyses and LDC subcontracts. To the extent possible, the evaluation panel has tried to identify benchmark dates (particularly the time, approximately 6-8 months from the date of submission of this report which can occasion further review of progress).

The Futures Group

8.3 For the first 18 months of the contract neither USAID nor TFG made the necessary staffing changes that would allow the contract requirements to be met, given the constraints on staff time which the overhead cap presents (see Chapter VII above). In the startup period RAPID II spent more resources--and therefore more TFG staff time--on computer models and RAPID presentations than it should have, compared to contract provisions. The UMI, UNC, and PRB spent less time and money than anticipated. One result has been a dearth of LDC policy research.

8.4 The constraints on the total budget and the overhead, are not going to be changed. To reduce its spending levels TFG released certain personnel and moved others to subcontractor staffs:

- Mr. Claxton shifts to the World Population Society;

- Mr. Goliber shifts to The Population Reference Bureau where he will continue as part of the RAPID II project;
- Mr. Cole will devote less of his time to RAPID II during the remainder of the project.

These changes will reduce TFG direct labor costs and related overheads. A major question remains: Will TFG staff time be adequate to complete the work initially programmed? The recommendations below offer suggestions the evaluation panel believes will increase the probability that the work will be completed. The panel has identified progress indicators that can be checked by POP/PDD in about six months to see whether TFG is on the critical path toward achieving project goals. If it is not, USAID could reduce total funds committed to the project. Such a change would provide for reducing funds which cannot successfully be committed to LDC subcontracts and reducing labor costs of U.S. subcontractors that complement those resources.

8.5 RAPID II must give priority to developing LDC subcontracts and to making the basic RAPID model more user-friendly. All TFG staff time must be devoted to these goals and no staff time should be devoted to other models until USAID is satisfied that the original contract requirements in these areas will be met.

8.6 POP/PDD must assist TFG to turn down all but a few RAPID presentations. The number of these presentations could be limited to a maximum of ten in the remaining life of the project. That number might cost \$400,000, somewhat less than 40 percent of funds remaining in the budget for RAPID-style presentations and their ancillary support work. POP/PDD should consider allowing presentations paid for by country missions to augment the size of the RAPID II contract during its remaining life.

8.7 TFG must use subcontractors who can spend more time outside the U.S. so that policy-relevant research by LDC personnel can be generated and supervised.

Population Reference Bureau

8.8 PRB will continue to concentrate on those aspects of the project that are nearer to the end of the pipeline, particularly the dissemination of findings incorporated in the reports of RAPID II. These reports include the presentations made in the countries by project staff, special reports on population policy that may occasionally be prepared by project staff, and the reports based on LDC subcontract work conducted. PRB will concentrate on printed products, but will also be called upon to

help organize seminars and to perform such other tasks as fit both the project scope of work and the work program of PRB.

8.9 The addition of Mr. Goliber to PRB's staff will enhance PRB capacity to contribute to project goals.

University of Michigan

8.10 Some staff changes (especially the departure of Ms. Marie Claire Rens, who contributed to development of activities in Cameroon, Burundi, and Senegal) leave UMI somewhat weaker now than it was in the first two years of the project. ^{17/} The UMI team may not do as well in the next three years as it has done in the past two, in light of personnel changes.

8.11 Thus it may be prudent to reduce some of the staff time initially assigned to UMI to enhance the likelihood of project success. It would be inadvisable to send staff out on missions unless there is a clear probability of success, this measured by ability to identify local individuals or institutions that can conduct effective work on population policy under subcontract. The ability to do this work depends on past experience in doing it. The scope of work at UMI needs to be limited to those activities in which staff can perform well.

8.12 We suggest the following tasks for the UMI group:

- Wrapping up modeling work on those tasks identified by TFG to put together the transmissible software package described elsewhere in the report;
- limited travel to LDCs for identification and preparation of LDC subcontracts within the general provision of the contract.

The reduced scope would also reduce the need for coordination and secretarial support at UMI. There does not now seem to be a real need for coordination and the limited time devoted to that function in the past could be freed up for more direct project activities.

^{17/} Ms. Rens spent more days (242) in the field than any other person supported by the project; she generated subcontracts totaling nearly \$200,000 which is considerably more than any other staff person. Other UMI staff spent many days in the field without generating any subcontracts. This discrepancy is in part explained by the shift of the financing of some project-related activities in Morocco and Senegal to another intermediary organization funded as part of the USAID population policy portfolio, INPLAN.

The University of North Carolina

8.13 Several members of the UNC staff were among the more productive persons in generating LDC subcontracts, including Ms. Lacey, Mr. Freymann, and Mr. McDevitt. The program should continue to build on their successes and help them increase their productivity.

8.14 As with PRB and UMI, we suggest elimination of the coordinator role at UNC as well. The savings in staff time should be applied to generation and management of LDC subcontracts.

Recommendations

8.15 TFG should provide to POP/PDD quantitative, dated progress indicators indicating minimum accomplishments by March 1, 1986. POP/PDD should decide at that point whether progress is adequate. If it is not, then those components of the program not advancing on schedule should be terminated. As appropriate, funds could then be redeployed for execution under other projects in the POP/PDD portfolio.

8.16 PRB should concentrate on those dissemination activities included within RAPID II that are consistent with its overall mission. Mr. Goliber should continue to execute the important role of regional coordinator for Anglophone Africa.

8.17 UMI should prepare for a reduction of effort consonant with changing project priorities and UMI staff capabilities as discussed elsewhere in this report. The role of RAPID II coordinator at UMI can be eliminated and the staff-time savings allocated to generation and management of LDC subcontracts.

8.18 UNC should build on the strength of staff who have successfully generated subcontracts in Africa. The role of RAPID II coordinator at UNC can be eliminated and the staff-time savings allocated to generation and management of LDC subcontracts.

LIST OF PERSONS MET BY EVALUATION PANEL, BY ORGANIZATION

USAID

Steven Sinding, Duff Gillespie, Elizabeth Maguire, Harry Cross, John Dumm, Judith Seltzer, Adrienne Allison, John Crowley, Scott Radloff, Maria Mamlouk, [AFR bureau staff], Constance Carrino, David E. Mutchler, Thomas Donnelly

The Futures Group

Robert Smith, Philander P. Claxton, Henry Cole, John Stover, Kenneth Yamashita, Maurice Middleberg, Thomas Goliber, Alice Bernstein

Population Reference Bureau

Thomas Merrick, Leon Bouvier

University of Michigan

George Simmons, Marie Claire Rens, Alison McIntosh, Jason Finkle, Stanley Bernstein

University of North Carolina

Richard Udry, Richard Bilsborrow, Moye Freyemann, Thomas McDevitt, Linda Lacey, Amy Tsui

Research Triangle Institute

James Kocher, Scott Moreland, Ellen Fried

Others in the United States

Manuel Costa, CPEPD, Rio de Janeiro, Brazil
David Radel, World Bank
Leovigildo Baez, CONAPOFA, Santo Domingo, DR

Dominican Republic

Lic. Leovigildo Baez, Director of Research, CONAPOFA;
Ms. Rosa Queiro, Programmer for D.R. RAPID II presentations, CONAPOFA;
Dr. Ramon Portes Carrasco, Executive Director, CONAPOFA;
Lic. Nelson Ramirez, Director, Instituto de Poblacion y Desarrollo;
Lic. Maritza Molina, Economist, CONAPOFA;
Ms. Maria Montero, Computer Specialist, CONAPOFA;
Lic. Jose Manuel Vizcaino, Secretaria de Estado de Agricultura;

Lic. Ezequiel Valdez, Secretaria de Estado de Educacion;
Dr. Elias Dinzey, Secretaria de Estado de Salud Publica;
Lic. Zenon Ceballos, Oficina de Estadistica;
Lic. Rafael Alba (Tito), Oficina Nacional de Planificacion;
Dr. Julio Cross Beras, Director de Relaciones Interinstitucionales;
Lic. Julio Mejia Santana, ONAPLAN;
Francisco Caceres Urena, Professor of Statistics, University of Santo Domingo;
Mr. Lee Hougen, USAID, Santo Domingo;
Dr. Robert McDowell, Professor of Agriculture, Cornell University.

Ecuador

Dr. Betty Proano, Director, CEPAR;
Lic. Francisco Paez, Director for Population Studies, CEPAR;
Ms. Alicia Ruiz, Programmer for RAPID II, CEPAR;
Lic. Ernesto Pinto, Statistician/Consultant, CEPAR;
Lic. Marco Posso, Demographer, Instituto Nacional de Estadistica y Censos;
Ms. Magdalena Torres, Economist, CEPAR;
Dr. Karen Ruffing, Fulbright Fellow, Catholic University in Quito and consultant to the Ministry of Public Health;
Lic. Manuel Rizzo, USAID Population Officer, Quito.

Cameroon

George Vishio, AID Population Officer;
Bob Schmeding, Chief, USAID Human Resources Division;
Ken Kolb, Chief Economic Section, U.S. Embassy;
Helen Vaitaites, program officer, USAID;
Horace (Hap) Pritkin, Chief, Political Section, U.S. Embassy; Richard Sherman, Political and Science Officer, U.S. Embassy;
Rod Kite, USAID/US Department of Agriculture Advisor to Cameroon Ministry of Agriculture on food sector model;
U.S. Ambassador Myles Frechette;
USAID director, Jay Johnson;
Dr. Bernard Noah, National School of Administration;
B. Sampson Lamle, Center for Demographic and Economic Research (CDER);
Emmanuel Nowe, CDER;
Patrick Gubry, CDER;
Alphonse Tabi, Director, Human Resources Division, Ministry of Planning and Regional Development (MPER);
Jean-Marie Foacam, Chief, Health and Population Human Resources Division, MPER; and
Dr. Dan Lantum, University of Yaounde School of Medicine (infertility seminar).

Liberia

Betsy Brown, USAID Health/Population Officer;
Mike Rugh, USAID Program Officer (Acting Deputy Director);
Nancy Pielemeier, departing USAID Population Officer;
John Hall, Economic Officer, U.S. Embassy;
Greg Fergin, Political Officer, U.S. Embassy;
Ambassador Gavriel Gavrieli, Israeli Embassy;
Mrs. Amelia Ward, Deputy Minister, Ministry of Economic
Planning, Government of Liberia;
Mr. Edward Liberty, Assistant Minister, Ministry of Economic
Planning;
Ms. Massalce, Director, Population Office, Ministry of
Economic Planning;
Mrs. Dorothy Johnson, Senior Statistical Officer, Ministry
of Economic Planning;
Prof. George Botchie, Dept. of Planning, University of
Liberia;
Prof. Jonas Kokor, Department of Planning, University of
Liberia; and
Prof. Steven Owusu, Department of Planning, University of
Liberia.

APPENDIX A
REVIEW OF RAPID PROJECT MODELS

To: Dr. Harry Cross, S&T/POP/PDD USAID

From: Warren Sanderson
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SUNY Stony Brook
Stony Brook, New York, 11794-4384

Subject: Review of RAPID Project Models

Date: June 25, 1985

1. Overview

This review of RAPID project models has six parts. The first is this overview in which I report my overall impressions and recommendations. The second section, which is the longest, reviews the RAPID presentation model. In that section, I provide a number of detailed as well as general comments, which I hope could be helpful in improving the program. The third section discusses the demographic projection model, the fourth, the target model. The last two sections, which are quite short, deal with the cost/benefit model developed for Bangladesh and the socioeconomic determinants model.

I have decidedly mixed feelings about the RAPID models. There are some nice aspects to the RAPID presentation model, but there are also some problems with it. The remaining models all have certain positive features, but many problems. On the basis of the output I have reviewed, I would say that the RAPID project was still at a very early stage of development. A considerable amount of work is still required to get the models into a form in

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which they would be most useful. The programs as they stand now are usable if a trained person runs them. When the trained person goes home, the programs will be, for the most part, inaccessible to the people who AID wishes to help. The impacts of the programs, as they stand, are, therefore, far below their potential.

Let me say a few words about the basis on which I evaluated these programs. The main purpose of the models, as I understand it, is educational. They are designed to show policy-makers the consequences of various demographic scenarios in a way which can be easily understood without any formal demographic or economic training. I believe that this educational function is quite important and that it ought not to be viewed as limited to a one hour session with the Prime Minister. People from The Futures Group can present the model to the Prime Minister, but there are many other people in the country who could benefit from seeing the show as well. These people may be lower level officials in the capital or administrators in various outlying cities. The Futures Group workers cannot be around to show the model to everyone. Local people will have to run the model for other local people. In my evaluation, I stress the ease or difficulty of learning how to run the models as well as the clarity of the message.

Most of the programs, however, seem not to be meant for policy-makers, but for technicians. The demographic projection model asks the user which Coale-Demeny regional model life table he wishes to use. No policy-maker that I have ever met could answer that question. Certainly it would difficult to educate,

for example, a leading official in the ruling political party about the effects of population growth, if he or someone on his staff had first to answer questions about Coale-Demeny model life tables.

In most of the sections, I provide detailed comments which are designed to make the model either easier to understand or easier to run. Here let me address these issues from a broader perspective. In general, the models would be difficult for someone without computer background to learn to run. Mistakes sometimes lead to the user being dumped into BASIC with no easy way out, but to reboot. The models sometimes require a knowledge of demography (Coale-Demeny model life tables, for example) or a knowledge of economics (Cobb-Douglas production functions and income elasticities, for example) that policy-makers are not likely to have.

I recommend that a moratorium on program development be called and that the producers of the programs be asked to develop a statement of their goals and how their programs will help them meet these goals. Before programming resumes, the program designers should also decide on a common programming environment in which all the programs will be written. Writing some BASIC programs and then a program in LOTUS seems to me to be a poor idea. A set of programs written in a consistent style will be much more powerful and useful.

The statement should clearly relate objectives with techniques. Let me give you an example. If the presentation model is to be for policy-makers, does it need to incorporate a

wide variety of model life tables. For most purposes, would not one type be sufficient? From my perspective, the relationship between the goals of the RAPID project and its outputs is not clear enough.

If there is really interest in developing a set of programs which can educate people about population and which they themselves can manipulate, some thought must be given to the hardware as well as the software. Today, the easiest to use computer is the MacIntosh. It uses a mouse and pull-down menus to simplify many programming tasks. A mouse and pull-down menus can also be used on the IBM to allow people with little computing experience to do a wide variety of otherwise complex tasks.

If the RAPID project is likely to end soon, I would not recommend any change in hardware or in the software environment. I would just recommend the implementation of my detailed suggestions. If the RAPID project is likely to go on for a while with the object of preparing a set of interrelated programs which can be useful to people in developing countries even without the assistance of U.S. experts, I would recommend that the modelling effort take a short breather of three months or so while the program creators spend some time considering technologies which make running programs easy. In particular, I would suggest that they look at the MacIntosh type programming environment with mice, pull-down menus and windows. I think that all RAPID programs should then be written in the same programming environment.

I have become sensitized to the difficulty of running computer programs because I teach college juniors and seniors how to use simple econometric packages on our computer at Stony

Brook. The students often come to me with difficulties which seem totally trivial. Some of them have been stumped for several days over something I can clarify in several words. What seems so trivial to us, occasionally turns into a major obstacle for them.

I have a challenge for the RAPID modelling team. When the revisions of the RAPID models are nearing completion, the models should be given to a group of local college students. If the students can easily learn how to run the programs and feel at least somewhat edified by the experience, then the programs are likely to be helpful in developing countries as well. I do not expect that such students would give the models high grades in their current form.

2. The RAPID Presentation Model

A. General Comments

The creators of the RAPID presentation model should be congratulated on some nice graphics. I am sure that members of the RAPID team can give very effective presentations using it.

Although the designers of the RAPID II presentation model have tried to make it user friendly, they still have some distance to go. What is needed here is some guidance from AID. As matters stand, the disks are most useful if someone familiar with the computer system and with the program is available to run them. When these people go home, it seems likely that people in the target countries will have a difficult time running the presentation programs. If AID would like to enable people in the target countries to use the RAPID II presentation model, the program needs additional work. Below I will suggest some precise ways in which to make the disks more available to users with little or no computer experience. My personal opinion is that the programs should be constructed so that people in the country have easy access to them when the presentation team leaves.

There are a few segments of the RAPID II presentation model which should be deleted. These refer to certain demographic-economic interactions which are too complex for inclusion in a presentation model. The technical comments which follow provide more detailed information on this.

B. Technical Comments

I have used the Nigerian case as an example for most of my comments. The comments apply to virtually all of the other countries.

1. The first screen which appears asks whether the person wants the automatic country loading feature. The question is to be answered with a "y" or an "n". This is told to the person in the users' manual, but users' manuals do not always get copied in developing countries. An additional line should come up on the screen saying that in the program all yes/no questions should have responses of "y" or "n". The first screen should also indicate that the "return" key should be hit after the "y" or "n" is typed. The designers of the program should also think about incorporating two modes into the program, one mode would be the current version of the program, the second mode would have more explanation. In essence, the second mode would contain enough information for someone unfamiliar with the computer to run the program. On the first screen or on the second screen the user could be asked which mode he wants. I do not think that putting more guidance into the program would be difficult or costly and the extra guidance would significantly improve the impact of the message after the presentation team has gone home.

2. The more explanatory mode should tell the user how to copy the disk or disks. The disk itself should have all the DOS programs needed for copying. It is important to inform users that backup copies of the disk should be made. It is easy for novice users to ruin disks.

3. If you answer "y" to the first question, the next screen asks the name of the country that you want loaded. This seems trivial, but it is needless sources of confusion. The screen should ask whether you want the information for Nigeria loaded. The user can then answer "y" or "n". If the answer is "n" the program can then see if there is any other data on the disk which can be automatically loaded. If so, a screen could ask about those alternatives. One option on that screen could be to load a new data set. I do not think that this option will be frequently used.
4. In the Nigerian case, a map on Nigeria now comes up on the screen. There should be a line below the map which says "press <- to continue", where <- indicates the symbol on the "return" key.
5. By the way, the RAPID programs are inconsistent in the use of RETURN and <- (this should be the symbol on the "return" key). I would replace all the RETURNS in all the RAPID programs with the symbol on the "return" key. This will aid some novice users.
6. The main menu comes up next. I would prefer this menu and all other menus to have clear titles and numbers. In the discussion which follows, I call this menu "MENU 1". Having numbers for the menus could make the use of the function keys somewhat simpler. One function key could always return the user to MENU 1, for example.
7. It is a very small point, but I find the two ways of calling for something a bit confusing. To obtain information on the economy, the user can either type "2" or move the cursor down one category and then strike return. This redundancy seems not to

serve any useful purpose. I think removing the cursor based choices would make the program simpler to deal with, without diminishing its usefulness. Somewhere, perhaps in the more documented mode, the user should be told to choose categories by pressing the appropriate number above the letter keys. Otherwise someone might try to type a number using the numerical keys on the right side of the keyboard. If "num lock" has not been pressed, the person would move the cursor instead of typing a number. This can be very confusing to the uninitiated.

8. The line on the bottom of the screen is somewhat confusing. The user needs to be told that the numbers refer to the "F" keys. It certainly will not be clear to the untutored that the "0" on the bottom right of the screen refers to F10.

9. It is unfortunate the pressing "F1" for help leads the user into more confusion. The program writes "ERROR-FILE NOT FOUND". The user is then given two choices on how to proceed, press <- or ESC. If he press ESC, MENU 1 appears, but the person is in the BASIC program. If the person tries to press a number to obtain information on one of the categories which appears on the screen, the program responds "undefined line number". All this happens to the poor person who needed help. Now essentially, the person either has to give up or with persistence might try again. There are two ways to try again. The first requires both a knowledge of BASIC and the DOS, the second is to reboot and load all the files over again. This is much too difficult for practitioners in LDC s. The ESC option should never have been included. It really serves no productive function.

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10. A neat termination command would be useful in MENU 1. When run in the more elaborated mode, the termination screen should remind users to remove disks.

11. Pressing 1 on Menu 1, we get our choice of a number of demographic items. This menu should also have a title and a menu number. I call this menu either the DEMOGRAPHIC MENU OR MENU 2. Choosing one of these, we are asked how we would like to see the data displayed. I call this menu the DATA DISPLAY MENU. It too should have a title on it. On the DATA DISPLAY MENU, we are asked whether the table or graphics should be based on something other than demographic projection A. Unless you have been trained and have not forgotten, you may not have the faintest clue as to what projection A is. From everyone's perspective it seems crucial that the demographic projections be explained on the screen in terms that policy makers can understand. I think I finally derived the assumptions underlying projection A, but it was a pain and I do not think that many people in LDC s will bother.

Of course, if we expect someone from the Futures Group is always available to explain the projections, they do not need to be explained on the screen, but I do not think that we should make that assumption. I think a screen is needed to explain what projections are and another screen to describe in simple terms the major assumptions underlying Projections A, B, and C.

12. The question about the terminal year of the projection on the same screen should include some guidance as to what are appropriate answers. If someone presses Y on the DISPLAY MENU and then types "2100" the machine will just beep. Beeps with no

guidance can be frustrating and I strongly suggest to the designers that they take all informationless beeps out of the program and replace them with some guidance as to what appropriate responses should be. In the case of the terminal year of the projection, it would be easy to include a line of guidance on the same screen as the question about that year. If you have been beeped at and cannot understand what to do next, the program just gives you a single option, F10. If you press F10, you are sent back to MENU 1. This is frustrating. It would be preferable if F10 took you back to the DISPLAY MENU that you just left.

13. If you do not know the difference between projections A, B, and C in the Nigerian case, it is possible that you would press "N" on the DISPLAY MENU to get a result based on projection C. This leads into all sorts of problems because there is no projection C. Tabular data sometimes come out with strange things in column C and indeed sometimes with strange things in other columns as well. If you ask for a bar graph based on projection C, the screen changes colors and you are thrown uncerimoniously out of the program and into BASIC. If I were a Nigerian civil servant, I would not want to make a presentation to one of my superiors, when a slip of the hand or a lapse in concentration could result in the program bombing like that. Really, the only option in this case would be to reboot, reload, and start from the beginning. In the Nigerian case, either some alternative projection should be used in the case of projection C or some protection should be written into the program.

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14. If you choose to base the 3 bar graph on projection B and then ask for projection A to be plotted, the results for Projection A run over the top of the graph. A similar problem occurs with the line graph. The graphics in this case can be improved somewhat.
15. The "N" and the "Y" options on the DISPLAY MENU should be toggles. One should be able to run projections to 2030 for example without always having to use the "Y" command for each display. Similarly, one should be able to look at projections based on Projection B or a new Projection C without having to use the "N" command each time. Each time either of those two commands are used the respective parameters should remain reset at their new levels until they are changed by using the "N" or "Y" commands once again.
16. Graphs ask about which additional projections you want to see and say "F10 to quit". F10 takes you back to the DEMOGRAPHIC MENU. If you wanted to see the same data in tabular form or in some other graphical form, going back to the DEMOGRAPHIC MENU would be inconvenient. It would be better to give the user two options like "F9 to return to DISPLAY MENU; F10 to return to DEMOGRAPHIC MENU". This is somewhat easier to understand.
17. On each graph the country name should appear and there should be an indication of which projection is being displayed. Now you have to keep track of which projection is being displayed mentally.
18. The DEMOGRAPHIC MENU should list all the alternatives. Now one has to type 9 to get at a few more options. These two pages of the same menu cause a certain amount of awkwardness which is

not necessary. It may require two columns on the DEMOGRAPHIC MENU to accommodate all the options.

19. The DEMOGRAPHY MENU includes options that a policy maker will not immediately understand. For example, "crude birth rate", "crude death rate," "rate of natural increase" and indeed all of the remaining options. When a given option is chosen a screen should come on which describes in simple language and perhaps with a simple numerical example, the meaning of each of the concepts.

For example, graphic obtained by typing 9 on the Demographic Menu and then 1 is very nice. I think that it should be the first item on the DEMOGRAPHIC MENU. It demonstrates the concepts of the crude birth rate, crude death rate, and the rate of natural increase for 1985. I think the first item in each category in MENU 1 be a screen which simply explains the important concepts and shows what the current situation is with respect to those concepts. In other words, that graphic could be used as a example of what it needed in each category.

A bit more graphic work is still needed here, however. The graphic refers to the birth rate while the DEMOGRAPHIC MENU refers to the crude birth rate. I prefer, for the present purposes, terminology like "birth rate" to terminology like "crude birth rate". The same is true with respect to the crude death rate. The user should be able to see a simple discussion of what population momentum means before he sees the actual figures for his country.

F10 on the DEMOGRAPHY MENU returns you to Nigeria map

instead of to MENU 1. This is a minor inconvenience.

20. Returning to MENU 1, if 2 is pressed the ECONOMY MENU or MENU 3 should come up, but it does not. When we deal with the economy, we are suddenly facing something very different from what we had when we were dealing the demographic sector. The demographic sector had two built-in projections. The assumptions for these projections were not made clear, but we could immediately see their consequences. When we get to the economic projections we are first asked if we want to change a set of parameters. This must seem very opaque to someone who encounters this for the first time. Why not treat the economic projections in the same way that the demographic projections are treated?

This question is dominated by another question. The basic economic model in RAPID II is too simplified to be useful or instructive. Where it is included at all (it is absent, for example in the Nigerian case), it is a very old-fashioned one sector growth model based on a Cobb-Douglas production function. Agriculture does not appear in the model, the government does not appear in the model, land does not appear in the model, education does not appear in the model and important export and import prices do not appear. In the Nigerian case, labor force growth is assumed to have no effect at all on output growth. The one-sector framework is so grossly oversimplified that it is essentially useless or worse. Anyone who wanted to discredit the RAPID framework could simply point to the economic framework, in which much of what is important economically is omitted, to cast doubt on the quality of the entire enterprise.

In the model GDP growth depends on an exogenous rate of technological change, an exogenous rate of labor force growth, and a rate of growth of the capital stock, which depends on, among other things, the level of output 5 years ago and the level of consumption 5 years ago. The consumption equation in the model is extremely puzzling. It states that total consumption in the country is negatively related to per capita GDP. I refer you to the equation in the middle of p. 18 in The Futures Group document entitled "Description of the Rapid Socioeconomic Model". This is documentably false. Perhaps there is a typo or something I just do not understand. I tried for about ten minutes to find the appropriate lines in the BASIC program, but failed.

I do not suggest a quick fix for this equation because the entire framework in which that equation is embedded is grossly inadequate. The truth of the matter is that the relationship between population growth and economic growth is complex and cannot simply be programmed in a few lines. A more complete analysis is necessary than can be provided in a presentation program.

The bottom line on this is that the economic projections need to be removed. More work is needed to articulate the relations between population and economic growth in a way which is appropriate to particular developing countries. This does not mean that everything on the ECONOMIC MENU should be thrown out. In the Nigerian case, I would retain the sections entitled "labor force", "new jobs required", and "labor force and child

dependents" and put them into a new section called "Labor Force". These projections are not based on the economic projections. Of course, a screen should always come on first which explains the concepts in a language which is easily understood. Labor Force and Child Dependents has a DISPLAY MENU which is different from the others in that it omits the "N" and "Y" options. The "Labor Force and Child Dependents" graph needs better labelling. It is impossible to tell by looking at it whether the upper or the lower part of the graph refers to dependents. When the new labelling is completed, the graphic will be very effective.

21. By choosing 3 on Menu 1, we obtain the Education Menu. The item labelled "A comparison of secondary enrollments under two projections" is somewhat mystifying. First, the graph provides us with secondary enrollments under Projection A. Upon hitting "return" we obtain the secondary aged population under Projection A. This line is not labelled on the graph and certainly should be in the future. In the Nigerian case, it appears from the graph that there is 100 percent enrollment in secondary school in 2030. Upon next pressing "return" I got my secondary aged population under my projection C, which is a very low fertility projection. The graph did not work correctly here and the population of secondary age shot up dramatically from 2025 to 2030. The program needs to be checked. The labelling on the right hand side of the 3 bar graph for secondary students appears to be wrong and should be checked. One time it repeated the number 24 for all projections. In some other instances, the labelling seemed to work fine. I do not know whether the problems only occurs when Projection C is used or not.

22. The special graphic for "primary schools required" does not label the projections. It should do this. It should tell what years it would accept. The special graphic cannot go backwards in time. If a policy-maker wants first to check 2015 and then some earlier time, the graphic will not work correctly. There seems to be some additional trouble with my Projection C as well.
23. The recurrent primary costs bar graph does list the currency unit.
24. The concepts used in the educational projections are not made clear. A screen is needed to do that. The screen should say something about the situation in 1985 as well as say something simple about the major assumptions. Now, in order to get some idea of what the assumptions are, the user must choose an option which recalculates the projection. A sophisticated user may guess that he could induce the program to produce a recalculation which leaves everything the same, but allows him to see the assumptions in the process. A novice, however, might find the task of recalculation daunting, especially if there is some possibility that he would alter the database. All relevant menus should offer the user the option of viewing the assumptions used to make the projections.
25. One item among the assumptions used in the educational projections is called modern sector jobs, and another is called rate of growth of modern sector jobs. It is unfortunate that the rate of growth of modern sector jobs was taken to be independent of both the rate of growth of output and the rate of urbanization. Without careful thought it is possible to enter

grossly inconsistent figures. At least when the economic projections are removed, we only have to worry about the relationship between the implied growth rate of the urban population and the assumed growth rate of modern sector jobs. Perhaps, we should just note on the screen somewhere that the user should be aware of the relationship between these two figures.

Now since in a number of places the same structure is used, let me just discuss a problem which occurs here without repeating myself below. Recall that we are dealing here with the assumptions into the educational projections. The time series of the modern sector jobs which appears on the screen is meaningless except for its first number. The number of modern sector jobs in any year is determined through using the number of modern sector jobs in 1985 and the time series of modern sector jobs growth rates. I really feel sorry for the poor bureaucrat who is confront with contradictory series of numbers of modern sector jobs and growth rates of numbers of modern sector jobs. More information is required on the screen, otherwise we are just inviting people to throw up their hands in despair.

26. We are asked whether we want to change the labor market factor. I do not have the faintest idea what the labor market factor is. I could perhaps make some guesses on the basis of the equations written in the manual and experiment to see if I am right, but I did not. I think much more clarity is required here.

27. I think that the Education Menu should list all the options on a single screen. Having two screens makes a number of

operations slightly awkward.

28. Choosing 4 on Menu 1, we arrive at the Health Menu. Here there are some health projections made. I think that there should be an easy graphic at the beginning of this section which shows what the assumptions are in easy to understand terms. An additional option can be given asking if the viewer wants to see what the assumptions are. Each heading under health should have its own screen explaining what it means. For example, "Number of health persons required". What does this mean? "Required" for what? If this is the number of people required to maintain the same number of health persons per capita as today the interpretation would be different than if it meant the number of health personnel required to provide an ever improving standard of health care.

29. The special graphic for the number of health clinics required is somewhat difficult to understand. It seems to imply that health clinics today are only needed in one limited area, but that in the future they would be needed in other areas. If this is not the case, perhaps some other graphical technique can be used.

30. Choosing 5 on Menu 1, we see the Urbanization Menu. In the present model urbanization and economic growth are totally unconnected. By removing the economic submodel at least we are saved from the possibility of making inconsistent projections of economic growth and urbanization.

31. Again the assumptions are not presented. In order to look at the assumptions, as was discussed above, we have to ask to

change the data. It is EXTREMELY important that the portions of the program which allow users to enter or change data incorporate restrictions on allowable inputs. For example, I have just set the rural-urban outmigration rate to 200% without a whimper from the program. In other words, for each person in the rural area two people migrate from the rural areas to the urban areas in each year. The projections were computed without difficulty and the urban population in 2015 far exceeded the entire population of Nigeria in that year. Obviously there is a large negative population in the rural areas, but this does not seem to bother the program. Of course, no trained person would purposefully make such a mistake. Nonetheless, we all occasionally type 200 instead of 2.00 and not everyone who runs the program will be fully trained. The program itself should guard against nonsensical inputs and nonsensical outputs.

32. The concept of the rural-urban migration rate needs to be made clear to users. An example should be given in the portion of the program where people are changing or just looking at the input data.

It is difficult to know what plausible net rural-urban migration rates for Nigeria look like. One way to make the program more sophisticated is to make use of data on the age and sex structures of the urban and the rural areas. One can then use the Rogers-Castro model migration relations with fixed migration rates instead of a fixed net migration rate. This would imply that the net migration rate would vary endogenously with the age structure of the population. This would require that total fertility rates be specified separately

for the urban and for the rural areas. As it is now, the rate of natural increase in the urban areas is assumed to be identical to the rate of natural increase in rural areas. This is not likely to be a very accurate assumption, but it does make the computations easier.

33. The urbanization projections make use of the labor force participation rate in Lagos. Migrants are likely to be a very highly selected group with labor force participation rates different from those of the current residents. Should the program make a distinction between the two participation rates? It would make computations more difficult. I am not sure of the answer, but perhaps we should be reminded that this question exists.

34. Choosing 6 on Menu 1 brings us to the Agriculture Menu. A simple graphic would again be useful to explain to policy-makers what is going on here. In general, agricultural production projections are based on exogenously given growth rates. Labor force growth has absolutely nothing to do with output growth. This certainly is not the experience of most developing countries in the past and seems unlikely to be reasonable as a projection of the future. Consumption of an agricultural product is based per capita consumption multiplied by the total population regardless of its age structure. Per capita consumption may be fixed, change at a fixed rate or change according to GDP per capita and an assumed income elasticity. Since I have recommended removing the economic module, GDP per capita will no longer be available, so the last option will vanish. The

framework even as it now stands is weak. Population affects both consumption and production. This part of the model needs to be rethought to incorporate the links between population and agricultural production. This should be done in a way that takes into account assumptions about the sizes of the total, urban, and therefore rural populations. Without this reworking, the portions of the program dealing with agricultural production should be dropped.

35. Items 2 and 3 under the AGRICULTURE MENU refer to carrying capacity (subsistence) and carrying capacity (intermediate) respectively. I do not know what these concepts mean or from what source they are derived. A serious look should be given to dropping them from the program.

36. Item 4 is firewood consumption (cm). I assume that (cm) refers to cubic meters. The designers of the program should make this clear. The special graphic shows 60 million cm's are used under either of the two projections in 1985. The projections are not labelled. They should be. The special graphic asks for an additional year to be examined. It will only accept years which end in a multiple of 5 through the year 2015. The user should be told this on the screen. In other projections, the user is allowed to go up to 2030. The graphic can only go forward in time. If a policy-maker first wants to ask about 2015 and then wants to go back to 2000, the graphic will not work. The correct total will be shown although the number of units in the graph will be inconsistent. The projection assumes that a slowly declining proportion of the population will be using firewood and that the per capita use of firewood among users will

remain constant. I do not know if these assumptions are reasonable. Should the proportions using firewood be associated in some way with the proportions of the population in the urban and the rural areas? Is the per capita use of firewood among users larger or smaller in rural areas than in urban areas? Should we be more interested in firewood consumption per household? I suspect so.

37. Choosing item 7 on Menu 1 provides us with interesting material on population programs. Item 2 on that menu provides us with a choice of two options. After investigating the first option there should be a direct way to investigate the second option and visa versa.

3. The RAPID Demographic Projection Model

A. General Comments

The RAPID demographic projection model should provide a vehicle for the easy preparation of demographic projections to be used in the family planning costing model, the TARGET model the education model, and other RAPID models. In addition, it should be able to produce projections for the RAPID II presentation model and should allow a user to look into the parameters used in already existing RAPID II projections. The program should have enough internal documentation that it could be used without much training.

I found that some routine things were accomplished without too much difficulty. Often, however, I was frustrated. I must admit that eventually I was able to do most of what I wanted, but it took quite a while. The program can certainly use work to make it more user-friendly.

The first question to be addressed is the role of the demographic projection model in the overall scheme of the RAPID models. Does the demographic projection model have any interaction at all with the RAPID II presentation model. If it does, this needs to be communicated to the user in some manner. How else is a user to know that the RAPID demographic projection model will provide him with the tools needed to produce a presentation model projection?

The RAPID demographic projection model is not a model whose purpose is to educate policy-makers about the consequences of

various demographic scenarios. It is really a tool kit program which is addressed to the technical personnel who will prepare projections, budgets and plans. This appears to me to be quite appropriate. Still, it should not be assumed that all such people are trained on the computer, let alone in demography.

I tried to view this program through the eyes of someone who know about the RAPID II presentation model, but who was not too sophisticated in microcomputer usage or in demography. Such a person would not find this program a joy to work with. Below I share with you both my frustrations and my suggestions for improvements. My comments in part read like a travelogue concerning a maze. Please excuse the ramblings.

B. Detailed Comments

1. A number of the detailed comments concerning the RAPID presentation model are also applicable here. For example, the line on the bottom of the screen needs to be labelled and users should be told that 0 refers to F10. Care should be taken that the F10 key functions in a consistent manner. Other function keys can also be used to make the flow from one menu to another as convenient and as clear as possible. I simply cannot overstress the importance of documentation and clarity of presentation. If anyone outside The Futures Group staff is to use the RAPID programs easily, he must be allowed to share in the secrets of the program.

2. The first screen in the demographic projection model is a real stumper. It is a master of understatement. Most of what is

important simply remains unsaid. It asks whether I want to input data for a new country or region or create or display a projection for an existing country or region. The user needs a significant amount of additional information before, he even answers that question. It turns out that there are a considerable number of different files with which this program works. The user needs to be told about them right from the beginning. There are input files, regular output files, and RAPID II presentation model output files. At this juncture, however, we cannot assume that the user knows any of that without being told.

Suppose now that a Nigerian civil servant reads the first screen. How would he react? Is Nigeria a new country or not a new country? Suppose he wanted to revise Projection C in the RAPID II presentation model, which would he choose? The key difference between the first and second option has to do with the existence of input files, but the user has not been told anything about input files yet.

I imagined that I was a Nigerian civil servant and that the Prime Minister and I had just enjoyed watching the RAPID II presentation model. The Prime Minister, then, gave me the task of altering Projection B in that model to be consistent with a tentative plan being drawn up by the Ministry of Planning. Nigeria is certainly an existing country so I would choose the second of the two options on SCREEN 1 (screens should be numbered and/or titled). SCREEN 2 then asks if I want to create a new projection or examine one that has already been created. Actually I want to modify a RAPID II projection that has already

been created. Modifying is somewhat different from examining, but the second option sounds closest to what I want to do. Unfortunately, I did not realize that I had to put the RAPID II Nigeria disk into drive B. I am thrown out.

All of us who are familiar with DOS on the IBM PC have come across commands which tell us to put a disk into a particular disk drive. Why are we assuming that Nigerian civil servants are more sophisticated than DOS users. A message should appear on the screen to tell the user to put the correct RAPID II disk in the right disk drive.

If the civil servant knows how to reboot the system, he can put the Nigeria disk in drive B and begin again. If he did this instead of ejecting him, the program would ask him to enter the name of the population program to be loaded and suggest the name Nigeria. I will have more to say about the configuration of the LOADING SCREEN below. That looks perfect and I press RETURN as suggested (the symbol on the RETURN key would have been preferable to the word RETURN). The machine tells me that the fertility file is not found. I know that the fertility file is there because I just saw it run on the presentation model. The screen says to press any key to continue. I do so and the machine tells me that the mortality file is not found.

What would the civil servant do in this case? He cannot fulfill the first request of the prime minister and if The Futures Group team has gone home, he has no one to ask. I think that it is extremely unfortunate that what might be the most commonly requested operation using the demographic projection

model turns out to be so difficult to accomplish.

The civil servant has now given up trying to modify Projection B. I do not mean the comments to simply be read as a travelogue through the program. The program needs to be redesigned so that people either can revise Projections A, B, and C on the presentation disk easily or be told not to bother.

3. If the civil servant is persistent, he might try to create a new set of projections including the projection that the Prime Minister requested. On the first screen, he would still choose the second alternative, i.e. to create a projection for an existing country. On the next screen, he now knows to choose the first alternative—to create a new projection. Now he is asked to name the projection to be created. He is given no guidance here. If he answers "Nigeria" will he overwrite the original RAPID II file? He has no idea. Should he not be helped? I answer "IC" for Ivory Coast just in case something terrible happens. Now the program asks for the name of the base population file to be loaded. It suggests the name "Nigeria". If the civil servant is confident that the loading process will not destroy the original database, he will press RETURN. The program will tell him "Error-File Not Found". This I suspect would be the end of his attempts to do anything with the demographic projection program.

4. I have now taken the "Nigeria" presentation model disk out of drive B and put in a blank disk. I too have given up, but since there is more to say about the program I am prepared to proceed in any event. The civil servant could decide to try to create a file for a new country even though this is somewhat counterintuitive. Let him go back to the first screen and take

the first option, to "input data for a new country". The following screens ask whether the data are in thousands, the base year, whether rates are point rates or period rates. Here is a case where the F10 key works reasonably well. It takes you back to the beginning of the demographic projection model so that you can change any of those responses. I prefer going back one screen at a time, but this is a matter of taste. The program accepts any year in the twentieth century as a base year. The RAPID II presentation program is not flexible enough to do that. This might cause a problem for someone who does not keep 1985 as a base year. I am not sure about this because I cannot seem to do much with RAPID II presentation files.

5. The civil servant is now ready to enter data. The DATA INPUT MENU gives him five choices, to enter the base year population, the TFR and the age distribution of fertility, life expectancy and mortality, migration, and an option to make a demographic projection. He chooses first to enter data for the base year population. The screen gives him two choices either to enter new data or to revise data already entered. Now the second option comes as something of a surprise. Apparently it is possible to create a new country projection on the basis of the old country data. Why was the civil servant not told this right at the outset? Unfortunately, though, the hope vanishes. If the civil servant tries to revise data already entered he gets into a morass. In an earlier draft, I have a long discussion of it. Here let me just recommend to the model designers that they try it and then rewrite the program so that clear messages will guide

the user back to some reasonable place.

6. Having escaped, the civil servant knows that he must choose to enter new data and cannot base his new projection on the previous Nigerian data.

When he decides to enter new data on the base year population the cursor appears to run needlessly around the screen for a brief moment before the screen settles down. I do not know if it is just my computer or whether the screen editor needs a little reprogramming to remove blinking and cursor streaking. Someone may need to go through the program carefully to get rid of other irrelevant flashes as well.

7. The first data entry screen comes on with the word command on the top. Unfortunately, the civil servant may not know what to command the computer to do. The commands refer to the various--function keys whose meanings appear at the bottom of the screen. It would not be at all difficult to put in a line which explains that the function keys give the commands. The F1 (help) command is very useful here and the user should be directed to it. I say this because if the user had tried the F1(help) command in the RAPID II presentation model he may not want to try it here. The F10 (quit) command does not cause the program to quit but has several different functions depending on when it is pressed. It seems to me that there is altogether too much pressing of the F10 key required.

I have some suggestions on how to make the editing process simpler. First, when the editing screen is called up it should automatically be in edit mode. I see no reason that F2 should be pressed to get into edit mode and F10 pressed to get out of it.

Second, F3 and F4 should be programmed so that interpolation and copying are possible within the edit mode. In this way, the user can enter data, interpolate data and just press a single F10 when the data is ready for storage.

8. I have entered my base year population data. The base year population, unfortunately, does not seem to be scanned at all to see if it is plausible. The program does not object to negative populations or populations in which the age or sex distributions are strange. In the future, thought should be given to making the program ask the user a question if the age or sex distribution of the population is very unusual.

9. Now the program asks the user to enter the name of the population file to be saved and Nigeria comes up as the file name. The program instructs us to hit RETURN if we want to use the current name. Now a civil servant with rudimentary computer skills could be caught in a bind. A RETURN could cause something to be stored under the name of Nigeria which overwrites the original file. It may not occur to some people that the word "Nigeria" on the screen could be overwritten, but even in this case there may be a fear that overwriting the word "Nigeria" may cause problems. I do not think that calling all the files "Nigeria" would cause a problem down the road, but I do not want to overwrite the original RAPID II files by accident so I name all my data files "IC".

10. Moving on, it is now time to enter the data for the TFR and the age distribution of fertility. Fortunately this is not a program to educate the Prime Minister, because we cannot assume

that he knows what the TFR is. The demographic projection program can be used by the entire set of Nigerians who know what the TFR is. If we wrote on the screen "average number of births per woman (TFR) we could perhaps increase the set of Nigerians who would be able to run the program.

11. The next screen asks for the sex ratio at birth. The manual makes clear that this means the ratio of males to females, but in the field, there is no guarantee that all users will have manuals. Why not make clear what is desired here, but adding a line which states what the sex ratio is.

12. The total fertility rate must be specified next. The following screen asks for the percent distribution of fertility by age. I would not have constructed the program in this way. It seems that two different sorts of users are likely to be better served by an alternative. Poorly-trained users may not know what to do about the age distribution of fertility. They may only have vague ideas about it. They are likely to put in one set of figures for the base year and assume that they remain constant over the projection period. If the TFR falls rapidly over the projection period, it is unlikely that the age distribution of fertility would remain constant. I would give the user an option of not entering figures on the age distribution of fertility. I would have the program generate the age distribution of fertility using some Coale-Trussell model fertility rate parameters. I would be quite happy to spell out the details of how this could be done if there is interest in it. For the more sophisticated, I would allow the option of having the TFR and the timing of fertility jointly determined by

specifying Coale-Trussell model fertility rate parameters. The current option of specifying the age distribution of fertility could be left in for those who prefer that approach.

13. Moving on to mortality rates, the program asks whether I want to enter life expectancies, age-specific mortality rates, or calculate age-specific mortality rates from life expectancies and model life tables. I chose to enter life expectancies. There is much flashing around before the screen settles down. I complete the task and it asks where the mortality file is to be stored. I say IC again. We now return to the same menu we just left. I do not want to enter life expectancies again and do not want to enter age-specific mortality rates because those would almost certainly be inconsistent with the life expectancies I just entered. The question is whether I want to create age-specific mortality rates from the life expectancies and model life tables. If I do not I would press F10. That would be a big mistake. It would take me to the data input screen and I would continue by entering migration data. In that case, however, the program will assume that all death rates are zero even though that is inconsistent with the life expectancies that I entered. To avoid this, the program needs to be rewritten so that the life expectancies are not immediately saved. The program should go directly from the life expectancies to creating the age-specific mortality rates using the model life tables.

As the program stands, once the life expectancies have been saved, the user is supposed to know that he must ask to create age-specific mortality rates using model life tables. When the

user does this, he is given a choice of: Coale-Demeny North, Coale-Demeny East, Coale-Demeny South, and Coale-Demeny West. How many Nigerian civil servants are going to know how the different Coale-Demeny regional model life tables were created and which one is appropriate for Nigeria. It would be much better if someone with some demographic expertise chose the set of life tables which were appropriate for Nigeria. There is no reason to provide people with choices among alternatives about which they have no understanding. This just increases confusion and frustration.

14. After saving the mortality rates under IC, I moved on to entering migration data. The table which we are asked to fill out is for either the number of net immigrants or net emigrants by age and by year. It hardly seems appropriate to make the number of migrants independent of the age structure of the population. It would be much better if migration rates rather than numbers were specified. In addition, I think that it would be better if the age-profile of the migrants were pre-specified for each country in a way that they could be altered if someone wanted to. In this way someone who knew nothing about the age structure of immigrants or emigrants would get a plausible pattern by choosing not to alter the built-in pattern.

15. All the data have now been entered and it is time to choose the last option "make a demographic projection". The machine responds with two options, to create a new projection or to examine a projection which has already been created. The second option seems a bit out of place. It seems reasonable to choose "create a new projection" after having chosen "make a

demographic projection" so I do so.

16. The program requests the names of all the input files and finally calculates a projection. What now comes up on the screen is the WHAT DO YOU WANT TO DO NOW MENU or the DO MENU for short. There are ten options. One of them is to "save the projection in a disk file" while another is to "save the projection in a RAPID disk file". This is the first time that the user gets the message that a RAPID disk file is different from an ordinary disk file. There is no information on how or why they are different, but one can infer from the menu that they are.

17. I first decided to save my hard fought projection on an ordinary disk file. It worked and the DO MENU returned. I next decided to save my projection as a RAPID disk file. A new screen comes up with four options, to create a new RAPID file, to change an existing projection within a RAPID file, to save the new RAPID file, and to create another demographic projection. Apparently, I did not save my projection as a RAPID file by asking to do so on the DO MENU. I have to do something else to save it. Now I have a problem. Do I say respond by saying "save the new RAPID file" or must I create a new RAPID file with the create command before I saved the file. I really do not understand why the designers of this program have produced a quandry of this variety.

I flipped a coin and chose the save command. Now the program instructs me to put a RAPID projections disk into drive B. Where was this reminder when we needed it earlier? It seems to work, but I am suspicious because it does not ask me whether I

want the Projection to be A, B, or C. The create a new RAPID file does seem to work and ask about Projections A, B, and C. I am not sure about the relationship of the save and the create commands. It is possible that one must first save and then create. I could have tested that hypothesis, but I did not.

18. In order to test the accuracy of the demographic projection model, I entered data for various stable population age structures from the Coale-Demany volume of model mortality rates. In the cases that I tried, the projection model reproduced the stable populations to a reasonable degree of accuracy. It is my impression, on the basis of this, that the demographic accounting in the model has been correctly programmed.

19. I have a few other minor picky complaints, but I think I will stop here. The demographic projection program can be used in its present form to produce population projections by a trained person. The program, though, has many pitfalls and frustrations for the less sophisticated user. The person who has been trained by the person who has been trained by The Future Group's staff member probably will have a great deal of unnecessary trouble. I think that the program needs a serious reworking in order to make it productive in the hands of the people who should be using it.

4. The TARGET Model

A. General Comments

The TARGET model is very clever. It is too complex to be used for presentation purposes and may even be somewhat too complex to be used by lower level technical personnel in developing countries. It may possibly be used successfully by someone from the U.S. who comes into a country and uses it with the local technical personnel. I think it could be made much simpler by making it use analytic or prespecified age profiles of contraceptive use. In this simplified form, I think that the program would be useful for projections of five to ten years into the future. Beyond that the cost information and the proportions using various contraceptive methods are not likely to be very accurate.

The program shares in many of the faults of the demographic projection model. It is not user friendly. It is too easy to crash and it certainly needs a good deal more internal documentation. Nevertheless, I find that it has a creative idea at its heart and that it points the way to the sorts of creative programming that can be done within the RAPID framework.

B. Detailed Comments

1. Many of the comments which pertain to the RAPID II presentation model and the RAPID demographic projection model also pertain to the TARGET model. Since the TARGET model is in

the process of being revised, I will not go through a list of problems that I encountered. In the reprogramming, it must be remembered that the program will not serve any educational function if it is too complex for the audience of officials in developing countries to handle. Instead, let me point to several areas in which I think simplifications can be made.

2. The second item on the DATA INPUT MENU is "percent of women of reproductive age who are at risk". A person would need specialized demographic training to understand that phrase. If instead the menu asked for "percent of women 15-49 who are married (in 5 year age groups)" many more people would be able to understand what was being requested. I would prefer an even simpler formulation. The program could use the Coale-McNeil nuptiality specification. That specification requires only three parameters, the age at which a consequential number of marriages first occurs, the proportion ever married, and the mean age at marriage. Demographic experts can specify the first and third parameters and ask the user only to specify the mean age at marriage. Alternatively, the user could be asked to specify only the second and third parameters. In any case, it would be much easier to specify two mean ages at marriage than to specify two vectors of age-specific proportions married.

3. The third item on the DATA INPUT MENU is the current contraceptive prevalence rate. It would be easier just to ask the user about the proportions of women of various ages who are currently contracepting. But why ask at all? Generally, we ask users to set parameters which pertain to various future paths of variables. Competent demographers should make their best guess

as to the contraceptive prevalence rate currently in the country and The Futures Group should enter that number into the program in Washington.

4. Similarly, the IUD discontinuation rates should probably be preprogrammed in Washington as should the index of change in other proximate determinants.

5. An alternative would be to envision a program which has two modes. One which asks only a few easy questions and a second one which is like the present version where all the gory details are asked. If graphics were added to the first mode, the program could be very interesting indeed.

5. The Cost/Benefit Model (Bangladesh)

A. General Comments

I only have general comments on this model because someone in our Department borrowed our Lotus disk for a substantial period of time. John Stover was kind enough to send me one, and I ran the program, but did not understand the details of what it did. With some effort I could have mastered the program, but I was not very tempted to bother for two reasons. First, I think that the number of people in developing countries who can run Lotus comfortably is so small that it would be unlikely that any Lotus package should be included in the RAPID package of models. The second is that I have VERY substantial disagreements over the material in half of the model and do not think that the direction of modelling work there should be encouraged.

Let me be more precise. The cost-benefit/cost-effectiveness model is really two models. The cost-benefit model tries to estimate the value of a birth averted and the costs of a birth averted. The cost-effectiveness model deals with the costs of various alternative forms of providing a given number of years of contraceptive protection. I do not believe that the creators of the program have come near to doing the cost-benefit modelling correctly. I believe that their methodology contains problems sufficiently grave as to call that portion of the modelling exercise into serious question.

The value to society of a birth averted is an extremely tricky issue. Sophisticated overlapping generations models have

been recently developed in the economic literature which bear on this. Unfortunately, the work of Simmons, Rob and Bernstein makes no mention of it. In the paper entitled "An Economic Analysis of Family Planning in Bangladesh," the authors describe three methods of computing the value of a birth prevented (pp. 13-27). In the first method, the government wants to maximize GNP per capita where the level of GNP is not affected by population size. The premise here is wildly wrong. The level of GNP is substantially influenced by the size of the population. It may be argued that in Bangladesh GNP is unaffected by population size. I am not an expert on Bangladesh, but the Bangladesh case certainly ought not to be the foundation of a generally applicable RAPID model.

If ten people are not born because of a family planning program, we can think (incorrectly, I believe) of reallocating all of their consumption to the remaining citizens who are now better off. Is the measure of how much better off the remaining people are a measure of the value of the averted births? No, because the computation ignores the utility of the people who do not get born. If everyone but me in the U.S. disappeared and I could then consume the entire GNP of the U.S. as it was when everyone was around would my increase in consumption be a good measure of the value to the U.S. of destroying everyone but me. Of course it would not!

The second approach to the value of a birth averted is more sophisticated. It takes into account the fact that a larger population means that GNP would be larger because of the increase

in the labor force. It also takes into account a savings effect which is supposed to work in the opposite direction. The savings effect has two components, the dependency effect and the per capita income effect. The dependency effect works because higher fertility "makes individuals and institutions such as government less able to put aside resources for investment" (p. 22). Whether this statement is true or not depends on how one counts education. Education is an investment. If the government can invest less in other things because it must spend more on education this does not mean that investment as a whole has declined. If parents save less because they invest in their children, this does not mean that total investment has decreased. The per capita income effect is said to work because people with lower incomes save less. This argument is also flawed. In many LDCs, the government is the dominant source of savings not the household sector. If wages are lower, the price of labor to the government sector is lower and the same nominal investment fund can be translated into greater real investment.

The third approach is to estimate the value of a birth averted by estimating the savings in government programs. The major component of the savings is, of course, schooling. The government saves money because it is not forced to invest as much on human capital. It is true, in general, that in the short-run per capita consumption can be maximized by not investing anything and letting the country's capital stock run down. In the short-run people can save money too by not educating their children. The savings from not educating each child can then be divided among the population.

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I do not intend to get into a long-winded argument here. Serious scholars have significant disagreements on these issues. It is my belief that the measurement of the benefits of births prevented is NOT on strong enough intellectual grounds to justify its inclusion in a RAPID model at this time.

6. The Socioeconomic Determinants Model

A. General Comments

The socioeconomic determinants model is not yet a formal model, but rather a set of ideas in the process of coalescing into a model. I think that this enterprise has brought together an interesting set of papers so far and I think that continuation of this line of research is clearly in order. Bilsborrow, in his notes entitled "Development Progress: Socioeconomic Model of the Determinants of Fertility" notes three approaches to the task: (1) Bachue-like models, (2) cross-country macro models, and (3) single country models.

I believe that the single country modelling approach is the one most likely to be successful. The difficulty that I see is that it may be difficult to produce reasonable models in a time frame that is useful for the RAPID project.

It is easier to incorporate well-understood ideas into RAPID models. Research on the frontiers of knowledge is always messy and difficult to summarize in a simple way. I think that the resources devoted to understanding the socioeconomic determinants of fertility change are yielding returns already and that they will continue to yield returns even if no simple presentation-type model is ever produced.