

NONCAPITAL PROJECT PAPER (PROP)

Country: World-Wide

Project No.: 932-11-570-891

Submission Date: May 14, 70 Original: _____ Revision No.: _____

15p

Project Title: Expansion of Harvard University Center for Population Studies

U.S. Obligation Span: FY 1970 through FY 1974

Physical Implementation: Five Years

Gross Life-of-Project Financial Requirements:

U.S. dollars\$2,025,000

A. SUMMARY

This project proposal requests a five-year grant to enable the Center for Population Studies of Harvard University to expand its faculty in Population Economics and Sociology so that it can more systematically incorporate consideration of rapid population growth and its impact on economic and social development into the curricula of students from the U.S. and abroad in programs of public administration, economics, sociology, education, and related fields. The grant would provide faculty expansion and full-time support for about 50 man years of additional students devoting major attention to population matters in the Kennedy School of Public Service, the Center for Population Research, and graduate programs in economics and sociology, as well as general expansion of the population component in the curricula of all students in these and other programs. The grant would also provide a focal point for research activities in population ecology through the Population Workshop. Additional student support and faculty development would be provided through this workshop. And finally, the grant will also permit Harvard to offer in the Boston area, various courses and programs in population studies not now available to many students, American and foreign.

Involvement of additional U.S. and foreign students will undoubtedly have a perceptible effect in augmenting the capability of national programs in population and would become an important factor in influencing population policies and programs. It is anticipated that the graduates of the population program would carry out teaching and research roles and would be in position to clarify relationships between population growth and economic factors.

The expanded research program will close many of the informational gaps now extant, which is crucial to the development of a sound national population policy. Research may include, for example, such aspects as: the most effective means of introducing population teaching into the various levels of the educational systems of LDC's; the economic determinants and consequences of population growth and family planning in LDC's; changes in family structures, relationships, and functions, and their impact on changing fertility.

Harvard University Center for Population Studies is well qualified to perform the teaching and research proposed in this grant. Harvard's prestige, both in the U.S. and abroad, will enable it to selectively attract the most qualified students and faculty members. Harvard's proposed inter-disciplinary approach, with particular emphasis on economics to basic population problems gives added emphasis to demographic problems.

The Development Advisory Service of Harvard has a long and illustrious history in LDC's. Harvard influence abroad through its graduates both foreign and American, and its advisory services represent a strong resource which would be enlarged through this program.

In addition to the expanded faculty, expanded research program, and increased number of students, Harvard will also provide selected research and technical services as requested by UN/8 and individual missions abroad.

B. SETTING OR ENVIRONMENT

Many political leaders in less developed countries have given relatively low priority to programs aimed at fertility control because they are not firmly convinced: (a) that these programs are desired by the majority of their people; (b) that rapid population growth has significantly deleterious effects on economic and social development; (c) that even if such effects exist, their impact will be important within the usual time horizon of governmental planning; or (d) that programs to lower population growth can have significant economic or social effects within such time horizons. There is, as yet, little agreement within many countries about the nature and extent of the effects of rapid population growth, their importance relative to other factors of development, their interrelations with these factors, the future times within which different effects may become critically significant, or the likely impact of fertility control programs in mitigating these effects. Hence, economic planners and policy makers find it difficult to determine the direction and relative level of effort that should be given to programs aimed toward the reduction of

population growth in different countries with their varying economic, social and demographic conditions. The leaders of many less developed countries are unlikely to give priority to programs of family planning and fertility reduction until they are convinced of the importance of these programs by their own university teachers of economics, demographers, governmental economists, and administrative staffs. Their advisers need more knowledge, better analytical tools, and intellectual encouragement to help them bring population problems into their frames of reference. Much of the necessary knowledge does not exist, and must be sought through research. With the additional financial support requested in this proposal, Harvard University could make a major contribution to obtaining this knowledge and to teaching government officials and university scholars from the less developed countries, as well as Americans who are, or will become involved with the development of these countries. ✓

C. STRATEGY

The proposal is to strengthen and expand the program at Harvard of teaching, research, and public service in population economics and sociology thereby making the program more meaningful to the less developed countries. The project will offer opportunities to gain a much deeper understanding of the critically important interaction between population growth and economic and social development. This program will involve cooperation among the John F. Kennedy School of Government, the Graduate Schools of Education, Public Health, Divinity, the Medical School, the Departments of Economics and Social Relations of the Faculty of Arts and Sciences, the Harvard Development Advisory Service, and the Harvard Center for Population Studies.

This expanded program will also permit Harvard to encourage and accept students, both foreign and American, in the Boston area to participate in population courses and seminars, which at present are not now available to them.

An important aspect of this proposed expanded program would be training of the "Public Service Fellows" who come each year to the Kennedy School of Government. Normally, there are fifteen of these fellows. All of them are junior government officials from LDC's, selected for the Kennedy School by the Harvard Development Advisory Service as candidates for the degree of Master of Public Administration. It is proposed that about three additional Public Service Fellows be supported annually under this grant. These would be specifically recruited because of their interest in population studies.

In addition to the Public Service Fellows, Harvard will be able to create a special group of about four Harvard Population Center Fellows annually from LDC's, who would not necessarily be degree candidates but who could take courses and seminars in population studies, economic and social development, and administration. A planned course of study for these fellows would need to be flexible to take account of their different backgrounds and interests. This program could be tailored also to meet the needs to participant-trainees in population economics and sociology who might be supported by A.I.D., and it would be useful in providing special training to A.I.D. staff members who might later be assigned to A.I.D. missions as advisors or administrators in population planning and policy.

The Center's relationship with the Harvard Development Advisory Service continues to be close and productive. If this proposal can be funded, one of the most promising possibilities for graduate and post-doctoral study of population problems as they actually exist in LDC's would come through the opportunities offered by the Development Advisory Service to Training Associates in the countries where there are advisory teams.

D. PLANNED TARGETS, RESULTS AND OUTCOMES

The A.I.D. grant will enable the Harvard University Center for Population Studies to undertake an expanded program in teaching, research, both within the University and in the field, and public service.

Teaching

Programs leading to the Ph.D., with the dissertation in population studies, would be given the Departments of Economics and Social Relations and as one of the options of a new Ph.D. program in Public Policy which is currently being organized by the Kennedy School of Government.

The Program in Public Policy, which began experimentally in 1969-70, is intended for students whose career aims are limited to operational or research tasks associated with the making and executing of public policy. Beside the Ph.D. program, there will be a two-year program leading to the degree of Master of Public Policy. This will have a first-year core curriculum in four areas: Policy Analysis; Economic Theory; Statistical Methods; and Political Factors in Public Decision Making. During the second year, Master's degree students will concentrate on one area of policy or public management, taking two full or four half-courses in this area.

Courses in Population Studies would also be offered to the junior government officials who are registered in the Kennedy School as candidates for the M.P.A. degree, particularly to students from less developed countries. Normally, about fifteen of the one-hundred Kennedy School students are "Public Service Fellows" from these countries. They are recruited and their qualifications evaluated by the Development Advisory Service. During the past two years, Public Service Fellows have come from sixteen different countries - seven in Asia, five in Africa, and four in Latin America. Insofar as possible, Harvard will give precedence to applicants from Indonesia and Pakistan.

Students in either the Masters or Ph.D. programs would need to meet the general requirements of their Departments or of the Kennedy School, but they would have an opportunity to concentrate in population problems by taking courses in the proposed new teaching program in population economics and sociology, and, in the case of the doctoral candidates, by doing research in these fields. The emphasis in the teaching program would be on the following subjects: 1/

1. The consequence of population change for education, migration, urbanization, health and nutrition, the character of the labor force, development of natural resources, introduction of new technology, environmental quality, political structure, and other aspects of economic and social development. An attempt would be made to consider these consequences at both the micro- and macro-levels of the family and village on the one hand, and the nation or national region on the other.

2. The nature, use, and limitations, of demographic data and projections for economic and social planning.

3. Ethical, cultural, and religious considerations related to population policy.

4. The implications of population policy for socio-economic development, and, conversely, the effects of national economic and social policies on population change.

5. Quantitative analysis of the socio-economic determinants of population change.

6. The biological basis of fertility control from the standpoint of the administrator and the social scientist.

1/ Details of suggested expanded program in Appendix I.

7. The organization, administration, and evaluation of family planning programs.
8. The costs and benefits of different population programs.
9. The economic and social history of population change.
10. Theories of stable and quasi-stable populations and of human fertility, and their applications.
11. The theory of population change and the social and economic forces that affect it.

The proposed graduate program with a concentration in population problems would have several unique features, including its emphasis on economic aspects, on interactions between human populations and their environmental resources, and on the uses of population data and projections in planning. But perhaps the most important from the standpoint of students concerned with the less developed countries would come from the existing great strength of the Departments of Economics, Social Relations, and Government in the problems of economic and social development, especially of the Department of Economics.

Many of the candidates for degrees with a concentration in population studies would be Americans. But the contemplated design of the program would lead them toward careers in international development, in such Federal agencies as the Agency for International Development, the National Institute of Health, and the Public Health Service; such international organizations as the World Bank, the Inter-American Development Bank, the World Health Organization, the Pan American Health Organization, and the United Nations Development Fund; and such private organizations as the major foundations, and the Harvard Development Advisory Service. Many others, because of their unique training, should find careers in universities, where they can contribute by teaching and research to international development.

Equal emphasis would be laid on the participation of students from the less developed countries. Reference has already been made to the Public Service Fellows from these countries recruited by the Development Advisory Service as candidates for the degree of Public Administration in the Kennedy School.

For the population program, at both the Ph.D. and Master's degree levels, it would be especially desirable to recruit university teachers of economics and sociology in addition to Civil Servants, and part of this task could also be done by the Development Advisory Service, which now is responsible for recommending admission of students from LDC's to the Department of Economics.

Research

Research both within the university and in the field would be undertaken. The university research would be focused through a "Population Workshop" - a research seminar for faculty, graduate students, and research staff organized by the Center for Population Studies which would meet at regular intervals throughout the year, in which research results would be reported and an attempt would be made to formulate questions and problems suitable for analysis by quantitative methods.

While it is impossible to specify precisely what studies would be undertaken by the new faculty members under this grant, the cooperative research program of the Population Workshop would parallel many of the ~~teaching~~ subjects outlined on pages 5 and 6, namely, the impact of population change on the educational system, migration, urbanization, health and nutrition, the labor force, and other aspects of economic and social structures; population policies as related to ethical, cultural, and religious considerations; the implication of population policy on socio-economic development, and conversely, the effects of national economic and social policies on population change; quantitative analysis of the socio-economic determinants of population change; cost-benefit analysis of different population programs; stable and quasi-stable population and human fertility; social and economic forces affecting population change; economic motivation in family planning.

One organizing framework for the Center's research activities has been the broad point of view of population ecology - the interrelations between populations and their resources. Because of the special strength of the present faculty and research staff, these relationships, including the whole environmental system in which people live and which must change as populations change, will present challenging opportunities for the future. Harvard will continue to explore these opportunities through the methods of systems analysis and modern computer mathematics.

Field research would be conducted through the cooperative programs being established by the Center in India, Pakistan, Taiwan, and, it is hoped, elsewhere, and, where feasible, through the facilities of the Development Advisory Service. Its advisory teams are now operating in Colombia, Ghana, Liberia, Pakistan, Malaysia, and Indonesia. Considerable experience has been gained in assigning doctoral candidates who are working on their dissertations as "Training Associates" with these teams. Seven Training Associates have been given such assignments. Insofar as possible, students from LDC's will be encouraged to undertake research relating to their own countries.

The DAS Training Associates can work either as members of the advisory team or in research institutions in the same country, like the Pakistan Institute for Development Economics in Karachi, or the similar institute being established in Indonesia.

This proposed field research would be, to some extent, a departure for economists, who for the most part, base their analyses on data collected by others for purposes other than the analysis in question. As a consequence, relatively poor data or substitute data must often be used. The investigator should be at the source of the collection process so that he understands the limitations of the data. Research need not be limited to pre-Ph.D. level.

Other field studies, on the most effective ways of introducing population teaching into the various levels of the educational systems of less developed countries, are also contemplated as a cooperative project of the Center for Population Studies and the Graduate School.

Public Service

The Development Advisory Service* is prepared to help those countries where it has missions with advice on population policies and their consequences, and the economics of their implementation. For this purpose, it will need to appoint both population policy advisors who would be assigned as regular members of its overseas staff, and visiting specialists for shorter assignments. Building up of teaching and research competence for population studies at Harvard would be an essential element in the success of this program.

Research and Technical Services to A.I.D.

In addition to the expanded faculty and increased numbers of students that would be provided through the grant, the research program of the Center for Population Studies would provide a focal point for broader interdisciplinary types of research and technical services in the population field in response to policy and program formation needs of A.I.D. in Washington and the field. This programmatic support would assist A.I.D. in identifying areas of cultural, social, and economic change which impinge on the ultimate impact that family planning can have in reducing birth rates. This research would provide an opportunity for studying the fuller integration of family planning into on-going processes of social change in areas such as family health, nutrition, education, and other important areas of development. The Center will provide technical advisory service, consultation and specific program actions when requested by A.I.D. and the pertinent LDC's, or organizations concerned. These actions would be expected to be initiated as a consequence of research and applied studies in the dynamics of population growth.

E. COURSE OF ACTION

A.I.D. support of this proposal is strongly recommended. A grant of funds under Title X (now Sec. 208) to the Harvard University Center for Population Studies will provide a much needed resource in the development of technical capability of both American students and those from LDC's in the field of population ecology. This grant will also provide research opportunities, both in the U.S. and abroad, in those aspects of population problems which have received scant attention to date.

Before the Harvard Center for Population Studies undertakes a specific research project funded by this grant the Center shall submit the research proposal to TA/POP for approval.

When the total cost of a research project would exceed \$50,000, approval of the Research Advisory Committee (RAC) would also be required. With reference to research projects proposed for overseas locations, TA/POP will consult with the relevant Regional Bureaus and Missions. The request from the Center for TA/POP concurrence will specify the study or activity proposed, the goals of the project and its relationship to the objectives of this grant, a time schedule, budget estimates, including personnel, equipment, commodities, transportation, etc., and inputs, if any, from sources other than this grant.

TA/POP may also suggest types of research projects it might wish the Center to undertake under this grant. The Center would, if interested, subsequently develop an appropriate proposal and submit it to TA/POP.

The Center for Population Studies will be the focal point for the administration and coordination of this project among the various schools. As soon as the additional faculty members have been appointed, a committee will be formed made up of Center faculty and of Harvard faculty of some or all of the other schools participating in this project. The committee will be chaired by the senior faculty member obtained for this project. The purpose of this committee will be to assist and advise the Center on the necessary coordination and managerial interdisciplinary aspects of the project. The committee and/or its chairman, or duly appointed representative will be the Executive-Secretary of the project and will be the A.I.D. counterpart for this project. It is anticipated that the committee will be particularly active during the early formative years of the project when research proposals are being developed and initiated and when new academic courses are being integrated with current courses.

The procedures described above are intended to foster a full exchange of information between TA/POP and the Center in order to promote rapid and effective use of the resources marshalled under this grant.

Funds in the amount of \$405,000 yearly for five years will cover the costs of faculty, research, international travel, honoraria, library, secretarial help, etc. It will also provide stipend, maintenance allowances, and travel expenses for some seven Public Service and Population Center Fellows from IDC's annually. In addition to these long-term fellows, Harvard University will be able to accommodate students from the Boston area in various population courses not now available to them as well as students in other schools at Harvard. *

The most urgent need for the teaching program is the appointment of a senior demographer in the Department of Social Relations. The Department agrees that such an appointment should be made, and has selected two candidates, but it can contribute only about twenty per cent of the salary. The Center has an endowed Chair for this appointment, one of the two vacant Andelet Professorships, but, unfortunately, the endowment has not yet matured to the point where it could pay a Professor's salary.

To expand the teaching and give greater breadth to the research, a visiting Professorship to be held alternately by a Population Economist and a Sociologist Demographer, and two Assistant Professorships, one in Population Economics and one in Social Demography are also essential. The "Population Workshop" should be staffed with two Post-Doctoral Research Associates to give it continuity and form. Country time will also be needed.

Support for an additional 50 man years of Public Service and Population Center Fellows specifically concerned with population problems, Teaching Associates of the PAS, Research Assistants, two Post-Doctoral Research Associates, and Doctoral Student Support is necessary to assure that outstanding students who desire to concentrate on population problems will be able to do so. Basic support for the Research and Teaching programs will be necessary. A budget proposal is provided on page 11.

A.I.D. Budget

ITEM	ANNUAL	5-YEAR
1. Faculty Staffing		
Full Professors (2)	\$ 45,000	225,000
Asst. or Assoc. Professors (2)	28,000	140,000
Summer Professional Salaries	24,000	120,000
Secretarial Assistance (3)	18,000	90,000
Post Doctoral Research Associates for Population Workshop (2)	22,000	110,000
Training Assoc. for DAS (2)	<u>22,000</u>	<u>110,000</u>
Total	159,000	795,000
2. Support for Doctorals and Fellows	82,500	412,500
3. Research	99,500	497,500
4. Retirement and other Benefits	19,000	95,000
5. Travel, Library, Honoraria, and Other Expenses	<u>45,000</u>	<u>225,000</u>
Grand Total	\$405,000	\$2,025,000

Note: Increase of 7,500 annually or 37,500 for 5 years is result of anticipated increase of one more Fellow annually.

Suggested Additional Courses and Seminars for Expanded Program,
in Population Economics and Sociology

One Semester

A. Lecture Courses

1. Demographic Methods (expansion of Demography and Human Ecology 3c)
Half course. Three lectures and one two-hour laboratory each week.
Associate Professor D. M. Heer.
Applied demographic techniques. Evaluation and correction of vital statistics and census data; methods of measuring nuptiality, fertility, mortality, and contraceptive effectiveness, with special emphasis on measurements and estimates of population growth; application of stable and quasi-stable population models and models of fertility components; interrelations among demographic parameters, estimation of demographic quantities from inadequate data; preparation and evaluation of population projections.
2. Advanced Demography I. Theory of Stable and Quasi-stable Populations.
Half course. Professor or Assistant Professor of Sociology and Demography.
An exposition of stable and quasi-stable population theory as developed by Lotka, Leslie, Coale, Brass, Keyfitz, Alvaro Lopez, et. al., and its application in estimating demographic parameters, especially from inadequate or inaccurate data, and in interpreting relations among population components. Use of numerical analysis and computers in application of the theory.
3. Advanced Demography II. Human Fertility.
Half course. Professor or Assistant Professor of Sociology and Demography.
Theory of stochastic and other models of human fertility and components of the birth interval, including work of Henry, Lachenbruch, Potter, Ryder, Sheps, Tietze, et. al. Applications and illustrations of the theory from observed data.
4. History of Human Populations.
Half course. Visiting or Assistant Professor of Economics and Population.
Economic and social history of population change and its determinants and consequences, with special emphasis on Europe, North America, and Japan from the 17th to the mid-20th Centuries, but also considering other cultures, and earlier times.
5. Population Policies.
Half course. Staff of the Center for Population Studies.
History of population policies, such as family subsidies; family planning programs, and legalized abortion. Consequences of population policy for economic and social development - costs and effectiveness at different future times; degree of satisfaction of welfare economic criteria and ethical criteria generally; effects of other national economic and social policies on population change; criteria for allocating resources to population policies.

6. Basic Economic Analysis for Students of Population Problems.

Half course. Faculty members of the Center for Population Studies in Population Economics.

A course for students without adequate background in economics.

7. Biological Basis of Fertility Control.

Half course. Assistant Professor of Population and Public Health.

A course for non-biologists who will have administrative or policy-making responsibilities in fertility control programs, designed to give basic understanding of the physiology of ovulation, spermatogenesis, sperm transport, fertilization, implantation, and development of the fertilized ovum; hormonal regulation of these processes; the scientific terminology of the subject; the effectiveness, side effects, contra-indications for use, and what is known about the modes of action of existing methods of fertility control; problems and prospects of development of improved methods; and human sexual and reproductive psychology.

8. Family Planning Programs.

Half course. Professor Joseph Beasley.

Planning, administration, and evaluation of family planning programs in the United States and in less-developed countries; problems of financing, procurement, and distribution of supplies, recruitment and training of personnel, adjustment to local customs and conditions, and integration with other health or welfare programs.

B. Seminars

1. Econometric Analysis of Population Problems.

Half course. Visiting or Assistant Professor of Economics and Population.

Case studies in the use of econometric methods to obtain quantitative estimates of the socio-economic determinants and consequences of population change in different countries and regions; applications of multivariate methods, regression, analysis of variance and covariance, small sample theory, significance testing, probability distributions, and elementary matrix algebra to such questions as the significance of education, infant and child mortality, employment and status of women, degree of urbanization, etc., in determining fertility; effects of age distribution on economic growth; relation between savings, investment, and population growth.

2. Economic and Social Consequences of Rapid Population Growth at the Village and Family Level.

Half course. Staff of the Center for Population Studies.

Forced migration of young men, reduced size of farms, deterioration of diets, increase in intra-village conflicts, etc.; effects of large family size on social and economic mobility of the family; mortality and morbidity of mothers and children; family income; child growth and development; social performance of children in later life; intergenerational relationships, etc.

3. Sociology and Economics of Urbanization and Migration in the Presence of Rapid Population Growth.
Half course. Professor or Assistant Professor of Sociology and Demography.
4. Socio-economic Planning and Population Growth.
Half course. Visiting or Assistant Professor of Economics and Population, and Professor or Assistant Professor of Sociology and Demography.
Case studies designed to show the potential or actual usefulness and limitations of demographic data and projections in economic and social planning, including educational, manpower, and employment planning; allocation of resources to agricultural, industrial, and other sectors; introduction of new technologies; land use; urban and regional development, etc.
5. Human Populations and Natural Resources.
Half course. Staff of the Center for Population Studies.
Analysis of natural resource development required by rapid population growth in different countries; use of linear programming and simulation techniques for these analyses; human effects on the natural environment and vice versa.
6. Ethical Aspects of Population Policy (expanded part of present Ethics 284).
Half course. Professors A. J. Dyck and R. B. Potter.
A critical examination of the ethical issues connected with population control in the light of current population trends and problems. Special attention to the ethical problems associated with family planning, and with the formation by governmental and voluntary organizations of public policies for controlling population growth.
7. Cultural and Religious Factors in the Population Problem (expanded part of present Ethics 284).
Half course. Professor A. J. Dyck.
Consideration of the relevant teaching of the major world religions, the influence of religious factors on fertility rates, and the nature and image of the family in different religious and ethical systems. Critical analysis of historically and culturally diverse religious and moral orientations toward nature and toward the technical means for coping with nature. Special attention to the causes and ecological consequences of rapid population growth.
8. Research Seminar in Population Studies.
Full course. Staff of the Center for Population Studies. ...
A "workshop" meeting at two-week intervals throughout the year to serve as a focus for faculty, graduate student, and staff research on population theory and its applications. Research results will be reported and attempts will be made to formulate questions and problems suitable for computer analysis or other qualitative methods.

Proj 9320891
PR-

PROJECT AUTHORIZATION

PROJECT NUMBER 931-11-570-891	COUNTRY WORLDWIDE	7/8 1970
PROJECT TITLE EXPANSION OF HARVARD UNIVERSITY CENTER FOR POPULATION STUDIES		5. AUTHORIZATION DATE 6/1/70
7. LIFE OF PROJECT		6. PROP DATED May 14, 1970

a. Number of Years of Funding: 5
 Starting FY 1970; Terminal FY 1975

b. Estimated Duration of Physical Work
 After Last Year of Funding (in Months): none

FUNDING BY FISCAL YEAR (in U.S. \$ or \$ equivalent)	DOLLARS (000s)		P.L. 480 CCC + FREIGHT	LOCAL CURRENCY Exchange Rate: \$1 =			
	GRANT	LOAN		U.S. OWNED		HOST COUNTRY	
				GRANT	LOAN	JOINTLY PROGRAMMED	OTHER
Prior through Actual FY							
Operational FY 1970	2,025						
Budget FY							
B + 1 FY							
B + 2 FY							
B + 3 FY							
All Subsequent FY's							
TOTAL	2,025						

9. DESCRIBE SPECIAL FUNDING CONDITIONS OR RECOMMENDATIONS FOR IMPLEMENTATION, AND LIST KINDS AND QUANTITIES OF ANY P.L. 480 COMMODITIES

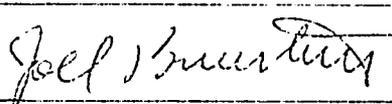
10. CONDITIONS OF APPROVAL OF PROJECT

(Use continuation sheet if necessary)

11. Approved in substance for the life of the project as described in the PROP, subject to the conditions cited in Block 10 above and the availability of funds. Detailed planning with cooperating country and drafting of implementation documents is authorized.

This authorization is contingent upon timely completion of the self-help and other conditions listed in the PROP or attached thereto.

This authorization will be reviewed at such time as the objectives, scope and nature of the project and/or the magnitudes and scheduling of any inputs or outputs deviate so significantly from the project as originally authorized as to warrant submission of a new or revised PROP.

A.I.D. APPROVAL	CLEARANCES	DATE
 SIGNATURE AA/TA, Joel Bernstein TITLE	RTRavenholt, M.D. (WB cleared-phone)	5/21/70
	MLieberman (WA cleared-phone)	5/21/70
	EA, NESA, AFR (subs)? LA (no comment)	5/25/70
	XXXXXX TA/PM, JHLean; KSevick	5/25/70

TA/PM E. J. Long