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USAID NEW DELHI

ACTION PLAN

1987

USAID/NEW DELHI

1987 Action Plan

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I. INTRODUCTORY OVERVIEW

The FY 1987 Action Plan is the last in a series of documents which bridge the last major CDSS, produced in 1984, with the one due in 1988. In a sense, this Plan anticipates the development of a fully-articulated strategy by including a presentation of future activities in advance of that articulation. Nevertheless, this document will seek to validate those elements of the current strategy for which it remains possible to do so and identify those areas where changes in emphasis may be expected to occur in the CDSS. Much of this will be determined based upon the outcome of analyses currently underway. In any event, new Mission leadership will no doubt have an impact on the development of the strategy.

A. MAJOR STRATEGY GOALS

One of the major questions the next CDSS will have to come to grips with is the continuing validity of a strategy which was formulated during a period of relatively high assistance levels, levels which have declined by more than 40 percent between FYs 1985-1988 and which, at this writing, face an even graver reduction via the U.S. legislative process.

The U.S. development assistance level was small (by comparison with the overall

Indian development budget) at \$85.0 m. in FY 1984. Yet even when this level was reduced in the following two fiscal years to \$72 million and \$53 million respectively (largely because of U.S.G efforts to reduce the deficit) the Indians did little complaining publicly. There was clearly a perception in India that the cuts were being applied if not equally among the development assistance recipients; at least in response to budget forces that were beyond India-specific considerations. Distressed about the downward trend of the levels the Indians nevertheless recognized the importance of a development "relationship" with the U.S. and worked with us in determining how best this limited funding could be applied to critical development issues and problems.

It is not clear how the new potential reductions targetted at India for what are perceived to be political reasons will effect this dialogue. Yet the issue remains one of defining the best use of AID funds in an environment much changed from 1984.

AID's existing strategy for India rests on an analysis of the continuing impoverishment of its people as reflected in low rates of per capita economic growth (both agricultural and industrial), complicated by serious population and health problems. The broad strategic goals of the program are: improving agricultural productivity and rural incomes; reduction of child mortality and reduction in fertility; and improving the capacity of science and technology in the resolution of development problems. These objectives are tied together by the broadening engagement of

the private sector and other nongovernmental institutions as alternative engines of development. These goals have remained constant and valid throughout the CDSS period.

While our analysis of India's fundamental development agenda is not expected to change, the ambition behind our strategy and the means by which we carry it out may well have to be reconsidered. Indeed, there is ample evidence that such a shift has already occurred. AID's current incarnation in India (1978-present) demonstrates an almost non-stop transition from one mode of assistance delivery to another: resource transfer to large field-based programs and, more recently, to more concentrated science and technology development activities and to more qualitative and focused assistance on key issues which have high impact and multiple linkages such as vaccine development and specific management improvement in irrigation and medical services delivery. In addition, the program has taken some steps away from governmental action on development problems to engaging non-governmental institutions, particularly the private sector. This transition reflects both the constraints posed by magnitude in India and an increasing awareness on our part that the current U.S. comparative advantage in development in India lies less in traditional field-based programs than in other activities which capture the opportunities offered by its already substantial human and technical resource base.

The current manifestations of this shift in

thinking span the portfolio. In agriculture we are beginning to fashion a new generation of activities which are designed to strengthen the resource base. By describing agriculture in resources management terms we are beginning to fashion a new generation of activities which are designed to strengthen a resource base which is being systematically "mined" of its productive capacity. Unless the forces which lead to the destruction of the resource base are arrested, agriculture will not be sustainable over the long run. Growing GOI and worldwide concern for this problem has led to rapid changes in the policy framework, opening up significant opportunities for AID collaboration. These will include a new Plant Genetics project, a state-based forestry education and research project and an agricultural R&D project which engages the capacities of the private sector rather than the government research bureaucracy which has been the focus of previous AID-supported research activity. In irrigation, we will shift away from construction of new surface irrigation systems and focus on improving water management practices on existing systems. In forestry, we can expect to continue with moderate-sized field programs but with a greater emphasis on research as mentioned above although we may expand the focus to include watershed management if the opportunity arises.

In health and population the dual emphasis on improved service delivery and scientific research will mature in the next CDSS period as child survival programs are put in place and as the linkages be-

tween Indian health research institutions and widely respected U.S. and international organizations (such as the Center for Disease Control and UNICEF) become more firmly established.

Food aid has always been an important component of the AID program in India but only in recent years has it been integrated into overall strategy. Title II food resources account for over one-half of the resources the Mission is applying towards its child survival strategy. This year we propose to restore, after a fifteen year hiatus, a Title I program at a level of \$25.0 million to support our private enterprise efforts and objectives in other sectors. We will pursue a comparable program in FY 1988. The Mission will continue to look for ways to utilize all available resources including food aid, in the implementation of its strategy.

Although research and technology development is, in many ways, a cross-cutting theme in our portfolio, we have identified it as the third of our major sectoral concentrations. The intent in giving it its own identity is to capture as coherently as possible those opportunities provided by the policy shift toward greater competition, emphasis on technology innovation and the growing awareness of the need to better utilize India's large R&D capacity. Technology innovation is critical if India is to create the growth necessary to expand income and employment sufficiently to keep up with population. Technology innovation with strong backward linkages into the rural sector will be especially significant. This component of the program

is targetted at that segment of the economy which is making the transition that every developing economy must make on the way to modernization. In India, where resources in the agriculture sector may be nearing their capacity to sustain a growing rural population this "secondary" sector transition is critical. (See Part II C for further discussion of objectives.)

Putting the meat on the bones of this strategic component of our program will be the major challenge for us in the next CDSS period. Our goal in India in this sector is to develop a strategic framework which is something more than a collection of projects (eg. a little science here, a little enterprise there). Thus we expect a rather lengthy gestation period as we attempt to bring diverse institutions (eg. business, academia, the public sector) together to work toward a common end, a criterion which appears to underlie all successful models of technological development.

Early efforts in this arena include the Technologies for the Rural Poor and Alternative Energies for Rural Development projects. Another major effort is the Program for the Advancement of Commercial Technology (PACT) which is just now gaining impetus with the approval of four technology development proposals. The second, soon to be signed with the GOI is the Program for the Acceleration of Commercial Energy Research (PACER). A third, and much more complicated activity to describe at this time, is something we are calling, for the moment, State Technology Development and Enterprise (STE). STE cannot be called a project yet; indeed,

we are reluctant even to describe our efforts in developing this activity a typical "design" at this time. It is, rather, a process of working with leadership in Karnataka and Bangalore to create a more dynamic environment for technology change at the local level. One or more projects may emerge, in FY 1988 and/or 1989.

If the opportunities for AID in this sector seem abundant so too do the obstacles. Perhaps the most critical obstacle to the development of a strategy in this area is the functional account question. The shortage of Section 106 (Energy and Selected Development Activities) funding forces us to drive a strategy toward the traditional areas of USAID involvement eg. agriculture, health and population when it simply may not be possible to conform to these categories given our analysis of a particular development problem. We are making every effort to use the other accounts where possible. But the Section 106 problem throws into doubt our ability to follow through with an STE activity and other things we are thinking about. It would seem that this is a critical issue for the agency, the resolution of which may well determine the outcome of our development strategy in India.

B. IMPACT

The sectoral summaries which appear in Part II of this Action Plan give a mixed picture of achievement toward goals which are extremely difficult to measure

given the magnitude of the Indian development agenda and USAID's role in it. We are in the process of developing indicators at all objective levels but we despair of ever relating empirically modest AID inputs to progress in Indian national goals, with some important exceptions such as child survival. Nevertheless, it is becoming apparent in those geographic areas in which AID is working that some impact is beginning to be felt. The forestry sector is a good example where enough trees have been planted in our project states that they would stretch in a row from New York to Los Angeles. This does not permit us to say much about an increase in rural incomes, our goal in this sector, but the narrative explains that the overwhelming majority of these trees are planted on the land of marginal and small farm households, providing important income-earning assets to the poor.

Under the recently completed Integrated Rural Health Project over 2,000 new health facilities were constructed and became fully operational providing expanded health coverage to over 20 million people. At this time we are unable to measure the actual health improvements associated with this service delivery but we are confident that they are making important contributions in project states. A recent evaluation of the Integrated Child Development Services Project, a forerunner of a much larger follow-on project in 1988 and a major component of our Child Survival Strategy, has indicated a significantly expanded use of oral rehydration therapy by village health workers in project districts and a soon-to-be com-

pleted statistical survey is expected to show a marked decrease in diarrheal related illness in these districts.

In irrigation the gradual shift from foodgrains to higher value crops has taken place on nearly one third of the land in AID project districts indicating improved water use efficiency and delivery reliability. Important institutional changes in project states are having an impact on water resource planning.

The impact of PACT in terms of usable technologies is yet to be determined. But PACT as an idea has seized the imagination of a broad segment of the public and private sectors in India. The PACT model has opened up the dialogue on a category of issues hitherto untouched by AID in India including technological innovation, commercialization of research and tripartite linkages among business, academia and the government. The impact so far is environmental but it nevertheless represents movement in a direction which captures the benefits of the liberalization program underway in the Indian economy.

C. NEW ACTIVITIES

Notwithstanding the doubts about levels expressed above, the Mission has planned a substantial agenda for new programming in FY 1988 and FY 1989. In Agricultural Resources Management two new projects are planned for FY 1988: Plant Genetic Resources and Agriculture Technology Development and Enterprise. The

Agriculture Research and Education Project will start in FY 1989. In Health and Population, one new project will start in FY 1988: Population Research Centers and one is planned for FY 1989, Child Development Support - ICDS/CARE. In Research and Technology Development, the State Technology Development project should begin in FY 1988. A follow-on Development and Management Training project is also planned for FY 1988. New Project Descriptions (NPD's) are being prepared for these projects.

D. MAJOR PROGRAM MANAGEMENT ISSUES

Declining levels and the paucity of Section 106 funds are the two most significant issues which lend uncertainty to the India program. They potentially affect new project development across the board, but primarily in the Research and Technology Development Program. In the environment of continuing reductions, questions about the size and make-up of the USAID staff will be raised more vociferously in some quarters. Three years ago (and even more recently) we were looking at increasing planning levels despite the cutbacks forced by overall U.S.G. budget cuts. This "expansion" mind-set had a lot to do with the selection of program activities and the size and composition of Mission staff. The inexorable *directional* change in the levels, as much as the absolute level, calls many of these assumptions into question. Another program management issue is

AID/W support of our current efforts to restructure our field projects to orient them more toward improved institutional and management performance.

E. CURRENT STATUS OF LIBERALIZATION

Liberalization has entered a period of incremental change and consolidation of past gains. The sweeping reforms of Indian Fiscal Year (IFY) 85 and 86 such as the electronics policy, textile policy, long term fiscal policy, delicensing and broad banding have given way to a less visible but nevertheless purposeful commitment to raise industrial competitiveness. The recent IFY 1988 budget speech by the Prime Minister which, in sharp contrast to the previous two budget speeches contained no announcement of major new economic reforms, can be seen as a milestone reflection of the shifting approach to liberalization.

The return to the pre 1984 approach to liberalization, namely incrementalism, is a response largely to pressures on the Government from political opposition and the business community. The former have attacked the reforms by characterizing liberalization as favoring the rich and the latter have lobbied for relief or been less enthusiastic about further deregulation as the reforms have begun to bite into relatively comfortable market positions. For example, the engineering industry, which has been hard hit by liberalised imports of

capital goods, has been lobbying for reinstatement of protective barriers, though without significant success to date. The emergence of vocal and effective opposition to major economic policy reform in a parliamentary democracy should not come as a surprise.

A critical element for building constituencies for continuing the transition from an economy characterized by excessive administrative controls to one that is more market oriented is the realization of benefits from the transition. At this juncture the most tangible outcomes are lower tax rates, a stock market that boomed in 1985 and has stabilized now at a substantially higher level, doubling of imports of capital goods and less restrictive licensing. The industrial growth rate, the main target of liberalization, has stayed around its trend rate of the 1980s of six per cent per annum. The realization of gains with respect to industrial growth are likely to come with a time lag over the medium term and are dependent in part on the continued support of the GOI for the reforms.

The immediate pressure most threatening to realizing benefits of liberalization, and possibly continuation of the reform program, is the balance of payments situation which has been difficult in recent times and is expected to worsen in the near future. The debt service ratio has risen above the 20% mark, the consensus ceiling in the past for this ratio. Under this circumstance, the GOI with its record of conservative management of external accounts may well accede to pressure groups calling for controls of imports and

in the process accept a slower pace of modernization of industry and growth. The resulting diminished benefits may combine with other pressures to setback the evolution of India towards a more open market economy. In this regard, continued access by the GOI to concessional finance through the MDBs and other donors (Japan plans to provide over \$400 million in FY88 and Germany has just signed an agreement for a new level of \$365 million) will be important to the long term success of liberalization.

preliminary conclusions expected by Program Week. A population update will follow a review by the Population Council which is also currently underway.

A. AGRICULTURE RESOURCES MANAGEMENT

II. PERFORMANCE AND PLANS

Last year's action plan described the dominant themes for FY 1987 as implementation, assessment and redesign. As FY 1987 passed the halfway mark, however, new design efforts emerged in several sectors. In addition, the Mission initiated a major effort of program impact analysis which involves the identification of key program indicators and the establishment of a system to collect data over time. This effort began relatively recently and there is much work to be done.

During last year's Program Week the Mission agreed to conduct a series of analyses leading to updated strategy statements in several sectors. An irrigation paper will be ready for review in AID/W during this year's Program Week. A broader agriculture strategy paper will be ready, as agreed, by the end of FY 1987. An R & TD Assessment Update is currently underway with

The A.I.D. program in India contributes to the improvement of the rural economy through increases in agricultural productivity and incomes. The approach focuses on improving the quality of water, land and agricultural technology. For convenience we have divided this sector into three subsectors: water resources management, forest resource management and agriculture science and technology development. Some activities are planned which do not fit easily into these categories. They are, nevertheless, consistent with our evolving agriculture resource management strategy.

1. FOREST RESOURCE MANAGEMENT OBJECTIVES

In 1981 the Government of India asked USAID to become engaged in the serious problems confronting the country's forest

resources. Essentially, a growing population and a rising economy have accelerated consumption of forest products in India to a rate which exceeds by four-or five-fold the country's capacity to replenish supplies. The result is rampant deforestation and environmental degradation. Since forest products are a staple of life in rural areas and forest resources play a critical role in maintaining overall rural productivity, sections of India's rural population especially the poor are experiencing marked reductions in living standards.

Once the urgency of this situation was realized in the late 1970's, there was little time to pilot test and carefully design interventions before sizeable financial resources were committed to largely untried "social forestry" programs in India's major states. Foreign donors are now supporting such projects in 15 of India's 25 states; the current level of government investment in social forestry or closely related wasteland development activities exceeds Rs.3.5 billion (\$275 million) per year. These programs have made commendable progress. Over the past four years, over 5.8 million hectares of trees have been planted. (In the preceding 30 years, the state forest departments were able to afforest only 3.8 million hectares.) However, the current rate of tree planting still falls well short of requirements, and the institutions, policies, and technologies which can fulfill India's forestry needs over the longer term are still evolving. AID assistance is geared to support these evolutionary processes.

USAID's major program goal in this sub-sector is to increase the incomes of the poor. An important collateral goal is to maintain and enhance the natural resource base. To attain these goals, USAID's intermediate (or purpose level) objectives are to support the development of effective government and private sector capacities to undertake alternative afforestation field activities, evaluate their effectiveness, and develop supportive policies and future initiatives and; to support Indian initiatives to improve the scientific and technical foundations of afforestation activities.

IMPACT

USAID's initial response to the GOI request for support was three collaborative Indo-U.S. projects totaling nearly \$140 million. The first of these, the Madhya Pradesh Social Forestry Project, was completed at the end of March, 1987. The most recent and largest of the projects is the National Social Forestry Project, co-financed with the World Bank. These projects support the development of social forestry capacities within six states and the Government of India. By mid-1987 nearly 700 million tree seedlings have been produced and planted on more than 5.8 million hectares in farmers' fields and small village forests in project states. Sixty to seventy percent of these seedlings have been distributed to farm households and other private parties interested in introducing tree culture into their agricul-

tual activities and a recent survey indicates that approximately 75 percent of these are marginal and small farm households. Evidence indicates that seedling survival rates generally range from 20 to 80 percent, reflecting variation in seedling quality, site characteristics, rainfall and post-planting protection and management. Initial collaborative planning exercises to facilitate village level management of 130,000 hectares of small village forests have taken place in about 5,000 villages. Monitoring and evaluation offices have been established in each project state and are now being provided with computer hardware, software and training.

Social forestry is a field in which little rigorous research has been conducted and few proven technologies are available. Although much can be learned from careful analysis of the empirical experience constituted by on-going social forestry programs, the sustainability of future social forestry interventions will require a solid scientific base. During the past year, USAID began supporting Indian efforts to improve relevant research capacities. While no scientific impact is demonstrable at this time the enthusiasm of Indian forestry authorities and scientists in establishing this program is satisfying important institutional objectives of the program.

Given India's unique biological history, USAID is seeking ways to respond to growing concerns regarding the preservation of biologic diversity. The GOI believes the US holds a certain comparative

advantage in the area of wildlife management. In 1986 this resulted in a request for US collaboration in building the capacities of the new Wildlife Institute of India. USAID was one of several US agencies involved in fashioning the response which has been accepted by the GOI. The resulting program will bring a number of US visiting faculty and research associates to the Institute over the next five years. Additionally, some 18 Institute faculty members will receive advance training in the U.S. These activities will be financed by USAID and represent a major step in the preservation of biological diversity in India.

PROBLEMS AND CONSTRAINTS

Two generic constraints which affect overall program planning and implementation also affect the resource management sector. The current uncertainty about outyear budget levels raises some doubt about our ability to count on funding for one activity (U/FRED, described below) already in the design phase, and another Maharashtra Social Forestry II, which is notional at this time but which we might consider in FY 1990.

Political commitment and GOI funding are no longer major constraints to expanding afforestation programs in India. Major problems now are the shortage of trained people (eg. the human resource constraint) and effective management sys-

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tems; the inadequacy of technology in nursery management and techniques, and effective institutions.

MAJOR PLANNED PROGRAMMATIC AND MANAGEMENT ACTIONS

A number of actions are contemplated over the next two years:

-Madhya Pradesh Social Forestry Project close-out procedures are underway. Discussions regarding the need for follow-on support in program monitoring and evaluation, staff training, collaborative forest management and land-use planning, and social forestry product processing and marketing are also underway. USAID will support these activities through an amendment to the National Social Forestry Project.

-Some Maharashtra Social Forestry Project outputs are being increased and should be completed in 1988. In the meantime, the State of Maharashtra is preparing a proposal for a second generation social forestry wasteland development project which it intends to submit for AID-financing.

-Preparation will begin soon for the joint USAID//World Bank mid-term

review of the National Social Forestry Project.

-The Agroforestry Research Sub-project (to be financed through the Agricultural Research Project) will begin in 1987/88. We will also try to develop possibilities in agroforestry enterprise in the context of afforestation programs.

-Based upon the design work completed during March 1987, a Project Paper is being prepared for USAID's long-awaited support program for forestry research and education. Initially tabbed Forestry Research, Training and Education (FORTE), then Forestry Research, Education and Training (FRET), the project now bears the title State Agricultural University Forestry Research and Education Development (U/FRED). The new name reflects the institutional focus as well as the institution building nature of the proposed activity.

-Related to the growth in social forestry/wasteland development programs is increasing recognition that the GOI and the USAID must concern themselves more explicitly with the longer-term stability of the land, water and biotic assets which underlay agricultural productivity and rural welfare. Wasteland recovery in particular presents an opportunity to improve resources productivity (land) and to solve some longterm sustainability concerns -

afforestation and grassland development techniques. However, both the GOI and USAID share a limited ability to analyze and articulate the problem. As an initial contribution to more acute problem definition, USAID proposes to support the collaboration of Indian researchers and resource managers with their counterparts in a number of U.S. and international institutions concerned with natural resource management and sustainability issues. The Mission is currently in the process of identifying interested institutions and assessing USAID's potential role in fostering their collaboration.

-During the next year we will begin to analyze, understand and accommodate more fully in our programs the total fodder-animal linkage as it impacts on forestry and afforestation.

SUBSECTOR POLICY AGENDA

As mentioned above, most social forestry projects started without the luxury of a pilot testing period. These initial projects have had their problems, but they do constitute a wealth of empirical experience regarding which policies and approaches work and which do not. Through their fledgling monitoring and evaluation programs, many states are attempting to get on top of this experience and more rigor-

ously analyze the reasons behind their successes and failures. USAID support for their efforts is a key contribution to improving the quality and rigour of the public debate concerning subsector policies and programs. Better monitoring and evaluation is a necessary condition to resolving a number of questions regarding the impact of seedling price policies, tree harvest and transport laws, and new land use and credit policies put in place to discourage the planting of trees on better agricultural land.

In collaboration with the National Wasteland Development Board, USAID is initiating a series of studies to assess linkages between farm forestry and forest based industries and the efficacy of certain heavily subsidized social forestry models.

2. WATER RESOURCES MANAGEMENT OBJECTIVES

Irrigation's contributions to the development of Indian agriculture over the past twenty years are well known. Yet nearly 70% of the Indian population continue to derive their livelihoods from agriculture, the great majority of whom lack the purchasing power to sustain an adequate living. USAID's major program goal in this sub-sector is to increase rural incomes. A

major subgoal in the sector is to increase water (hence agricultural) productivity. To help achieve these goals, USAID's intermediate (or purpose level) objective is to improve irrigation system performance by better planning, design and operations. Each of these objectives remains valid and will continue to be the focus of efforts in this sector.

IMPACT

USAID is developing indicators at each of the three levels described above. Although quantification remains problematic at this stage, systems for gathering data are being put into place.

Because India is so vast and diverse it is necessary to disaggregate both the objectives and the means utilized to attain them. Each of the Indian states where USAID is engaged in this sector is the size of a small country (eg. Maharashtra with 60 million people). Each has its own political and administrative structure. Thus, it is unrealistic, in most cases, for us to look beyond each state, at best, in measuring in impact of our projects. Indeed, given the very large variation in agri-biological zones, it is best to focus on the project areas themselves.

Notwithstanding the lack of quantifiable information, we have been able to observe progress against an important indicator of impact at the sub-goal level, increasing water (and agricultural) productivity. A good indication of progress in this area is

the extent to which a shift of cropping patterns to higher value crops takes place in project areas. We have observed such a shift from foodgrains to higher value crops in up to one-third of the hectareage currently being irrigated by USAID-funded medium and minor irrigation projects. This is a broad estimate which is representative of a trend but which has yet to be verified statistically.

While data collection at the purpose level is also incomplete some statements about impact can be made, especially for indicators relating to institutional development objectives. USAID economic, technical and design criteria have been adopted by all four project states for all medium and minor irrigation projects, not only those financed by USAID. Mapping and distribution system design is much improved and considerable attention is now being given to operations, operational planning and farmer consultation. At the planning and budgeting level, relatively minor USAID contributions (relative to the total size of irrigation budgets in three of the four USAID project states, eg. 5%) are leveraging significant portions of the state irrigation budgets and forcing a much greater concentration of resources on fewer activities. This serves an important policy objective of the states which are often (for political purposes) forced to scatter these resources inefficiently against a much wider number of construction activities.

A major breakthrough which impacts on our institutional development objectives has been achieved in the Madhya Pradesh

Minor Project. Basically, a performance based disbursement mechanism has been introduced which triggers the disbursement of tranches of the \$41 million loan to concrete steps taken by the Irrigation Department to improve systems operations planning and reliable water deliveries. This approach shifts the dialogue away from construction scheduling, budgeting and certification matters to those operational planning, staffing and organizational strengthening matters needed to make the physical infrastructure operate and perform better. The infrastructure must, in fact, be built, and built to improved specifications, in order to function properly. For this, USAID staff time will continue to be directed at design criteria issues and monitoring. However, by relieving some of the physical works certification requirements called for under FAR, more time can be devoted to discussing and supporting the institutional adjustments and processes needed ultimately to operate the systems for early and maximum performance. This allows us to deal frontally with a major deficiency in government irrigation systems development.

PROBLEMS AND CONSTRAINTS

The ability to bring technical assistance to bear in our program, a serious constraint in the past, has been vastly improved in the past year with the activation of long-awaited T.A. contracts. Disbursement

remains a big problem in irrigation although these have increased somewhat in the past year. The Irrigation Strategy Statement deals more fully with the range of irrigation issues which concern the Mission.

MAJOR PLANNED PROGRAMMATIC AND MANAGEMENT ACTIONS

The Mission is submitting with this action plan the irrigation strategy statement called for at last year's program week. Implementation remains the key focus of activity in this sector in fiscal years 1987, 1988 and 1989. No new major state level initiatives are planned at this time. Important implementation actions which will be pursued include a program assessment of Maharashtra projects to improve the impact and targetting of assistance in the state; the reconceptualization (and perhaps redesign) of the Irrigation Management Training Project; refinement of the performance disbursement mechanism and related grant re-budgeting in Madhya Pradesh and other project states; and the possible restructuring of the Himachal Pradesh Minor Irrigation Project to reflect a more comprehensive, holistic approach in the state where forestry, watershed management etc. are of greater concern than irrigation per se.

The Mission is building a socio-economic research agenda which includes irrigation economics, farm water management studies and other activities to complement the program in this sector.

SUB-SECTORAL POLICY AGENDA

USAID will continue to work through analyses and consultancies on the sensitive policy issues of recurrent cost recovery and water pricing. No targets can be established at this time however. Increased emphasis on the economic viability of projects will occur.

3. AGRICULTURE SCIENCE AND TECHNOLOGY DEVELOPMENT OBJECTIVES

Since 1960, India has made major strides in increasing agricultural productivity through the application of green revolution technologies. In 1950, India's foodgrain production was 51 million tonnes. By 1985, production had risen to 150 million tonnes and India had achieved self sufficiency in foodgrains. However, by the year 2000 the population is projected

to increase to one billion and India will need to produce nearly an additional 100 million tonnes to meet basic foodgrain needs. Major production increases will also be required in oilseed, pulses, and other crops. USAID's major program goal in the agriculture sector, as stated above, is to increase rural employment and incomes. An important subgoal in this sector is to increase agricultural production. To attain these goals, USAID's purpose level objectives are to strengthen the capability of the Indian agriculture research and technology system to conduct research, improve research output and develop the technologies required to disseminate research output.

Until recently, this subsector was identified with only one agriculture research project, albeit one which served as an umbrella for a diverse research agenda. We are expanding this rather narrow emphasis to include a focus on technology development in agriculture - with particular efforts to engage the energies of the private sector in this process. We are, in addition, planning to restore to the program an emphasis on agricultural education, one which does not duplicate the highly successful AID role of the 1960's and 1970's but which recognizes the new challenges of the Indian agricultural education system as it exists today.

IMPACT

It is a bit early to assess the impact of the research that is being conducted under the

Agriculture Research Project (ARP). Substantively, USAID and the Indian Council for Agriculture Research (ICAR) are developing an improved collaborative mechanism for the identification of research priorities and management of research programs.

Perhaps the most significant role the ARP has played so far is its support for the rest of the agriculture portfolio acting, in several cases as a generator of new ideas and approaches which have, or may eventually, gained separate identities. In this regard the FY 1987 University Forestry Research and Education Development (U/FRED) project finds its antecedents both in the old Forestry Education Research and Training (FRET) design and in the agriculture research subproject which supports training of state agriculture university forestry personnel. The ARP also will provide support to the Water Resources Management portfolio with an on-farm water management activity and, more broadly, the entire agriculture resource management sector through the proposed Plant Genetic Resources Project.

The Indian rural population continues to grow rapidly and opportunities for employment in "productive" agriculture are finite. Several factors have led us to include that agrobusiness may be an important sector for AID involvement including the existence of a vibrant, yet underdeveloped, commercial agriculture sector in India. The Mission plans to develop a project in this area for obligation in FY 1988 (see Major Programmatic Actions

below) engaging both the U.S. and Indian private sectors. One likely focus of the activity will be on seed development perhaps with the collaboration of such firms as Pioneer Seeds and Cargill.

AID is now financing an impact evaluation of its assistance (in the 1960's and 1970's) to the State Agricultural Universities (SAU's). Although early, it is safe to say that the evaluation will find that a strong foundation for agriculture education was created in those years and remains to this day, a "living" testimony to AID impact on agriculture in India. The study will also say that the extended period of isolation of the Indian agriculture university system from the outside has led to the stagnation of creative thinking and research among SAU faculties. The U/FRED project, partially an ARP spinoff, is the first of the activities planned to reinvigorate this system. A second, is the Agriculture Research and Education Project which is planned for FY 1989.

PROBLEMS AND CONSTRAINTS

There are several areas concerning personnel, equipment procurement and administration that are constraining USAID-funded research progress under the ARP. Early approved subproject staffing moved extremely slowly and as a result almost no research progress occurred during the first one or two years. In later approved subprojects we have attempted to deal

with this problem by only supporting research activities with existing staff. Procurement of equipment has moved exceedingly slowly (in excess of one year from initiation of procurement procedures) due principally to bureaucratic redtape in India but also because of AID's regulations. From an administrative viewpoint, lack of influence and effectiveness of the Project Implementation Unit (PIU), an ARP component which was set up within the ICAR to manage AID funding research activities, has also seriously constrained implementation progress. Although ICAR leadership is committed to the project, the ICAR system remains exceedingly slow to act.

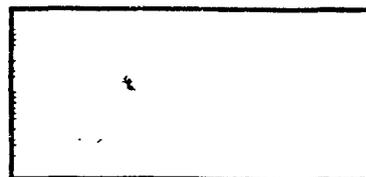
There appear to be no serious constraints to new project development at this time with the possible exception of the Plant Genetic Resources Project where the issue of germ plasm sharing remains a concern in some quarters. Even so, there has been no evidence to date that this concern will effect project development adversely.

**MAJOR PLANNED
PROGRAMMATIC AND
MANAGEMENT
ACTIONS**

In the past year we have placed emphasis on the design of research activities emanating from the Indo/U.S subcommission deliberations. The next 2-3 years will focus on the approval and implementation

of these activities. We currently have five activities underway including the processing and utilization of soybeans to enhance food protein availability, technology development to reduce post harvest losses in fruits and vegetables as well as three biotechnology focused animal science projects. Research activities to be implemented include activities in agrometeorology, agroforestry, on-farm water management, integrated nutrient management in multiple cropping systems, small farm machinery and tissue culture in crop species. The Plant Genetic Resources Project is planned for obligation in FY 1988 as is the Agriculture Technology and Enterprise project. As mentioned above, an Agriculture Research and Education Project will begin in FY 1989. A mid-term evaluation of the ARP is scheduled in the first quarter of FY 1988.

In addition, during FY 88 we plan to initiate a cooperative program with the USDA/FERRO (Far East Regional Research Office) to support the research of top Indian scientists in the U.S. We will soon complete an evaluation of AID-funded activities in India and the U.S under the Science and Technology Initiative (STI).



HEALTH AND POPULATION

1. HEALTH

OBJECTIVES

The Government of India is committed to the betterment of the health and development of its children and has set extremely ambitious goals for itself. Although since Independence there has been a 27% decrease in infant mortality and a 70% increase in life expectancy at birth, much remains to be done. Immunizable diseases, diarrheal disease and acute respiratory infections account for much of the mortality. An underlying cause is the poor nutritional status of mothers, infants and children. Short birth intervals and complications of deliveries are also associated with high infant mortality. USAID's major program goal in this sector is to reduce infant mortality by 18 percent by 1991 and child mortality by 27 percent by 1991. Major sub-goals include: reduction of malnutrition among pregnant or lactating women and children under 3 years of age by 35 percent; reduction of vaccine preventable diseases; and prevention of dehydration resulting from diarrheal disease among infants and children.

To attain these goals, USAID's intermediate objectives are: To expand immunization coverage among infants against six vaccine preventable childhood diseases; to expand mothers' knowledge and use of

oral rehydration therapy among children under 5 years; to expand capacities to perform surveillance of leading causes of morbidity and mortality; to expand effectiveness of growth monitoring as an educational tool and in combination with nutritional supplementation; and to determine feasibility through research of reducing low-weight births.

The AID program in India reflects an emphasis on improving the delivery of technology packages (ORT, immunization) at the state level, the strengthening of disease monitoring and response capabilities and basic research emphasizing international collaboration. Research provides the broad underpinning of an attack on several immunizable diseases. The Biomedical Research Support and Vaccine and Immunodiagnostic Development (VIDEX) projects are two key components of this strategy.

IMPACT

Indian states differ from one another in terms of health and nutritional status of the population, mortality rates, causes of mortality and resources the states bring to bear. For example, the infant mortality rate varies from 28 in Kerala to 165 in Uttar Pradesh (U.P.) and the leading cause of infant deaths in U.P., neonatal tetanus, is less important in Kerala. While we do expect to obtain measurement of the impact of national programs such as the Universal Immunization Program (UIP), Diarrheal Management Program and the

Integrated Child Development Services Program (ICDS), the more meaningful measurements of project impact will take place in USAID-assisted states.

With the exception of one terminating rural health infrastructure project, the USAID entire health and nutrition portfolio consists largely of projects which are in the early stages of implementation. There are extensive data collection activities built into the designs of the Integrated Child Development Services and Child Survival Health Support Projects which will allow measurement of project impact. The ICDS Project has already collected impressive baseline survey data for the project's impact evaluation and recurring survey rounds are scheduled throughout project life. The Child Survival Health Support Project will supplement district-level reporting systems built into the designs of the National Universal Immunization and Diarrheal Disease Management Programs with periodic EPI and ORT coverage surveys. Moreover, both projects are designed to strengthen the existing state Management Information Systems and to ensure that appropriate child survival indicators are included within the MIS.

Data from existing Universal Immunization Program districts indicate that coverage of the under one population with the six antigens is significantly higher than before the inception of the program. Little evidence is available concerning impact on vaccine preventable diseases or mortality within UIP districts to date.

Results of the mid-term evaluation of the

ICDS Project conducted in September 1986 have shown that due to training and orientation workshops provided through USAID assistance, regular enrollment of priority groups in supplementary feeding and growth monitoring of children have begun to occur on a large scale. There is a better understanding among ICDS workers of the need for strengthening nutrition and health services for pregnant women and children below 3 years of age. While nutrition and health education services have not begun at the village level yet, a systematically designed social marketing/communications package has been developed and tested for launching in August 1987. This activity has already helped strengthen government-private sector linkages through use of commercial advertising and market research firms.

Findings of the ICDS baseline (1984) and first follow-up survey (1986) indicate a doubling in the number of anganwadi workers (AWW) who can interpret growth charts correctly from 35% at baseline to 69% at first follow-up. Impressive results have also been achieved in the awareness and knowledge of anganwadi workers about oral rehydration therapy (ORT). The baseline survey findings showed that while all of the trained AWWs had heard of ORT, none of them could make it correctly. However, in the follow-up survey, 85% of the trained AWWs could make ORT correctly. The improvement in knowledge about preparation of ORT was attributed to the training program carried out by CARE with a grant from AID and the provision of cups and spoons for accurately measuring ingredients.

Under the Integrated Rural Health Development Project, 2000 new fully operational health facilities serve over 20 million people. Although we are unable to measure, as yet, the impact on illness and disease in project districts, we are confident that the vastly improved delivery of services is serving this purpose.

PROBLEMS AND CONSTRAINTS

Recent Ministry of Health (MOH) efforts to curtail the ability of donors to work in the states independently have affected monitoring and evaluation of field programs and have constrained the development of innovative systems of service delivery. Innovation is also affected by the strong tendency toward uniformity and equity which permeates Indian policy preventing additional resources from going to pilot or demonstration districts. GOI lack of appreciation for technical assistance provided from external sources continues to be a constraint in this sector. The social marketing and communications components of projects are underway but the clash between the public and private "culture" of doing business constrains implementation.

Agreement on implementation under the Child Survival Project is expected with each project state recently submitting plans for project planning and implementation. There appears to be no problem with the grant to UNICEF. Very compli-

cated procedural issues over grants to WHO and the Center for Disease Control (CDC) have blocked implementation of the Biomedical Project. These issues are still being sorted out.

The Vaccine Action Program (VAP) Memorandum of Understanding (MOU) was not signed during Health and Human Service Secretary Bowen's visit to India. The obstacle still appears to be approval by the cabinet. Until this is done we are unable to obligate the VIDEX project.

MAJOR PLANNED PROGRAMMATIC AND MANAGEMENT ACTIONS

The Mission is planning one major design effort, the Private and Voluntary Organizations for Health II Project, during FY 1987. The design will build upon the experiences gained through implementation of PVOH I and the recommendations of the recent mid-term evaluation. During FY 1989 we intend to design a new ICDS project with CARE which will replicate on a much broader scale the interventions tested on a pilot basis in two districts. This new project is an element of the Mission's Child Survival Strategy.

Implementation of previously authorized projects will be the main focus of attention. The process of preparation of Annual Performance Financing Action Plans for

the two national programs and states participating in the Child Survival Health Support Project will be a new experience and could well require modification of the approach proposed in the PP. USAID must finalize programmatic and administrative arrangements with the GOI, the World Health Organization and the Centers for Disease Control so that implementation of the Biomedical Research Support Project can move forward. Although funds are committed for all 32 sub-projects under the PVOH I Project, many of the sub-projects require outside technical and managerial assistance to overcome implementation problems. USAID and the GOI will be exploring modalities for institutionalizing the provision of necessary consultant services to PVOs.

POLICY AGENDA

USAID will continue to stress the need to reorient public and private health care systems which are urban-directed, clinically-based and curative rather than preventive in nature. We are advocating that health practitioners focus selected interventions of proven efficacy on the major causes of morbidity and mortality in children under three years of age. USAID, UNICEF, WHO and other donor agencies have advocated policy changes which have been adopted by the GOI. These include introduction of measles vaccine and the focus on universal coverage of children under one in immunization activities.

The Mission also is encouraging the privatization of vaccine production in India by providing a grant to the privately-owned Serum Institute of India, perhaps to be supplemented by a PRE loan. We will also undertake some studies in health economics that will be broadly applicable across the sector.

2. POPULATION OBJECTIVES

The demographic goal India has set for itself is to achieve a Net Reproduction Rate of 1 by the end of the present century. To attain this goal it is planned to achieve a couple protection rate of 60 percent and to reduce the birth rate to 21 per 1000 population, the death rate to 9 per 1000 population and infant the mortality rate to 60 per 1000 live births. USAID's primary objective is to contribute to the achievement of these goals. A major subgoal required to achieve this goal is to increase contraceptive acceptance rates, particularly of spacing methods. To attain these goals USAID's intermediate (or purpose level) objective is to increase the range of contraceptive services available, to improve the quality of services, and increase the reach of these services. For reasons which are well known a major element of the AID program in population, the Communications Marketing Organization (CMO) component of the Family Planning Communications and Marketing (FPCM) Project, will soon be deobligated. Other

important elements of the same project will continue and perhaps be expanded. The portfolio also includes the research based Contraceptive Immunology Project.

IMPACT

USAID has worked with GOI to develop statistical indicators to monitor the progress towards the achievement of these goals. The data needed come from three sources: (a) service statistics generated by the program activities themselves, including data on method-wise contraceptive acceptance rates, age and parity of acceptors, and other socioeconomic and health status correlates of acceptance; (b) field surveys conducted on both regular and intermittent bases to collect detailed information on particular aspects of program operation or impact in any given district, state or for the nation as a whole; (c) demographic data routinely collected by the GOI through its statistical agencies such as the Census Organization, the Vital Statistics Registration Scheme and the National Sample Survey Organization. An important part of USAID's efforts in the past has been concerned with improving the quality of these data, and the programmatic usefulness for monitoring progress towards the goals.

Although the CMO activity is about to be deobligated, the Information, Education and Communications (IE&C) component of the FPCM project has made important progress in project states. Indeed, the

Ministry has asked that this component be expanded. Much cannot be said about impact at this stage but the GOI is convinced that the approach represented in this project is a model for much broader application. The Demographic Analysis component for the project is also having a positive, as yet unmeasured, impact on the development of accurate statistics in family planning.

Research is being conducted under the Contraceptive Immunology project in labs equipped by AID. No results are reported at this time.

PROBLEMS AND CONSTRAINTS

The problems which have been encountered in reaching the program objectives fall into two categories: (a) those due to the generally underdeveloped state of the Indian economy and society (low levels of income, nutrition, literacy and poor state of physical and human capital infrastructure); (b) those arising from the limitations of the GOI's own structure for the delivery of services and for operating an effective fertility control program. The first of these problems is being addressed, in effect, by the entire USAID portfolio of programs and projects as well as the entire development thrust of the GOI itself. As will be clear from the above discussion of the present and contemplated USAID programmatic actions many of these actions are themselves designed to meet and help

deal with the second of these barriers to achieving the objectives by increasing the training and work-skills of field workers, by introducing improved management reporting and monitoring systems, by improving the quality of the program data and by building up the national data based and the research capacity in independent demographic and social science research institutes to provide effective monitoring of program impact.

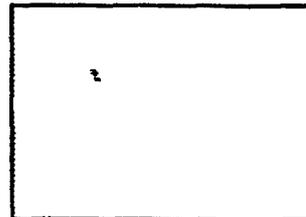
**MAJOR PLANNED
PROGRAMMATIC AND
MANAGEMENT
ACTIONS**

USAID has prepared and submitted a major proposal under the IE&C component of the FPCM Project to improve the quality of family planning services by increasing and regularizing field visits, streamlining supply systems, providing continuous training to workers, and by a computerised management information system at the district level. The project is in the final stages of GOI clearance procedures and it will be implemented in four states starting in April 1987. Also under the IE&C component, information has been collected on service statistics from selected districts and a workshop on improving the evaluation and monitoring system for the project is planned in the near future. A continuing effort is under way to involve Private Voluntary Organizations in these improved evaluation procedures.

Assistance has been provided the GOI in planning several demographic contraceptive impact surveys as well as baseline surveys in several areas. Discussions are under way regarding a new National Fertility Survey to parallel the AID-supported Demographic Health Survey (DHS) being launched in other countries. Technical assistance, training, equipment and collaborative research continue to be supported between U.S. Institutes, the GOI Registrar General and the Ministry of Health and Family Welfare on basic demographic questions such as fertility and mortality trends in India.

USAID has already informed AID/W of its intentions with respect to the deobligation of the CMO. A new project, Population Research Centers will be designed and hopefully obligated in FY 1988.

A team from the Population Council recently completed an update of its 1982 report on population activities in India. This report will contain recommendations for future AID assistance. The results of the report were not available at this writing but should be ready for discussion during Program Week.



RESEARCH AND TECHNOLOGY DEVELOPMENT OBJECTIVES

It is within the broad context of the GOI's basic objective of application of science and technology to problems of development that the Technology Development and Enterprise Program has identified problems, formulated objectives and defined programmatic activities. The goal of the Technology Development and Enterprise Program is application of science and technology to the quest for higher standards of living through raising industrial (broadly defined to include manufacturing, agrobusiness, biotechnology and other "secondary" sector industrial activities) productivity and incomes.

A problematic aspect of the application of science and technology to development has been the weakness of industrial research and development (R&D). Large sums have been spent on public sector industrial R&D infrastructure and programs with little to show in the way of results. The wastefulness of the existing system is widely recognized and determined attempts are being made to change it. Beyond the reform of public sector facilities, a principal thrust of technology policy has been to engage industry directly in technology development. In this context TDE has identified strengthening

of private sector R&D as an important and cutting edge program objective.

Acceleration of the pace and improvement of the quality of technology development in industry is a complex phenomena involving interaction amongst financial institutions, universities and research facilities, government and private enterprises and their trade associations. The problem of successfully combining these forces to develop and bring together the appropriate mix of human resources, access to capital markets, required physical infrastructure and dynamic entrepreneurship in a policy environment conducive to R&D is a problem that is not unique to India and indeed is one that the U.S. has outstanding knowledge and experience of at the state and national level. In this context TDE has set as its purpose to assist in developing and bringing together in synergistic combination the building blocks — human resources, finance, physical infrastructure, private enterprise and scientific and technological research capability -- that will accelerate the pace and improve the quality of technology development and innovation in India.

IMPACT

The Program for Advancement of Commercial Technology (PACT) is the first project in the portfolio designed specifically to the objectives described above. At this very early stage of the project's life, the payout already has been substantial. The PACT as an idea has taken roots at the

national level to the point where it has inspired similar indigenous facilities and perhaps, most importantly its premises have captured the imagination of persons influential in the business, financial and policy making communities.

The PACT has entered into the world of ideas in a way that no other project in the portfolio has come close to matching. It has directly inspired two spin off funds. The Industrial Credit and Investment Corporation of India (ICICI) and the Industrial Development Bank of India (IDBI) have both set up PACT type funds to finance indigenous private sector R&D. Beyond finance, the highly placed and influential Indo-U.S. PACT Council, which has already met twice has decided, now that the PACT policies and procedures have been adopted and the first four sub-projects have been approved, that they should turn attention to policy issues impacting on industrial R&D. The two major business newspapers in the country, the *Financial Express* and *Economic Times* have been moved to write editorials and articles about the PACT. The State Technology Development and Enterprise Project (STE), which is in design, and the Program for Advancement of Commercial Energy Research (PACER), which will be obligated shortly, in part have drawn their inspiration from the premises of the PACT and the design effort has been assisted by the credibility and contacts the PACT project has brought to AID.

The \$20 million PACER project is intended to accelerate the development and absorption of new energy technologies

through increased R&D in the enterprise sector, increased collaboration among scientific institutions (including universities, commercial firms and end users) and increased exposure of the science community to market forces. It will also encourage policy research, public dialogue on technology development issues, and advocacy of technology development issues.

The PACT association with USAID has led numerous persons in both India and the U.S. to come forward with proposals and requests for assistance on R&D policy issues. (For example, the governor of a mid-western U.S. state proposed a Challenge Grant Program jointly funded by USAID and the State that would bring together universities and enterprises in the state and India in collaborative R&D.) The Chairman of a GOI policy making committee on R&D approached USAID for advice and materials when drafting the committee's report because of the association USAID had with him in designing the PACT. In sum, the PACT, which has been operational for less than one year, has had an impact as an idea and through specific measures that already indicate project has been a success.

It is worth noting that the commitment of financial resources provided through the PACT (\$10 million) for Indo-U.S. private sector collaborations in R&D has moved at a pace that has exceeded expectations. The ICICI now estimates that all USAID funds will be committed by mid-1988. The first four sub projects involving collaborative R&D in agroindustry, health diag-

nostic equipment and electronics have been funded and an additional 24 proposals have passed initial screening and are under consideration for funding.

The Technologies for the Rural Poor (TRP) and the Alternative Energy Resources Development (AERD) projects have contributed to significant technology transfer between U.S. and Indian scientific and academic institutions in the area of renewable and conventional energy utilization. This has fostered long-term institutional relationships which should favorably influence future energy technology development and information exchange. Further, they have assisted significantly in the establishment of Indian centers of excellence including those for fluidized bed combustion research at Bharat Heavy Electric Limited (BHEL), biomass conversion research at the Indian Institute of Technology (IIT), in New Delhi and solar thermal development at the Indian Institute of Science in Bangalore. The quality of the technical research performed at these institutions was high and the technologies developed were technically sound and had high performance characteristics.

While significant scientific exchange and information was derived from these projects not enough attention was given to commercialization of energy technologies in the projects. This consideration weighed heavily in the extension redesign of the AERD project and in the design of the Program for Accelerated Commercial Energy Research (PACER).

The STE project, which is being designed within broadly defined parameters to assist the regional economic development process in the state of Karnataka (population 42.2 million), already has had a major impact operating through the process mode. The recent Conference on "Technology Development, Finance and Human Resource Development in Karnataka" which was funded by the Mission as part of the design of the STE Project which led to the formation of a statewide Technology Development Board, the first of its type in India. The potential catalytic impact of this Board, which includes membership from the business community, university and financial institutions and the state government, on technology development, innovation and regional growth may be enormous within the state and beyond its borders.

In conclusion, purpose level impact of the emerging TDE program can be captured best qualitatively. This said, in the future one can look to quantitative performance indicators ranging from the very broadest such as changes in per capita income and industrial production and productivity to narrower measures such as R&D expenditure as a per cent of sales and numbers of patents applied for and sealed for measures of program success.

MAJOR PLANNED PROGRAMMATIC AND MANAGEMENT ACTIONS

ICICI estimates \$10 million obligated for the PACT for Indo-U.S collaborations in R&D will be fully committed by the fourth quarter of FY88. An evaluation is planned during the fourth quarter to assess the project and determine the future course of action. The Development Management Training (DMT) will be evaluated during the fourth quarter of FY87 to provide input into a concept paper for a DMT follow on project in FY88. DMT will be amended to include activities such as support of the National Informatics Centre (Dept. of Electronics) in the establishment of MED-LARS services in India; support of an exchange program for scientists between the National Science Foundation and Council for Scientific and Industrial Research (CSIR); support of the Development Management Institute in the establishment of a graduate program in the management of research and development; and support of a university/business center program (on the NSF model) which is being established by the Industrial Development Bank of India (IDBI). The design of the State Technology Development and Enterprise Project will follow a time path different from the traditional project. We plan over the course of FY87 and FY88 to fund a series of small grant activities involving analysis of the Kar-

anataka state economy, Indo-U.S. exchanges, conferences and seminars out of which we anticipate a PID and PP will evolve. A project should be ready for obligation in late FY88.

The Technology Development and Enterprise office is becoming a kind of service organization for the rest of the Mission. TDE is serving both as an incubator of ideas and as a locus of cross-sectoral expertise in science and technology.

This includes looking at possibilities in agribusiness and biotechnology. A long-term Personal Services Contractor specializing in biotechnology will be added to the TD&E staff in order to pursue applications in biotechnology across the portfolio.

PROBLEMS AND CONSTRAINTS

As described above, the major problem and constraint on development of the R&TD program is the scarcity of Section 106 funds. In the near future, as demands for 106 resources grow, an increase is an absolute necessity for program viability. The Mission will apply other functional account resources as possible but the longer term issue of 106 funding will remain an obstacle to program success.

POLICY AGENDA

In the process of examining the reasons why technology development and innovation have not been as dynamic in India as might be anticipated, the industrial policy environment has been shown to be an important constraining factor. In this regard, the TDE program aimed at accelerating the pace and improving quality of technology development and innovation provides a vehicle to raise issues on virtually every important aspect of industrial policy. The TDE policy agenda aims at continued support of the liberalizing forces in the country and will work towards this end along two paths. One path is to pursue indirect opportunities for influencing policy that arise in the course of project implementation. Already as noted above, the PACT has begun to show promise for influencing policies that impinge on sustaining technological dynamism of the Indian economy. The second path is to develop a program of analysis on economics of technological change to improve understanding of opportunities and constraints to technology development and innovation. In this regard, a team is working with USAID under a Macroeconomic Indefinite Quantity Contract (IQC) to develop the agenda of analysis on economics of technological change. The combination of opportunities that arise out of the project development process and analytical work are the principal mechanisms through which the USAID will support liberalizing forces in the Indian economy.

D. FOOD AID

For many years India has operated the largest Title II program in the world. The largest single element of the Title II program has been the CLUSA oilseeds program which involves the importation of 160,000 MT of vegoil. Even though Title II-funded, this activity can be considered one of the Agency's largest agricultural development projects as it was designed to improve local capacity for production and processing of oilseeds to meet India's huge requirements for vegoil. The activity involves virtually complete monetization of Title II commodities.

CRS and CARE have been the principal conduits for the rest of the Title II tonnage over the past three decades. The latter has until recently been heavily involved in Food For Work (FFW), school feeding, and, most importantly, traditional Maternal Child Health (MCH) support activities. The former has a similar array of programs, albeit on a much smaller scale. These were traditional Title II programs which operated independently of bilateral DA activities.

The CLUSA oilseeds program will be completed in FY 1988. The CRS program is continuing at an annual level of about \$20 million. Chief areas of concentration are the Targeted Maternal Child Health Education Program (a companion to the GOI's Integrated Child Development Scheme (ICDS) program) and a declining level of Food for Work.

The CARE program already shows the greatest promise for integrating its MCH program into the larger Mission orientation towards child survival. The on-going involvement of CARE with aspects of India's ICDS program provides food resources and technical support. The alterations in CARE's traditional MCH program stemmed from several evolving concerns: that feeding without health and education components is inappropriate and that more appropriate foods should be made available and directed principally to the needs of the smallest children. CARE assistance to the ICDS covers more than 40 percent of the total number of ICDS beneficiaries in the States where the organization operates.

USAID has also granted to CARE \$718,000 for staff upgradation training and related project activities. In an attempt to reinforce ICDS child survival objectives nationwide, USAID granted \$300,000 to World Food Program for similar activities.

In FY 1986 CARE and USAID/India conducted a joint programming exercise which resulted in the Mission's child survival strategy and the bilateral Child Survival Health Support Project. CARE was a full partner in the conceptualization of the Mission's child survival strategy.

The existing U.S. voluntary agency programs, adapted to integrate with the Mission's new emphases on child survival in its broadest sense, are an important vehicle for utilizing additional food resources at a time dollar resources are declining.

CARE feels, however, that to join with the Mission in the latter's efforts to integrate Title II resources into the on-going program will necessitate significant monetization to enable it to broaden further its coverage and to test new approaches. CARE's proposal for a \$10-million program in child survival/ICDS enhancement involving ORT, growth monitoring, targeting the hardest to reach and most vulnerable beneficiaries including pregnant mothers, and other primary health care interventions was recently approved by the DCC. This proposal includes a provision to monetize five percent of CARE's FY 1987 AER, yielding approximately \$2.5 million.

The Mission is continuing to seek ways to integrate Title II resources in its broader program. Patterned after the most successful elements of the existing ICDS project and the most promising features of the large Child Survival Health Support project, a companion Child Development Support project with CARE will expand improvements in growth monitoring, training of workers and social marketing for nutrition and health education. Title II will be an important integrated resource in this project which will operate principally through village ICDS centers where CARE already is active.

The Mission has held discussion with CLUSA and the GOI about assistance via the Sugar Quota feature of Section 416. We understand that the GOI and its designated agent, the National Dairy Development Board (which operated the expiring oilseeds project) will seek the combined FY 1986-87 commitment of \$3.1 million in butteroil.

The Mission recently proposed the resumption of Title I in India largely to support its activities in the private sector. As of this writing the outcome of this proposal is uncertain given pressures on Title I levels and GOI sensitivities to the resumption of Title I in India.

**III. SPECIAL
CONSIDERATIONS
A. FINANCIAL
ISSUES
1. PIPELINE**

USAID's portfolio of 20 major dollar funded projects amounts to about \$535 million. Of this some \$320 million remains in the pipeline. As our May 86 pipeline analysis demonstrated, USAID's overall project expenditure performance is approximately a year behind where it would be had the expectations of the project papers been met. Currently portfolio expenditures average about \$6 million a month. Our b

estimat AID project expenditures will continue to average \$72 million per year. Assuming obligations of \$50 million per year the pipeline will steadily decrease over the next few years.

We are looking for ways to accelerate expenditures on projects such as the performance disbursement mechanism proposed for the Madhya Pradesh Social Forestry Project. The figures above include the pending deobligation of the Contraceptive Marketing Organization.

2. MORTGAGE

Declining budget levels are forcing us to consider pipelines' converse, the program mortgage. If FY 1987 obligations are included, the mortgage on the USAID portfolio will total approximately \$138.0 million. In general, the larger the mortgage the less flexibility a Mission has in bringing forth new projects. This does not appear to be a serious problem for us at this time (assuming an obligation level of about \$50.0 m per year) but it could become serious if levels are reduced much further. Nevertheless, we do see a time coming when it may be necessary to slow down the pace of project development. Another alternative we will look at may be the deobligation of some existing projects having very large pipelines and the reobligation of those funds for other priority projects.

3. DEOB/REOB PLANS

For the moment, we are looking at one deobligation in FY 1987, of \$34 million for the Contraceptive Marketing Organization (CMO) component of the FPCM project. Three other components of the project would continue, including the IE&C component on a somewhat larger scale. We are asking AID/W for a substitution of \$10.5 m of the lost loan funds for CMO with grant funds for other population activities.

4(a) LIST OF PROPOSED NEW PROJECTS, FY 1986 - FY 1989

New Projects:	Proposed Funding - \$ Million		Obligation		Span
	LOP	Grant	Loan		
<u>FY 1986</u>					
Child Survival Health Support	65.0	65.0	-		FY 86 - 93
Total:	<u>65.0</u>	<u>65.0</u>	-		
<u>FY 1987</u>					
U/Forestry Research & Educ. Dev.	20.0	20.0	-		FY 87 - 92
Vaccine & Immunodiagnostic Dev.	6.0	6.0	-		FY 87 - 89
Program for the Acceleration of Commercial Energy Research (PACER)	20.0	20.0	-		FY 87 - 93
Private Vol. Org. for Health - II (PVOH)	10.0	10.0	-		FY 87 - 92
Total:	<u>56.0</u>	<u>56.0</u>	-		
<u>FY 1988</u>					
Ag: Technology Dev. & Enterprise Plant Genetic Resources	15.0	15.0	-		FY 88 - 93
Population Research Centers	12.0	12.0	-		FY 88 - 92
State Tech. Dev. & Enterprise Development & Mgt. Trg. - II	9.0	9.0	-		FY 88 - 92
	10.0	10.0	-		FY 88 - 92
	5.0	5.0	-		FY 88 - 92
Total:	<u>51.0</u>	<u>51.0</u>	-		
<u>FY 1989</u>					
Ag. Research & Education	10.0	10.0	-		FY 89 - 93
Child Dev. Support - ICDS/CARE	20.0	10.0	10.0		FY 89 - 93
Total:	<u>30.0</u>	<u>20.0</u>	<u>10.0</u>		

4(b) FY 1987 OBLIGATION SCHEDULE

<u>Project No. & Title</u>	<u>G/L Q/N</u>	<u>Adjusted OYB (\$000)</u>	<u>Planned Month of Obligation</u>
<u>Agriculture, Rural Dev. & Nutrition:</u>			
0470, Agricultural Research	G/O	3,000	May
0484, Irrigation Management & Training	G/O	4,200	May
0487, Development & Mgt. Training (Extn.)	G/O	476	July
0488, U/Forestry Research & Education Dev.	G/N	6,000	Aug.
0489, Hill Areas Land & Water Development	L/O	8,000	May
0495, National Social Forestry	G/O	1,000	Aug.
0495, National Social Forestry	L/O	11,500	May
0496, Program for the Advancement of Commercial Technology (PACT)	G/O	1,174	May
Sub-Total (FN):		<u>35,350</u>	
<u>Health:</u>			
0487, Development & Mgt. Training (Extn.)	G/O	500	July
0492, Biomedical Research	G/O	4,000	May
0496, Program for the Advancement of Commercial Technology (PACT)	G/O	500	May
0503, Vaccine & Immunodiagnostic Dev.	G/N	3,000	May
Sub-Total (HE):		<u>8,000</u>	
<u>Child Survival Fund:</u>			
0511, Private Voluntary Organizations for Health - II (PVOH)	G/N	3,500	Aug.
Sub-Total (CS):		<u>3,500</u>	
<u>Selected Development Activities:</u>			
0487, Development & Mgt. Training (Extn.)	G/O	800	July
0494, Program for the Acceleration of Commercial Energy Research (PACER)	G/N	5,000	June
0496, Program for the Advancement of Commercial Technology (PACT)	G/O	195	Feb.
0496, Program for the Advancement of Commercial Technology (PACT)	G/O	155	Apr./June
Sub-Total (SD):		<u>6,150</u>	
Total:		<u>53,000</u>	
Grants:		(33,500)	
Loans:		(14,500)	

4(c) PROPOSED PROJECT OBLIGATIONS - FY 1987 - 89 (000)

<u>Project No. & Title</u>	<u>G/L Q/N</u>	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>
<u>Agriculture, Rural Dev. & Nutrition:</u>				
0470, Agricultural Research	G/O	3,000	--	--
0484, Irrigation Management & Training	G/O	4,200	2,000	3,400
0487, Development & Mgt. Training (Extn.)	G/O	476	--	--
0488, U/Forestry Research & Education Dev.	G/N	6,000	4,000	3,000
0489, Hill Areas Land & Water Development	L/O	8,000	2,000	--
0495, National Social Forestry	G/O	1,000	500	1,000
0495, National Social Forestry	L/O	11,500	15,000	13,100
0496, Program for the Advancement of Commercial Technology (PACT)	G/O	1,174	--	--
0505, Ag. Research & Education	G/N	--	--	2,000
0510, Ag. Technology Dev. & Enterprise	G/N	--	2,500	1,000
0513, Plant Genetic Resources	G/N	--	3,000	1,500
Sub-Total (FN):		<u>35,350</u>	<u>29,000</u>	<u>25,000</u>
<u>Population:</u>				
0500, Contraceptive Development/ Reproductive Immunology (Extn.)	G/O	--	1,500	--
0509, Population Research Centers	G/N	--	2,000	1,000
Sub-Total (PN):		<u>--</u>	<u>3,500</u>	<u>1,000</u>
<u>Health:</u>				
0487, Development & Mgt. Training (Extn.)	G/O	500	--	--
0492, Biomedical Research	G/O	4,000	2,000	--
0496, PACT	G/O	500	--	--
0503, Vaccine & Immunodiagnostic Dev.	G/N	3,000	1,500	1,500
0504, Child Survival Health Support	G/O	--	5,000	8,000
0508, Child Dev. Support/ICDS-CARE	G/N	--	--	3,000
0508, Child Dev. Support/ICDS-CARE	L/N	--	--	9,000
0511, Private Voluntary Organizations for Health-II (PVOH)	G/N	--	1,000	1,000
Sub-Total (HE):		<u>8,000</u>	<u>9,500</u>	<u>17,500</u>
<u>Child Survival Fund:</u>				
0504, Child Survival Health Support	G/O	--	--	--
0511, Private Voluntary Organizations for Health - II (PVOH)	G/N	3,500	--	--
Sub-Total (CS):		<u>3,500</u>	<u>--</u>	<u>--</u>

4(c) PROPOSED PROJECT OBLIGATIONS - FY 1987 - 89 (000)

Project No. & Title	G/L	FY 1987	FY 1988	FY 1989
	Q/N			
Education & Human Resources:				
0512, Development & Mgt. Training - II	G/N	--	1,000	1,000
Sub-Total (EH):		<u>--</u>	<u>1,000</u>	<u>1,000</u>
Selected Development Activities:				
0487, Development & Mgt. Training (Extn.)	G/O	800	--	--
0494, Program for the Acceleration of Commercial Energy Research (PACER)	G/N	5,000	2,500	1,500
0496, PACT	G/O	350	1,500	1,000
0507, State Technology Dev. & Enterprise	G/N	--	3,000	3,000
Sub-Total (SD):		<u>6,150</u>	<u>7,000</u>	<u>5,500</u>
TOTAL:		<u>53,000</u>	<u>50,000</u>	<u>50,000</u>
(Grants)		(33,500)	(33,000)	(32,900)
(Loans)		(19,500)	(17,000)	(17,100)

LIST OF PLANNED EVALUATIONS, FY 87-88

<u>Project No. and Title</u>	<u>FY 1987</u>		<u>FY 1988</u>		<u>Funding Source (\$000)</u>	<u>Comments</u>
	<u>PACD Start</u>	<u>To AID/W</u>	<u>To Start</u>	<u>To AID/W</u>		
	(Qtr)	(Qtr)	(Qtr)	(Qtr)		
<u>AG. RES./INST. DEV.</u>						
386-0470 Agricultural Research 06/92			1	2	Project 180	mid-term
<u>IRRIGATED AGRICULTURE</u>						
386-0483 Madhya Pradesh Minor Irrig. 09/89			1	2	PD&S 40	mid-term evaluation
386-0484 Irrig. Mgmt. & Training 09/90			3	4	Project 100	mid-term evaluation
386-0489 Hill Areas Land & Water Dev.09/91			4	89,Q1		mid-term (further design work)
386-0464 Gujarat Medium Irrigation 06/84			1	2	PD&S 40	impact evaluation
<u>RESOURCE MANAGEMENT</u>						
386-0495 National Social Forestry 07/90			2	3	Project 40	midterm - new project design
<u>TECHN. DEV. & ENT.</u>						
386-0487 Dev. and Mgmt. Trng Proj. 06/88			3	4	Project 99	eval./redesign

LIST OF PLANNED EVAL's, FY 87-88 - Cont'd.

<u>Project No. and Title</u>	<u>PACD</u>	<u>FY 1987</u>		<u>FY 1988</u>		<u>Funding Source (\$000)</u>	<u>Comments</u>
		<u>To Start</u>	<u>AID/W</u>	<u>To Start</u>	<u>AID/W</u>		
		<u>(Qtr)</u>	<u>(Qtr)</u>	<u>(Qtr)</u>	<u>(Qtr)</u>		
<u>TECHN. DEV. & ENT. Contd</u>							
386-0496 Progr. for Adv. of Com. Tech (PACT)	07/90		4	89, Q1		Project 100	mid-term
<u>P.D.</u>							
386-0462 Rural Electrification	09/87		1	2		PD&S 40	GOI/REC Eval., AID will decide if additional work necessary final/impact eval.
386-2119 CBCI Soc. for Med. Educ (St. John's)	06/87		2	3		PD&S 20	(Grant) final assessment
<u>FOOD FOR DEVELOPMENT</u>							
386-3024 CLUSA/Ind. Prog. Dvmt. and Supt.-OPG	06/88		4	FY89, Q1			final
386-4036 Cath. Rel Serv (CRS) PL480 Tit. II O Commodity Program	9/87	4		1		PD&S 35	final

LIST OF COMPLETED EVALUATIONS, FY 86-87

<u>Project No. and Title</u>	<u>FY 1986</u>		<u>FY 1987</u>		<u>Comments</u>
	<u>PACD</u>	<u>To</u> <u>Start</u>	<u>To</u> <u>Start</u>	<u>AID/W</u> <u>(Qtr)</u>	
<u>IRRIGATED AGRICULTURE</u>					
386-0467 Rajasthan Medium Irrigation	06/86	2		2	Final Ev. completed 86Q4.
<u>RESOURCE MANAGEMENT</u>					
386-0475 Madhya Pradesh Social Forestry	03/87	2		2	Final Ev. completed 86,Q4.
386-0478 Maharashtra Social Forestry Proj.	09/90	85,Q4	2		mid-term, submitted AID/W
<u>HEALTH & NUTRITION</u>					
386-0468 Int. Rur. Health and Pop. (IRHP)	12/86			1 3*	final (to be completed)
386-0469 Priv. Vol. Org. for Health (PVOH)	09/89			1 3*	mid-term
386-0476 Integrated Child Dev. Services	09/90			1 3*	mid-term
<u>POPULATION</u>					
386-0500 Contraceptive Dev/Repr. Immun.	05/88			1 3*	mid-term
<u>FOOD FOR DEVELOPMENT</u>					
386-0476 ICDS/CARE PL 480 Tit II Supt Comm		09/90		1 3*	mid-term
<u>TECHN. DEV. & ENTERPRISE</u>					
386-0474 Alt. Energy Res. Dvmt.	06/88			2 3*	Mid-term
					* planned submission to AID/W

MANAGEMENT AND WORKFORCE ISSUES

USAID is currently occupying the entire 5th floor of the Ashok Hotel annex. The Floor is comprised of approximately 15,100 sq. ft and is leased at a cost of Rs.30/sq. ft. The lease has two more years to go and the rates will increase to Rs.36/sq.ft. and Rs.39/sq.ft for each of the succeeding years. An intensive effort is underway to find alternative space for the Mission. The high rental costs and the difficult negotiations with the hotel management to implement security measures as well as various other conflicts resulting from a highly active commercial site as the Ashok is reaching the critical stage. Additionally the uncertainty of the space two years from now also adds to the Mission burden and serves as further incentive to come up with viable alternatives.

USAID/I is currently discussing one possible proposal for office space with the Family Planning Foundation of India. The Office of IG/SEC has surveyed the site and discussions could move to actual negotiations within the next few weeks. We are awaiting IG/SEC's final site survey and recommendations.

A recently completed reorganization has resulted in combining and consolidating several major functions. The Food for Development functions were reassigned to two different offices. The agricultural

functions were consolidated under a Directorate of Agriculture and Health, Nutrition and Population were also placed under a Directorate for Population, Health and Nutrition. A total Mission workforce was established at 180 positions consisting of 28 USDH, 47 FNDH, 87 FNPSC, 10 USPSC, 6 JCC, and 2 institutional contractors. It is anticipated that this level will be maintained for FY 87, and 88. Required changes to the skills mix will be accommodated and could be required after the arrival of a new Mission director.

HOUSING

The Housing market in New Delhi continues to get tighter and rental costs are soaring. In an effort to compete for established Mission Standard Housing, the Inter Agency Housing Board agreed to raise the ceiling of Rs. 25,000 per month to Rs. 30,000 per month. This drastic action resulted from the embassy's inability to compete with other foreign missions for several houses. This means that for the first time USAID/I anticipates leasing houses costing over \$25,000/yr. AID/W approval will be requested lease by lease and the justification is certainly there. Although budget predictions were for a 40% increase in renegotiation of existing leases, actual increases have been much higher. Additionally, landlords are requesting and getting as much as 3 years rent in advance. While USAID/I has been successful in limiting advances to one year in most cases this ominous trend, which is expected to continue, will make it

very tough to limit advances to one year. Our O.E. Budget is going to feel the strain of rising housing costs over the next few years as no relief is foreseen or expected.

tivities are developed. We defer to AID/W to explain our overall program objectives to such organizations in order to elicit their preliminary interest.

GRAY AMENDMENT

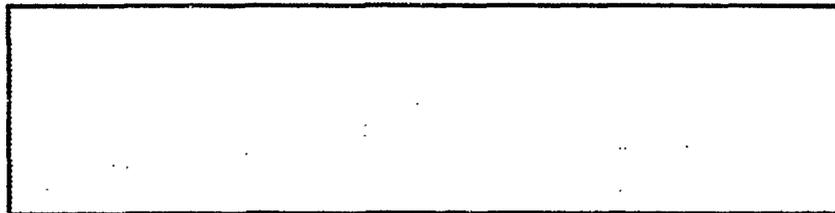
USAID expects several procurements exceeding \$500,000 in FY 87-88. Additionally, USAID/New Delhi generally executes a large number of smaller contracts, purchase orders, work orders and PSCs totalling perhaps \$2,500,000 in the course of a fiscal year. USAID follows guidelines and suggestions from AID/W regarding procurement of services from Gray Amendment organizations and looks for ways to assure that at least 10% of all procurement services is provided by Gray Amendment organizations. In fact, of the estimated total of some \$16,000,000 of potential procurements in FY 87 and FY 88, we are already planning to contract with Gray Amendment organizations for 12%. USAID will continue to look for other opportunities in this area.

We will continue to work with S&T/IT and OICD of USDA to place participants in Historically Black Colleges and Universities (HBCU) training courses or Joint Title XII University/ HBCU training courses.

From time to time USAID provides grants to qualified U.S. development oriented private voluntary organizations for undertaking activities of mutual interest. Gray Amendment PVOs could be recipients of USAID grant funds if suitable ac-

E. SUMMARY BUDGET TABLE BY PROGRAM COMPONENT (In Dollar Thousands)

<u>Program Component</u>	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>
1. Development Assistance (Grants) (Loans)	53,000 (23,500) 29,500	50,000 (33,000) (17,000)	50,000 (32,900) (17,100)
2. Economic Support Fund	--	--	--
3. PL 480 Title I/III	22,500	27,500	25,000
4. PL 480 Title II	90,006	80,000	80,000
5. Housing Guaranty	25,000	25,000	25,000



USAID NEW DELHI : ACTION PLAN, 1987

PD-AAX-350

1 OF 1 (24X)

INDIA
ACTION PLAN

1986