

INDIA _ ACTION PLAN

1988

BEST AVAILABLE

INDIA ACTION PLAN
FY 88

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USAID/India
FY 1988 Action Plan
Table of Contents

	<u>Page</u>
Introduction	1
A. The Drought	1
Donor Response	6
B. The FY 1988 OYB Obligation Plan	12
C. Pipeline Analysis	14
D. Food Aid	19
E. The CDSS	22
F. Management Issues	30
Office Space	30
Housing	32
G. Annexes (See Print File)	
1. New Project Descriptions	
Center for Technology Development	35
National Laboratory for Quality Control of Biologicals	38
2. Pipeline Analysis	42

Introduction

The FY 1988 Action Plan (AP) is an issues-oriented document intended to deal with several issues identified by AID/W and the Mission prior to the submission of the CDSS. These issues relate largely to current concerns although the section on the CDSS will discuss briefly some of the Mission's thinking on a new strategy. In addition, we have included in the Action Plan a section on Management Issues because of some serious concerns we have in this area.

This Action Plan deals with six primary issues: the 1987 Indian Drought, the FY 1988 Operational Year Budget, the Program Pipeline, the Food Aid Program, the CDSS and Management Issues. Separate sections of the A.P deal with each of these issues.

A. The Drought

Since it first became evident in August of this year that rainfall from the Southwest monsoon would be deficient in large parts of the country, several estimates of the impact of the drought on agricultural production and the economy have been made. This section of the Action Plan will review the status of the drought as described in several reporting cables and discuss U.S. and other donor responses to the drought.

Food Production

1. Foodgrains

Using different methodologies, early estimates by a number of analysts of the decline in foodgrain production for the 1987 kharif (rainy) season range between 10 MMT and 20 MMT from a 1986 level of about 83 MMT. Projections of rabi (winter crop) foodgrain production for 1987-88, which was in the process of being planted in November, are assumed to be about the same level as in 1986-87, i.e. 64 MMT. Thus, total foodgrain production for 1987-88 is expected to be somewhere between 127 and 137 MMT.

Statistical analyses of the effect of rainfall on kharif foodgrain production by USAID and the World Bank and extensive state level analyses by USDA based on field visits and meetings with farmers, center and state officials, traders and others concerned with agriculture have produced estimates of the decline in kharif foodgrain production in 1987 of 15 MMT to 20 MMT compared to the previous year.

It is too early to estimate rabi foodgrain production. However, based on the fact that much of the rabi crop is grown on irrigated

lands and that the coefficient of variation of rabi production is significantly less than for kharif, our projections of total foodgrain production have also assumed for the present that the 1987-88 rabi crop will be about the same as 1986-87, namely 64 MMT. Considerable uncertainty exists about rabi foodgrain production. The GOI is mounting a campaign to recoup kharif losses through expanded production in rabi. Its' 1987-88 target of 69MMT tons has been raised to 76 MMT (rabi production has never exceeded 65 MMT). However, USDA reports that planting conditions in North India are not very favorable for wheat because of a lack of moisture in the soil. In addition, the water level in most irrigation dams and wells in the principal wheat growing areas of the North are below normal and quality seed is in short supply.

All estimates of total foodgrain production except the GOI's fully revised estimate, which often takes more than a year to prepare, are essentially impressionistic. Even the fully revised estimates have an element of uncertainty since only a relatively small part of the estimate (9%) is based on actual sample surveys.

Given the estimated shortfall of 15 MMT-20 MMT and taking into account operational stock and buffer stock levels, the country team has projected foodgrain imports of about 2MMT to 4MMT in the period IFY1987-88 through 1988-89. The projection is based on the GOI policy that the size of buffer stocks should be 10 MMT plus operational stocks ranging between 6.5 MMT on April 1 and 11.4 MMT on July 1.

Public stocks at the beginning of October 1987 totalled around 16.7 MMT (wheat: 11.4, rice: 5.3) compared to 23.1 MMT (wheat: 16.1, rice: 7.0) during the same period last year. These stocks had reached a peak of 28.7 MMT on July 1, 1985 declining to 28.2 MMT on July 1, 1986 and 23.4 MMT on July 1, 1987. Because of the widespread drought this year, the offtake of wheat and rice through the Public Distribution System (PDS) has progressed at a faster rate than normal. Higher offtake levels are likely to continue at least until the end of March because the GOI has decided to distribute larger amounts of wheat and rice through PDS and for relief work. The GOI has also reportedly decided that it will auction 100,000 MT of wheat at different places in India primarily for increasing wheat availability and dampening price increases.

The buffer stock as of April 1, 1988 (when procurement of rabi begins) is projected by USAID/I to range between 9.1 million MT and 10.6 million MT which is close to the minimum buffer stock level. Even if the GOI decides to lower the buffer stock requirement norm to, say, 7.5 MMT, it will need to import foodgrains ranging from 2 MMT to 4 MMT so that food stocks as of April 1 will provide for at least two thirds of the operational stock requirement of 6.5 MMT. In

the coming months, rabi crop prospects, which will be known only around February end, will have an important bearing with respect to decision making on the level of foodgrain imports.

2. Oilseeds

The estimates for oilseeds production indicate a decline from the prior year of about 20 percent in the production year that runs from November 1986 to October 1987. The main losses have been in groundnut which accounts for almost 50 percent of India's production of edible oils. A consensus exists on the extent of the shortfall because the principal growing areas for groundnut, such as Gujarat, have been among those worst affected by the abnormally weak Southwest monsoon. Imports of edible oils were over 1.5MMT in the 1986-87 procurement year and are expected to rise to 2.0MMT - 2.5MMT in the 1987-88 procurement year.

Industrial Production

Projections of the impact of the drought on the rate of growth of industrial production indicate a decline of 15 to 25 percent from the level of each of the previous three years (more than 6 percent per year using the old industrial production index; more than 8 percent per year using the new one) for the period IFY1987-88 through IFY1988-89. Thus far, the view is that the industrial sector is less susceptible to the impact of drought than in the past because of structural changes in the Indian economy such as the growing importance of the tertiary sector and the changing composition of the manufacturing sector, including lesser dependence on agricultural materials. The effects of the drought on industry will work their way through the economy with a time lag of several months to a year, so that the empirical basis for the conclusion still has to be verified.

Balance of Payments

Unanticipated imports of food commodities, primarily edible oils, foodgrains and petroleum, as a direct consequence of the drought, in the period IFY1987-88 through IFY1988-89 are estimated at about \$900 million to \$1,200 million. Taking into account offsets such as the decline in fertilizer imports and dampened demand for capital goods, the net addition to the import bill directly attributable to the drought will be about \$1,000 million.

Even without the drought the period IFY1987-88 through IFY1988-89 was anticipated to be a difficult one for the management of the external accounts. By the standards of other developing countries, India's debt service ratio is not especially high. However, by the standards the GOI has set for itself internationally and

domestically, i.e. maintenance of credibility as a prudent manager of external accounts and "self reliance", India is getting close to the point where the norms of its political economy require consideration of options to prevent the debt servicing ratio from rising further. The additional \$1,000 million import bill attributable to the drought, coming at a time when India's debt service ratio is above 20 percent, will generate substantial pressures to review these options.

The principal short term options open to the GOI to keep the debt service ratio from rising involve singly or in combination increased private borrowing, draw down of reserves, cutback on import of capital goods and persuading donors to provide additional concessional finance.

In the absence of major financial support from the donors the brunt of the short term intervention to reduce debt servicing could very likely take the form of cutbacks on capital goods imports. Although the GOI has not, as yet, taken any major steps to reduce capital goods imports, such a step could be anticipated if the situation deteriorates further. Reduction of capital goods imports through a more restrictive trade policy could effect the trade liberalization process begun in the early 1980s. India's objectives of industrial modernization and an expanded role in international trade might suffer a setback.

The above said, it appears that the special drought-related donor commitments, especially by the World Bank and Japan, will mitigate the worst effects of the drought on the balance of payments. This short term financial assistance is warranted in order to avoid any dramatic adverse changes in the present direction of economic policy. India's record as a prudent manager of external accounts is all the more reason to give high priority to assisting it through the difficult short term balance of payments problem it faces this year and next.

Macroeconomy

The optimistic scenarios on the impact of the drought on the economy in IFY1987-88 anticipate agricultural growth of minus 5 percent and industrial growth of plus 5 percent and growth of GNP on the order of 2.5 percent. Growth of per capita incomes under this scenario would be slightly above zero. Several sources including the World Bank and USG country team are less optimistic on the prospects for growth for the year, i.e. GNP is anticipated to be marginally above zero and per capita GNP growth is projected in the range of minus 1 percent to minus 2 percent.

Regional

Approximately two thirds of India's total geographic area received less than normal rainfall. The worst hit region was the northwest of India including Gujarat, western Uttar Pradesh, Punjab, Haryana, Himachal Pradesh and Rajasthan where rainfall was 50 percent or more below normal levels. The worst extreme was the Saurashtra and Kutch meteorological subdivision of Gujarat where rainfall was 74 percent below normal rainfall. Other areas such as Orissa, Kerala and parts of Andhra Pradesh and Karnataka, though not experiencing as much of a shortfall in rain as the northwest of India, have had significant deficits in rainfall at about 25% below normal. The cumulative impact of successive years of drought, especially in Gujarat, Rajasthan and Orissa has begun to translate in 1987 into severe human deprivation and dislocation with very likely medium as well as short term economic and social effects.

It is the Mission's assessment that there are large pockets of severely drought affected areas where persons are suffering from major loss of income. As an example, a CRS report on the drought situation in the Chikalda and Dharni Talukas of Amvarati District of Maharashtra estimates that approximately 10,000 children (under age five) in these two talukas are malnourished with 5,000 of these children already in the third and fourth degree status.

In another example, the kharif area planted in Gujarat is estimated to have been about 50 percent of the area normally planted with only two thirds of the crop surviving the drought. The impact on rural incomes and standards of living should be severe.

While we do not have detailed reports, drinking water supplies in large areas of Gujarat and Rajasthan appear to be in jeopardy. Reports indicate that reservoirs in some areas have dried up and in all areas are well below normal. Borewells are being sunk to 800 feet and in some areas water being obtained from existing wells is brackish. By next April/May, water supply for human consumption could be a problem. The numbers of persons severely affected by the drought in states such as Gujarat, Orissa and Rajasthan runs into the tens of millions.

To cope with the regional impacts of the drought, the GOI has mounted a \$1,200 million drought relief program largely for public works programs. To meet the budgetary requirement for the program without significantly increasing the previously estimated budget deficit, the GOI is cutting back on non plan expenditures and enforcing tax collection with renewed vigor.

The Donor Response

The GOI, as expected, has a preference for concessional finance as a means of coping with the impact of the drought on the balance of payments although it will not officially request it. This is related to its desire to maintain its image of self reliance and avoid any semblance of conditionality.

1. The Other Donors

Most bilateral donors, with the notable exception of Japan, are not providing significant resources for drought relief outside of regular program commitments. A number of the donors plan to contribute to drought relief through accelerating disbursements on existing projects and committing regular program resources to commodities such as edible oils, pumps and drilling rigs. Several of the donors indicate that more substantial drought relief programs could only be triggered by a formal request to their respective governments from the GOI for such assistance.

Japan. Japan and the GOI have agreed to a \$200 million loan mainly for purchase of edible oils. The terms of the loan are an interest rate of 2.75% with 25 years to repay including a grace period of 7 years. These monies are additional to Japan's regular program commitment of \$474 million. Japan is presently negotiating with the GOI on the terms and conditions of an Ex-Im Bank loan (described as "semi-concessional" by a local Japanese official) that would be used to cover foreign exchange costs of procurements specifically identified on World Bank projects. The first tranche, which is targetted for disbursement in IFY 1987-88, may be approximately \$200 million.

World Bank. The World Bank will provide \$200 million from IDA funds and \$150 million from IBRD funds for a total \$350 million loan for balance of payments support. The full loan for the present is part of the regular program commitment for 1988-87 though we were told that this may change, i.e. the commitment level may rise. The loan is intended to help meet the reconstruction and rehabilitation costs of the drought; ease pressure on debt servicing and cash reserves, thereby assisting the GOI to maintain the momentum of economic reform; and increase India's ability to withstand future droughts. In addition, the World Bank is also considering accelerating disbursement of \$150 million on existing projects.

EC. The EC will provide approximately \$24 million of emergency assistance. Approximately \$18 million of grant food aid will be channeled through PVOs for procurement of drilling rigs, pumps and related supplies and equipment for development of local water

supplies. The aid is in addition to resources provided through the regular program.

United Kingdom. The United Kingdom is providing approximately \$ 1 million for drought relief channeled through PVOs outside of the regular country program commitment. As part of the regular program, the U.K has proposed a project for 55 drilling rigs compatible with drilling rigs used by UNICEF, handpumps, water testing equipment, water storage units and consultants that would respond to immediate requirements for development of local water supplies. The cost of the project would be about \$35 million.

Federal Republic of Germany. The FRG under its regular program commitment will provide about \$6 million of edible oils. The proceeds will accrue to the Prime Minister's Drought Relief Fund. The FRG is also considering accelerated disbursement of \$30 million for existing projects.

Netherlands. The Netherlands is not providing any resources for drought relief outside of its regular program. At the request of the GOI, the Netherlands has agreed for 1987-88 to substitute edible oils for the fertilizer and chemicals that have been a continuing component of its assistance package. The Netherlands will provide approximately \$45 million of edible oils in the 1987-88 assistance package.

Canada. The Canadians are planning on channeling grant resources to UNICEF in the range of \$5 million to \$15 million for drought relief. In addition, accelerated disbursement of about \$20 million, principally by advancing shipment of edible oils already programmed, is planned. Whether the funds are additional to this years regular program commitment is not clear at this time.

In summary, India can anticipate from donors other than the U.S. approximately \$450 million of resources for drought relief in addition to regular consortium program commitments of \$5,400 million for 1987-88. This does not include the IBRD/IDA contribution which, for the moment, is not additional; and it does include the likely Japanese Exim Bank loan now under negotiation. Of that \$450 million, about \$250 million is concessional and the balance will be loaned at or close to market rates. Also, India will likely receive an additional \$250 million in disbursements of concessional assistance in FY1987-88 from reallocation of regular program resources to quick disbursing drought relief related commodities and from acceleration of disbursements on existing projects.

2. United States

The U.S. response to the drought consists of several steps to improve food supplies for the needy and to provide the GOI with badly needed foreign exchange to support import of additional food commodities, primarily from the U.S. (See Section D on Food Assistance for a discussion of the food aid aspects of the U.S. response.)

In order to provide urgently needed foreign exchange for additional commodity imports, the Mission and the GOI are working out an effort to accelerate and/or increase disbursements of existing USAID project funds (approximately 85% of which is reimbursement for local costs) of at least \$100 million during the 1987-88 Indian Fiscal Year (IFY) ending on March 31, 1988. About \$28.5 million has already been disbursed and an additional, minimum, \$71.0 million will be disbursed between now and the end of March. The balance of \$100 million target will be achieved through two procedures:

a) what we are calling "accrual based" disbursements, in effect, advances for work completed or services delivered in anticipation of the submission of vouchers for these activities. The agreement between the U.S. and India identified an intermediate target of \$25.0 million for immediate disbursement. This will be accomplished as quickly as possible (by mid-December) utilizing this accrual method for vouchers which are already well along in preparation. Additional advances, based on this same procedure, will be made prior to March.

b) increase in the percentage of the USAID contribution to several projects, retroactive to the beginning of those projects. The USAID contribution to these projects will increase from 66 percent to 100 percent for local costs incurred through December 31, 1987, adding approximately \$11.5 million to the disbursement package. We are hopeful that this package of procedures will have a longer term impact on improvements in accrual reporting and claims management particularly at the GOI project authority level. However, there are drawbacks to the entire exercise which include a significantly increased management burden on the technical offices and, primarily, the Controller's office. Finally, the overall impact of the whole effort on both foreign exchange availability (compared to the programs of drought assistance announced by other donors, primarily the World Bank and Japan) and the pipeline is marginal. Section C on the pipeline will deal with the second of these issues in greater detail.

B. The Operational Year Budget

In the absence of additional information, this Action Plan is operating on the assumption that the FY 1988 OYB is \$50 million. Alternative obligation scenarios will be discussed in the event that the OYB is reduced because of overall Agency budget constraints. Current plans for the OYB involve a distribution of funding among five new projects and five ongoing projects (See Table 1). The proposed distribution of funding (and the prospect that the obligation plan can be achieved without change even if the OYB remains at \$50.0 million) reflects a fundamental programming dilemma that the Mission has faced over the years: the excessive forward funding of projects (both new and ongoing) because of the slow pace of project approval and implementation in India and because of functional account availabilities which often place us in the position of obligating or losing the money entirely.

A key objective in establishing this year's OYB has been to minimize the addition of excessive forward funding to ongoing projects thus giving these projects an opportunity to reduce existing pipelines through improved implementation actions. The pipeline analysis in Section C deals with our efforts to improve implementation and disbursements under these projects.

Although we are optimistic about the obligation of most of our new FY 1988 projects, experience has taught us not to take this for granted. The following deals with the prospects for achieving planned obligations in both ongoing and new projects. Where necessary we also discuss how these projects will fit into the new strategy.

New Projects

1) University Forestry Research and Education Development(U/FRED). This project was to have been obligated in FY 1987; however, because the multiple internal clearances required by the GOI before it would sign an agreement could not be obtained, obligation was postponed to FY 1988.

The U/FRED project, authorized at a level of \$ 20 million will assist the GOI in implementing its program to diversify forestry research and education in India. The project fits comfortably into the proposed AID strategy for India (see Section E, The CDSS) which will emphasize science and technology and human resource development within the context of an agriculture resource management sectoral strategy. Support for research and science education in the State Agriculture Universities (SAUs) will strengthen India's capacity to manage its natural resources in the face of increasing pressures of population and depletion.

The prospects for obligation of U/FRED in FY 1988 remain uncertain and depend upon the resolution of several issues, the most important of which relates to GOI concerns that the project relies too heavily on costly offshore procurement of training and technical assistance. It is not clear at this stage how this concern will be resolved or whether it can be done within this fiscal year.

2. Plant Genetic Resources (PGR). This project will advance the Mission's new thrust of mobilizing science and technology capacity in India to meet basic agriculture resource management requirements. Sustainability issues will be prominent in the new Agriculture Strategy and CDSS and the PGR addresses these issues head on by supporting biotechnology research and global Agency objectives to conserve biological diversity. The project will strengthen the linkages between U.S. and Indian research institutions and address policy considerations concerning the exchange of biological resources between the U.S. and India. Although some project design issues remain to be resolved, obligation of this project is on target for the summer of 1988.

3. Center for Technology Development. A new Project Description (NPD) in Annex II describes the rationale and progress of development of this project in detail. Obligation of the project is expected in August 1988.

4. National Laboratory for Quality Control of Biologicals. This project is described in some detail in the NPD in Annex II. This proposed \$15 million project represents the evolution of a component originally in the Biomedical Research Support Project but not funded because of a major GOI reassessment of its objectives in this area. Project development is underway with obligation targetted for August 1988.

5. Technology Assistance and Support. This project will assist the Mission in providing technical assistance and related types of guidance to the Indian Government in ways that enhance specific sectoral and program objectives of AID in India. Basically, the project will help support activities of keen interest to the GOI and AID which require relatively quick disbursement, e.g. program costs for technical support which by their intrinsic nature are not readily attributable to specific projects under the bilateral program. This activity will also include special studies leading to policy interaction in sectors which USAID is engaged. The project will be described more fully in an NPD which will be submitted before Program Week.

Ongoing Project

1. Child Survival Support. As designed, this project consists of three components: Immunization, Oral Rehydration Therapy (ORT) Program and State Programs in support of child survival activities. So far, \$22.0 million has been obligated for the project but agreement with the GOI as to how this money will be used has been difficult to obtain. Recent discussions with the GOI have led to a tentative decision to provide up to \$25.0 million to UNICEF for immunization activities and \$15.0 million to the GOI for its national ORT program. Of the \$22.0 million already obligated \$20.0 million would go to UNICEF and \$2.0 million to ORT. There has been no agreement so far on State programs.

A \$10 million obligation for this project in FY 1988 would fully fund the UNICEF (immunization) component of the project and increase funding for ORT to \$7.0 million. However, it is not clear at this stage whether the GOI still wants us to play an expanded role in its ORT program. A decision against such a role could lead to an expansion of our participation in immunization which the government has no objection to.

An obligation alternative for up to \$6.5 million of these Child Survival funds could be the Private Voluntary Organizations for Health Project, a \$10.0 million project with only \$3.5 million obligated to date.

Three remaining obligations will complete the OYB in FY 1988. The Family Planning Communication and Marketing project will receive funding for commodity procurement in the form of copper Ts, the second tranche of such funding. The Contraceptive/Reproductive Immunology project will receive final funding. The Biomedical Research Support project will receive a funding increment for its program to assure high quality in India's public health institutional development.

Alternatives

Although we hope to avoid the additional forward funding of ongoing projects, the following projects could absorb additional funding if necessary:

	Amount (\$000)
Irrigation Management & Training	- 13.0
Hill Areas Land & Water Development	- 2.0
National Social Forestry	- 28.1
Biomedical Research Support	- 3.9
VIDEX	- 3.0
PVOH/II	- 6.5
PACER	- 12.5
Total	- <u>69.0</u>

Any of the new projects obligated in FY 1988 could receive more funding in the first year of implementation. The mortgage on new projects beginning in FY 1988, less planned OYB obligations, is \$44.5 million.

I. FY 1988 OYB - OBLIGATION PLAN

<u>Project No. & Title</u>	<u>Functional Account</u>	<u>G/L</u>	<u>Estimated Obligation Date</u>	<u>Obligation Amount (\$ 000)</u>
(A) <u>ON-GOING PROJECTS:</u>				
0485, Family Planning C&M	PN	G	7/31	2,000
0492, Biomedical Research	HE	G	7/31	1,000
0496, PACT	SD	G	5/31	2,500
0496, PACT	FN	G	5/31	2,500
0500, Conceptive Dev./RI	PN	G	4/30	1,500
0504, Child Survival Health	HE	G	6/30	10,000
Sub-Total:				<u>19,500</u>
(B) <u>NEW PROJECTS:</u>				
0488, U/FRED	FN	G	7/31	10,000
0507, Center for Tech. Dev.	SD	G	8/31	5,000
0513, Plant Genetic Resources	FN	G	5/31	5,000
0514, Nat'l Biolog. Control Lab.	HE	G	7/31	8,000
0515, Tech. Asst. & Support	FN	G	6/30	2,200
0515, Tech. Asst. & Support	HE	G	6/30	300
Sub-Total:				<u>30,500</u>
COUNTRY-TOTAL (Grant):				<u>50,000</u>
	FN			(17,200)
	PN			(3,500)
	HE			(19,300)
	SD			(10,000)

(A) Oblig. Target: 85% by 6/30/88; 100% by 7/31/88.

(B) Oblig. Target: 85% by 7/31/88; 100% by 8/31/88.

II. PROBABLE DEOBS/REOBS IN FY 1988

<u>Project No. & Name</u>	<u>Functional Account</u>	<u>G/L</u>	<u>Est. Deob/Reob Date</u>	<u>Est. Deob. Amt. (\$000)</u>	<u>Est. Reob. Amt. (\$000)</u>
0465, Technology for Rural Poor	SD	G	1/31	48	-
0467, Rajasthan Medium Irrigation	FN	G	1/31	262	-
0474, Alternative Energy Research	SD	G	3/31	1,000	-
0475, Madhya Pradesh Social Forestry	FN	G	2/29	29	-
0475, Madhya Pradesh Social Forestry	FN	L	2/29	1,284	-
0481, Maharashtra Irrig. Tech. & Mgt.	FN	G	6/30	400	-
0496, PACT	SD	G	4/30	-	700
398-0249, Regional PD&S	SD	G	4/30	-	300
- ISPAN Core Project	FN	G	7/31	-	400
Total:				<u>3,023</u>	<u>1,400</u>

Note: The difference of \$1,623,000 between Deobs and Reobs will revert to the Treasury.

1988 Evaluations

USAID/India anticipates conducting four midterm and one final evaluation in FY88.

1) 386-470 -- Agricultural Research Project (ARP): A midterm evaluation is crucial to this sizable umbrella project to a) guide future implementation decisions as they relate to the project goal of building institutional research capacity through subproject activities, and b) to help determine the feasibility and desirability of designing a successor project. Currently, the Mission is devising scopes of work and searching for team participants in preparation for a late January evaluation.

2) 386-495 -- National Social Forestry (NSF): The midterm evaluation for the NSF project will a) provide the basis for implementation modifications to improve project effectiveness and sustainability in regards to social forestry management, extension, and economic rates of return, and b) assist in gathering important baseline data that will be used by the final evaluation team to assess project impact. Presently, final decisions are being made on the scopes of work and evaluation team composition. The evaluation should begin in mid January.

3) 386-495 -- Irrigation Management and Training (IMT): IMT's midterm evaluation will focus on the training, action research, and management components of the project, which may require implementation alterations to improve project impact. The evaluation is scheduled for February or March 1988.

4) 386-496 -- Program for the Advancement of Commercial Technology (PACT): Scheduled to begin in June of July, a

midterm evaluation is necessary for upcoming implementation decisions.

5) 386-3024-CLUSA/India Program for Development Support - OPG:AID will conduct a final evaluation of this project in the summer of 1988.

In addition to the evaluations listed above, the Mission is planning a redesign/evaluation exercise for the Hill Areas Land and Water Development project. Implementation delays and problems make a true midterm evaluation impossible and already suggest that project redesign is necessary. Consequently, the evaluation will be only be part of a redesign effort scheduled to begin in the second quarter of this fiscal year.

C. Pipeline Analysis*

USAID's pipeline peaked at just under \$ 340 million sometime in FY 1986.

As of 09/30/87 it was slightly over \$ 300 million 1/. The pipeline is expected to decrease to about \$260 million by 09/30/88 and further to \$200 million by 09/30/89 2/. The program mortgage of \$120 million at 09/30/87 should be about \$150 million by 09/30/88 and then decrease to \$110 million by 09/30/89 3/.

The analysis does not take into account the current USAID exercise to augment reimbursements in the four to six projects where such augmentation is feasible. This may result in a further \$ 15 to 20 million reduction in the pipeline this year but then will result in slower rate of disbursement in subsequent years as reimbursements are adjusted downwards to compensate for the earlier augmentation. The Mission's concurrent efforts to accelerate reimbursements by more effective claims mobilization and accrual based reimbursements (document based advances) will have a limited impact on the pipeline.

* See Pipeline Tables, Annex I.

1/ Small grants, central projects AID/W buy-ins, "mechanism" funding, and minor activities such as PD&S with a current pipeline exceeding \$12 million are excluded from this analysis.

2/ The \$200 million is assuming total obligations of \$50 million in FY 1988 (Pipeline Analysis does not include FY 89 starts).

3/ This does not include the potential mortgage of FY 89 starts. These reimbursements will be for accrued expenses which would have been incurred no matter what reimbursement method is used. Accrued expenses are not included in project pipelines.

Some thirty months ago, USAID fully recognized the serious implications of the rapid buildup of the AID/India pipeline and began serious efforts to reduce its size. Over the last two and a half years we have:

- completed a comprehensive pipeline analysis which was reviewed at the April 1986 program week for India.
- Deobligated a total of \$48.1 million of funds from 4 projects (\$14.1 million from 3 projects in FY 86 and \$34 million from the Family Planning project in FY 87).
- Reobligated the \$14.1 million in FY 86 into USAID activities (primarily bilateral). Based on our \$34 million FY 87 deobligation of Family Planning loan funds, about \$8.6 million of new family planning grant funds were made available to fund India oriented activities in AID/W central projects, buy-ins, and through an OPG for a PVO supporting an affiliate in India. The OPG was increased by September 1987 fall-out funding. Also \$2.0 million additional was provided to augment USAID's bilateral Family Planning project for Copper-T purchases.
- Undertook comprehensive reviews of three projects in the irrigation portfolio, made extensive revisions in the implementation modalities of these projects and in one case wrote a project paper amendment to gain AID/W approval of our plan for performance based disbursement.
- Carried out intensive reviews of four other USAID projects all of which subsequently experienced acceleration of expenditures as recommendations from the reviews took hold.

Currently we are:

- Restructuring and realigning four additional projects.
- Considering the potential of deobligating funds from four projects one of which is also being restructured.
- In response to the drought initiative beginning to implement the plan to augment reimbursements.
- Working to assure new projects are not overfunded in their early years and to assure they will begin to disburse much more quickly than projects generally have in the past.

These actions will be accomplished within an available reassessment of our strategy in several sectors. Consequently we should have a situation with:

- A pipeline which represents much less forward funding than in past years.
- A portfolio of projects clearly conceived and understood which are implementing well.
- new designs which are well thought through and capable of implementation according to plan.

All this is not to belie the amount of effort we are facing in sorting out with our Host Country counterparts major issues and/or implementation modalities on certain projects. Projects/problems which are of particular concern this fiscal year are:

- Family Planning Communications and Marketing Project - Restructuring (Target Completion 4/30/88).
- Hill Areas Land and Water Development Project - Evaluation and restructuring to correct design. (Target Completion 6/15/88).
- Child Survival Health Support Project - Realignment of all major components or redesign (Target Completion August 15, 1988).
- Irrigation Management and Training Project - Restructuring to expand project almost complete. Remaining "mortgage" may be utilized on a groundwater resources project now in initial discussions with Ministry of Water Resources (MWR). (Target completion of restructuring - 2/15/88).
- Agricultural Research Project - Realignment between and within Subprojects (Target Completion 3/15/88)
- Biomedical Research Support Project - Realignment (Target Completion 5/15/88)
- Rethinking and/or reprogramming of grant funds of the Maharashtra Social Forestry and National Social Forestry Projects. (Preliminary analysis completed on MSF by 2/15/88, on NSF by 7/31/88).

We have also identified 3 projects with some excess funding and projected PACD extensions on several projects. PACD extensions which have not yet been effected are noted in the tables. The three projects which we expect will have funds available for reobligation are: Dollar Amount in thousands

- | | |
|---|-------|
| - Alternative Energy Project | 1,000 |
| - Maharashtra Irrigation Technology and Management (MITM) Project | 400 |

- Maharashtra Social Forestry Project 3,200
If deobligated this FY all these funds can be easily and effectively used for other projects.

The Alternative Energy Project has turned out to be overfunded because certain coal technology activities which were to come forward were dropped and there was insufficient time to review and complete new subprojects. We propose to use \$300,000 of this to fund the Mangalore

Refinery Feasibility Study and reobligate the remainder into PACT or the Center for Technology Development Project. The small amount in Maharashtra Irrigation Technology & Management (OITM) could be absorbed in Irrigation Management & Training (IM&T) which is fast becoming our cornerstone project in irrigation water resource planning and management or used for a technical support "buy-in" in the ANE/Regional ISPAN activity. USAID is carefully considering how best to use the \$3.2 million left in the Maharashtra Social Forestry Project in a way which will correspond to agricultural objectives in the forthcoming CDSS. We will cable AID/W with our plans by 1/15/88.

The HALWD project, as presently structured, will not be able to achieve its broad land and water resource objectives, although the authorized funding could probably be totally utilized with a 2 year PACD extension.

USAID has initiated an evaluation of the Project to determine the restructuring necessary both to achieve these objectives and to determine whether the entire authorized funding level will be necessary to achieve them. Although there may be some fall-out funding from this exercise USAID will not be in a position to suggest reprogramming of any funds until this exercise is completed in mid 1988.

Additionally, four projects which have been completed have some funds which will be deobligated quite soon. These are: 4/ Dollar Amount in thousands

- Fertilizer Promotion Project	1
- Technologies for the Rural Poor	48
5/	-
- Rajasthan Medium Irrigation Project	262
- Madhya Pradesh Social Forestry Project	1,312
4/ Funds unavailable for reobligation as PACD has passed.	

5/ Not included in the Pipeline Analysis

With joint GOI/AID agreement in mid 1986 AID deobligated \$200,000 from the Rajasthan Medium Irrigation Project and \$6,900,000 from the Madhya Pradesh Social Forestry Project. It was estimated at that time that the funds then remaining in those projects would be used by PACD.

However, not all funds were used. In the former case Rajasthan project authorities failed to accomplish as planned certain grant funded activities. In the Madhya Pradesh situation AID received unrealistic information from the State's Social Forestry department related to what would be achieved by PACD.

In the last few months USAID's Controller reviewed the manner in which all USAID project managers estimate accruals and assisted them in developing more accurate accrual information. We now have more realistic expenditure and pipeline reports which should prevent faulty estimates in the future.

D. FOOD AID

I. Background

Averaging \$ 90 million (295,000 MT) annually over the last three years, the India Title II Program is the largest in the world. The Mission recommends that this level be maintained over the next several years despite the successful completion of the CLUSA Title II program in FY '88. Since 1978, this program has provided for the full monetization of 160,000 metric tons of vegetable oil (valued at \$ 130 million) in support of the Indian oilseeds sector. Selective and urgently needed increases in CARE and CRS feeding activities would permit continuation of the Title II program at roughly its current level. Indeed, as discussed below, both the increased integration of major segments of the CARE and CRS Title II programs with the Mission's DA strategy and portfolio and the current food/hunger crisis occasioned by India's worst drought in decades argue for a modest expansion of feeding activities.

II. Drought Response

The Mission's response to the drought has encompassed both Title II and Section 416 activities. On the PVO side, the DCC very recently approved 21,585 MTs of wheat under Section 416 and 1,353 MTs of vegetable oil under Title II for CRS emergency FFW activities for distribution to needy persons affected by the drought.

On the Government-to-Government level, the Mission has already concluded a Section 416 Agreement for 5,195 MT of butter oil. The entire local currency proceeds of over \$ 9 million from the sale of this commodity will be turned over to the Prime Minister's Drought Relief Fund to finance public employment projects in the most seriously affected states.

Senior level discussions with the GOI are currently underway to provide an estimated 400,000 MT of corn and 25,000 MT of vegetable oilseeds over the next six to eight months under Section 416. The corn will be used for urgently required animal feed in the drought-stricken states while the vegetable oilseeds will help address the critical shortage of edible oil, since the domestic oilseeds sector was devastated by the drought. Both commodities will be sold at commercial market price. The \$47 million in rupee generations is expected to replenish social welfare budgets of the GOI severely depleted as a result of the drought.

While consideration was also given to Title I assistance in the current drought situation, with its attendant burden on the GOI's balance of payment position, long-standing sensitivities foreclosed this option. We are, however, actively exploring with the GOI the

feasibility of major commercial purchases of U.S. corn and wheat under USDA's Export Enhancement Program (EEP). Finally, an acceleration of dollar disbursements to the GOI under existing bilateral programs, utilizing a variety of financial management mechanisms, should help provide the foreign exchange required for large purchases of U.S. soybean oil.

III. CARE

At \$ 60 million annually (197,000 MTs), the CARE Title II program dwarfs the CRS program and represents by far the largest single Mission activity in dollar terms. CARE's program is focussed on maternal child health care, through the GOI's Integrated Child Development Services (ICDS) program, and school feeding. FY 1988 will see the real flowering of the CARE ICDS program as a full-fledged developmental activity and integrated component of the Mission's child survival strategy and program. With strong Mission and AID/W support, CARE is collaborating with the Government of India in the most ambitious primary health care/child survival program being undertaken in the world. The program is particularly unique in the integration of food and non-food elements. In FY88, over 149,000 metric tons of PL 480 Title II commodities, valued at \$49 million, are providing nutritional supplements daily to an estimated 6.5 million young children and pregnant and lactating mothers. Complementing the food input, the Mission has made available major dollar and rupee resources. These include a Mission institutional development grant of over \$725,000 to upgrade CARE/India's staffing and operational effectiveness in child survival. With these funds, CARE has contracted a U.S. pediatrician to oversee their child survival initiative and several primary health care training coordinators for each of their state offices. They have also developed a first-rate audio/visual production and editing unit to assist in implementing their multi-faceted training efforts.

A centrally-funded child survival Grant of \$700,000 and \$4.5 million anticipated in rupee generations from the monetization of Title II commodities will allow for the initiation of major CARE child survival activities in eight Indian states during FY '88. Specific project interventions will include oral rehydration therapy, immunizations, growth monitoring, treatment of upper respiratory diseases, health and nutrition education, and potable water and sanitation. These projects will greatly enhance the effectiveness of the food resource and make a major impact on child survival in India.

The CARE food input to ICDS is programmed to increase by 25,000 MT in FY '89. In addition, because of the severe impact of the drought on central and state budgets of the GOI, CARE and the Mission have

discussed increasing CARE's 40% share of total food donations to the program on an all-India basis.

For school feeding, CARE and the Mission are planning to recommend a stretch-out of the phase-down for this program. The inability of several state governments to assume full responsibility for this program in the next several years has been severely exacerbated with the added demands of the drought.

CARE intends to direct its school feeding efforts to tribal and scheduled caste children, particularly girls, to the maximum extent possible. Several studies in India, the most recent carried out in 1983 by the Indian National Council of Educational Research and Training (NCERT), have verified the positive correlation between school feeding and attendance. In addition, the correlation is strong between female education (often closely related to food availability) and lower fertility levels.

IV. CRS

The CRS Title II program has averaged \$ 21 million (88,000 MT) over the last several years. In July 1987, two American-led consultancy teams independently evaluated the MCH and FFW programs, their primary feeding emphases. These final reports identified the need for consolidation of CRS activities as well as for across-the-board improvements in planning, implementation, and evaluation, both for CRS headquarters and zonal staff as well as for their counterpart agencies.

Several CRS staff changes, including a new Country Director, have significantly enhanced the prospects for major changes and strengthening of the Title II program. A just-concluded CRS/AID two day seminar on the FFW evaluation and one to be held shortly on MCH are the first step towards the development of a new regional-based strategy and plan to be completed by March/April of next year. The Mission would like to provide additional dollar or rupee assistance to CRS to help this restructuring succeed. Over the next twelve months, a combination of AID-funded TA, Title II monetization and AID/W - Mission grants will assist CRS to define and then implement the logistical/transport, staffing, training, and project inputs which will be required. As an outcome of this concentrated effort, we envision a much more targeted, effectively-run program in FY '89 and, on the MCH side, one that is increasingly focussed on an integrated child survival approach.

For its smaller school feeding/other child feeding activities, CRS, like CARE, will be increasingly directing its primary attention to tribal/scheduled caste areas.

V. Mission Organization

In recognition of the importance of food assistance in the Mission's program, the new Mission Director has instituted two organizational changes. First, he has upgraded the status of the Food for Development Program to that of an office level reporting directly to the Office of the Mission Director. Secondly, the Mission Director has formally established a Mission Food Aid Committee, under the direction of the Assistant Director for Development Planning and Programming, to monitor the integration of P.L. 480 food resources with other development resources. The Committee explores new uses of food aid in the Mission program and generally oversees the effective application of food aid across the portfolio.

E. The CDSS

The Mission is now anticipating a CDSS submission in late May with a review to take place in June, perhaps in conjunction with the ABS review. Much of the analytical work that will be background for the CDSS has already been completed or is well underway. Those completed include the following:

- a) Population Council Analysis of Population Programs and Policies in India.
- b) Research and Technology Development Assessment Update.
- c) Human Resources Development Strategy Report.
- e) Irrigation Strategy Paper.
- f) Child Survival Strategy Paper.

A draft Agriculture and Resource Management Strategy has been prepared and is being reviewed by the Mission. It will be submitted with the CDSS.

Aside from the formal analytical work the Mission has undertaken with respect to sector strategies we have also begun to lay down the outline for an overall Mission strategy which will focus heavily on the Modernizing Asia framework.

The 1987 CDSS (approved in February 1985) was constructed around a basic poverty alleviation paradigm with an emphasis on direct rural interventions in agriculture, health, nutrition and population. The assumption at the time was that U.S. aid levels in India were on an increasing trajectory and that these levels could sustain a meaningful engagement in programs which had large "resource transfer" components: irrigation canals, health centers, trees. The

irony is that, even at increased levels (particularly when compared to the magnitude of GOI resources), AID's ability to have a significant impact on rural problems through these programs is limited; declining levels reinforce the dilemma. The evolution of the program over the past couple of years has attempted to come to terms with this dilemma. However it is clear that we have not articulated this process adequately nor have we gone far enough in making programmatic choices which reflect emerging budget realities. We believe it is possible to discern two themes which characterize (and will continue to characterize) the AID program in India. These are science and technology development and the continued development of human resources consistent with the level of Indian economic and social progress and the U.S. comparative advantage for delivering assistance which "makes a difference". Implicit in both of these themes is a continuing concern for the strengthening of the institutions which are the basic infrastructure for further advances in science and technology and human resource development. Whether one calls this a Modernizing Asia strategy or not seems less important to us than the recognition that India, for one reason or another, is at a different level of development, in terms of its ability to respond to many of its own problems, than it was when the U.S. was a major contributor of economic assistance; that it has, in many ways, moved beyond the stage of acquiring the basics for economic growth to one which emphasizes the sustaining of these achievements. This evolution of Indian capabilities and the need for AID to come to terms with its vastly curtailed (in traditional AID terms) role in India requires that a new relationship be defined which addresses both objective realities. The CDSS will propose such a new relationship.

India remains one of the world's poorest countries and there remains great scope for addressing the issues of sustained growth and improvements in these sectors. The new CDSS will distinguish between program and sector disengagement in those areas where it needs to do so.

The CDSS will postulate the two themes described above (science and technology, human resources development), as, to use a familiar term, the new "pillars" of the AID program in India. It is important to understand, however, that by human resources and institutional development we do not mean the creation of new institutions or the basic training (eg. degree training) of large numbers of personnel, components typical of other AID programs. Rather we are talking about the enhancement of key existing institutions of research and education through programs of professional exchange, collaborative research and selected programs of training. In addition, we are talking about the creation of linkages, or networks, among those institutions such as the government, university community and the private enterprise sector,

whose combined efforts are needed to accelerate economic growth and address the poverty problem.

The two pillars and two sub-themes, policy engagement and private sector participation, will be developed in the CDSS in the context of three sectoral programs: Agriculture Resources Management, Health and Population and Energy/Power. (Note that by becoming a pillar or cross-cutting theme Research, Science and Technology Development is no longer treated as a separate sector as it was in the last two Congressional Presentations).

The first two of these sectoral clusters are familiar. An Agriculture and Resource Management Strategy is now being prepared by the Mission. The strategy will build upon and add to the Irrigation Sector Strategy which was approved by AID/W in April 1987. Key elements of both documents include a reorientation toward water and land management and planning, research and improved systems efficiency. In research, the focus on institutional development to support research (rather than actual research itself) will be strengthened. The policy issues which will be addressed in this sector include private sector investment in research, the impact of the wood industry on the environment, GOI regulatory policies concerning wood and wood product markets, and cost recovery, water pricing and beneficiary rights in irrigation systems. Our program in the Health Sector has been described as a dual-track approach with one track emphasizing service delivery (eg. ICDS, IRHP, Child Survival) and the other science (eg. VIDEX, Biomedical Support, Contraceptive Immunology, Low Birth Weight Research). As in Agriculture, however, we will be looking to a program which improves AID's ability to make the largest impact on Indian health problems consistent with budget levels and the relative ability of the GOI to target its own resources against these problems. The health portfolio will focus on science research and technology development and by building linkages between Indian and U.S. scientists and institutions, and selected activities in child survival. Policy issues that will be explored include regulation and control of pharmaceuticals, private sector production of vaccines and establishment of the peer process for evaluation of research.

The CDSS will propose a new sectoral emphasis on Energy/Power: AID has been active in this sector in India for some time and this involvement was reinforced in FY 1987 with the addition of the PACER project to the portfolio. A short attachment to this section of the Action Plan, titled AID and Energy in India presents a preliminary analysis of our thinking in this sector.

The CDSS will also continue to support cross-sectoral research and technology development programs such as the PACT and the proposed

Center for Technology Development Project. It is in these areas, including energy and power, that we see the best opportunities for trade and investment. For example, we anticipate substantial trade opportunities for U.S. suppliers in energy measurement, plant instrumentation, and high-efficiency power/energy conversion devices, the markets for which would be expanded through management improvement and conservation programs supported by the AID program in this sector. We are also actively pursuing policy dialogue with the Government of India to permit private sector participation in power generation, regulatory reform to encourage non-utility generation, and co-generation.

The CDSS will contain discrete "mini" strategy statements on Women in Development, PVO's, Food Aid and Housing. However, these concerns will also be fully integrated into the CDSS as appropriate. Food Aid in particular represents a resource of ever increasing importance as DA levels decline. Food will continue to support health and child survival programs, food for work and school feeding.

The Mission foresees the need for some assistance from AID/W in thinking through some aspects of the proposed strategy. This assistance might include Norm Nicholson and/or Virgil Miedema of ANE/DP and an energy specialist from ANE/TR or S&T/EY. An appropriate time frame for this assistance would be February/March 1988.

A serious constraint to India's economic growth has been the availability, quality and reliability of electric power. During the period 1986-87 India experienced an overall deficit in power supply of 9.3%. In the current year, because of the drought situation, hydel power generation in all regions, except perhaps the East, has been severely affected. (The GOI estimates a conservative figure of 11 billion units shortfall in supply compared to the previous year's supply of 52 billion units). Thus the national overall power deficit is expected to climb to 15%. Some states such as Kerala, Karnataka, Tamil-Nadu, Haryana, and Punjab are currently experiencing significantly higher deficits on account of the unprecedented drought.

These power shortages fall largely on industry. Since 1968/69, data indicate that whenever there has been a reduction in the supply of electricity an industrial slowdown occurred a year later; electricity supply is a major constraint to industrial growth. In the last few years value-added lost as a result of power shortages probably represents 1 to 3% of GDP. A study by Federation of Indian Chamber of Commerce & Industry estimated the loss of production to Indian industry because of a 10% power shortage at \$6 billion (1985-86). The cost of the power shortage is not only value-added foregone but

also misallocation of capital resources. A substantial investment in small uneconomic diesel generation sets, mainly by industrial enterprises, appears to have been undertaken over the past decade to help cope with shortages. Despite its high cost to the industry and the economy, such captive power capacities increased sharply from 2,860 Megawatts (MWe) in 1979-80 to 4,190 MWe in 1984-85. The GOI estimates that captive power capacity will increase another 68% to 7,056 MWe by 1990.

The power sector scenario has other compelling concerns as well. The GOI has been viewing with alarm the poor power plant availability of its utilities. A major impact on power delivery, with beneficial advantages in easing the capital investment crisis, could result from an increase to 55% or higher of the disappointing 50.1% average plant load factors (PLF) of thermal power plants. The PLF, which is the ratio of actual power produced to the maximum power production capability of a plant, can be improved through technological upgradation as well as in adopting better operational and maintenance procedures. It has been estimated that a 1% improvement in PLF will make available an additional 500 MWe to the Indian grid at costs which are a fraction of those incurred towards capacity additions.

Finally, in the Indian economy, power consumption is high relative to the level of economic activity, and the rate at which electricity consumption has been growing relative to GDP is much higher than is typical in other countries. This power-intensity is particularly marked in industry where it appears that both the intensity of power use within subsectors and the composition of the industrial sector have contributed to the overall intensity of power use. The high intensity of energy and power use in value-added operations suggests the tremendous scope that exists for energy conservation. Energy conservation and increased energy efficiency is thus another area of relevant and immediate importance. According to the report of an Inter-Ministerial Working Group on Utilisation and Conservation of Energy, there is a conservation potential of 25 percent in the industrial sector. These estimates are based on existing technologies (prevalent in the U.S. and elsewhere) that have not yet been adapted to Indian conditions.

Technology development will play a critical role in addressing some of the major issues confronting the Indian power sector. In view of the resource constraint* there is a need to identify and pursue alternative measures to meet power demand with a low level of investment. These least-cost alternatives are through investments in technology adaptation, innovation and development. There are several technology investments that hold great promise for existing generation, distribution and utilisation systems. For example, opportunities for technology development in power

generation exist through advanced coal beneficiation and conversion systems, fluidised bed boilers, combined cycle systems and non-utility power generation schemes such as industrial co-generation. The last- mentioned holds particular promise. In a recent USAID sponsored study and workshop it has been estimated that up to 3000 MWe of capacity from cogeneration can be made available (with comparatively shorter lead times and at lesser cost) than equivalent capacity in the public utility systems in Maharashtra and Gujarat. As a further example, the Indian sugar industry represents an opportunity to provide economic power from by-product fuels far in excess of its internal demands though the retrofiting of systems (boilers/turbines) having higher thermodynamic parameters than hitherto employed. The gain is estimated to be an additional 2000 MWe from the existing 377 sugar mills in the country. The realization of this potential will of course require the exercise of political will, driving the solution of manifold but not especially complex financial, institutional and technical problems associated in a large-scale retrofit program.

* See note at end of pages on overall investment requirements in relation to planned capacity growth.

In the conventional utility area, modernisation/rehabilitation of both thermal and hydel plants are critical for improving PLF. More often than not, these require relatively simple technological and managerial solutions that permit more efficient operation and maintenance of the generating apparatus.

Opportunities also exist in the area of reducing transmission and distribution (T&D) losses. With over 20% T&D losses (national average), and with some states having losses as high as 40-45% in some sections of their distribution networks, reduction in T&D losses is imperative. While past imbalances in investment between generation and T&D need to be corrected, over the longer term, short term measures to reduce both commercial and technical losses can be institutionalised more rapidly.

Finally, certain energy conservation technologies have proved to be extremely effective and viable in almost all areas of value-added operations, including power generation and end-use utilisation areas. For instance, in the power sector there are several technologies which could optimise the use of available generation capacity. Some of these are:

- load levelling and load management control systems;
- energy storage;
- power plant instrumentation, control and advanced diagnostics.

Similarly, some of the end-energy use efficiency systems/devices are:

- variable speed drives
- micro-processor based instrumentation for process control.
- efficient lighting systems

In the short term, many investments in conservation-oriented power systems pay off better than new power plants, especially demand-side planning, load management, and improvements in system efficiency. The Central Electricity Authority (CEA) has estimated that investment in lower-cost alternatives such as these can reduce capital required to finance planned power system expansion in India by \$50 billion. Neither the tools nor the institutions for least-cost planning are well developed, however, and least-cost measures are often more difficult to finance than new power plants. Considering the wide spectrum of opportunities that the Indian power sector presents, USAID could identify a niche commensurate with its funding levels and efforts. It is clear that some of the areas of

concern in the Indian power scenario are also areas where the USA has a definite technological advantage. Some of the more important areas appear to be:

- Facilitation of the process of modernisation/rehabilitation of power (hydel/thermal) generation systems.
- Reviewing T&D networks, and modernisation of load despatch centres.
- Power system studies for load management.
- Demonstration of energy conservation technologies in the generation and user sectors.
- Promotion of non-utility power generation.

A relatively small-scale project - the the \$3-5 million LOP range - could meet a significant portion of the technical assistance + training costs associated with addressing the technology and conservation aspects of the Indian power crisis.

Power Sector: Investment Requirements

Central to India's economic growth lies the performance and development of its power sector. As the rest of the Indian economy expands, demand for power grows roughly twice as fast and, because power is relatively capital intensive, its share in total fixed asset formation is increasing rapidly. The projected capital requirements for expanding power generation, transmission and distribution systems far exceed the financial resources available. At the end of the current seventh Five Year Plan (1985-90), the estimated short-fall will be 10,000 MWe in installed capacity. In the current Plan, the energy sector accounts for one-third of the Plan allocations of \$150 billion; the power sector accounts for \$28 billion or little over 50% of the energy sector and approximately 18.6% of the total Plan allocations.

As of April 1, 1987 India had 48,000 MWe of installed generation capacity. The Central Electricity Authority (CEA) estimates that 32,000 MWe of additional capacity is required to keep pace with the demand anticipated during the Seventh Plan. These additions will cost approximately \$56 billion; however the power sector has been allocated only \$28 billion, half the amount required. This has resulted in drastically pruning capacity additions to 22,000 MWe. The situation is expected to be further exacerbated in the eighth and ninth five year plans. According to CEA, the generating capacity addition required for the projected demand has been

assessed at about 110,000 MWe (48,000 MWe during the eighth plan and 62,000 MWe in the ninth plan) for the period 1990-2000. Further, the total investment in the power sector during the eighth plan would be around \$75 billion and \$95 billion in the ninth plan making a total of \$170 billion for the decade 1990-2000. This investment estimate does not include new schemes on which advance

action needs to be taken up during the plan periods (8th and 9th) to lay the groundwork for investments during the tenth plan and beyond. Given the current performance by the Indian power authorities in installing power capacities (22 of the 28 on-going power plants have been considerably delayed and 26 have incurred cost overruns between 20-25%), it is clear that the years ahead will undoubtedly strain the capabilities of the power sector as it strives to meet the needs of the economy.

F. MANAGEMENT ISSUES

OFFICE SPACE:

The offices of the USAID Mission in New Delhi are currently in two locations with almost half located in the Ashok Hotel and the other half located in the West Building of the American Embassy. The current lease of the office space occupied by USAID in the Ashok Hotel expires in September 1989. Fresh negotiations will have to be conducted for any extension of the lease at that time. The current lease provides for an escalation of twenty percent per annum. There are indications that it will be very difficult to renew the current lease beyond 1989. Currently USAID is leasing approximately 16,500 Sq.ft. which will cost about \$797,000 (rupees per square foot) by 1989, the last year of the lease.

Aside from the escalation in cost there are problems with respect to corridor space, as the Ashok is insisting that we pay for the entire gross area of the fifth floor and not just the individual rooms. Physical security continues to be a problem as the Ashok is not willing to allow implementation of IG/SEC recommendations. Fire safety is also a real concern based on a recent survey by FBO/FIRE. Additionally physical separation has had a very negative effect on overall employee morale as has

been noted in the recently completed USAID/I Management Assessment.

The Family Planning Foundation (FPF) has a building under construction approximately 15 minutes away from the Embassy which appears to offer the right amount of Office Space. The building is expected to be completed in six to eight months. A preliminary study was conducted recently by USAID/I thru a contractor of the building and the potential office space. The FPF site appears to be a good alternative. Although there are some issues that require resolution to continued occupation of the Ashok.

If we are to pursue this option the following actions would be required:

1. TDY assistance from AID/W/SER/MS to conduct a comprehensive feasibility study. Prepare detailed plans and budget involving move of USAID offices to new location and negotiate appropriate lease.
2. TDY assistance from IG/SEC to review current construction of building and make necessary recommendations towards physical security and seek waivers to setback requirements.

SUMMARY OF CURRENT AND PROJECTED SITUATION

<u>LOCATION</u>	<u>AREA IN SQ. FT.</u>	<u>NO. OF EMPL.</u>	<u>COST/ANNUM</u>		
			<u>FY 88</u>	<u>FY 89</u>	<u>FY 90</u>
A. CURRENT & PROJECTED					
ASHOK	16,500	67	\$550,000	\$797,000	\$956,000 (at current escalation rate)
WEST BLDG.	17,200	106	0	0	0
B. ALTERNATIVE					
ASHOK	16,500	67	\$550,000	0	0
WEST BLDG.	17,200	106	0	0	0
FPF	35,000	181	\$1,075,000	\$646,000*	\$646,000

* Annual Cost for 5 year period.

Mission estimates start up costs to be approximately \$1,075,000 as follows:

1. Procurement of air conditioning and back up generator \$ 300,000
 2. Interior construction of partition, electrical wiring and installation of ceilings and other cabling \$ 525,000
 3. Carpeting and Cafeteria equipment \$ 125,000
 4. Additional vehicles for motor pool (5 vehicles- partial offset by withdrawing from FAAS motor pool) \$ 75,000
 5. Miscellaneous A&E services etc. \$ 50,000
- \$1,075,000

HOUSING

"Delhi can now claim dubious distinction in yet another field. It is the unmitigated spurt of rentals that has put the metropolis on par with the most expensive capitals in the world" - Hindustan Times, September 25, 1987. This opening sentence from an article headlined "High Rents or extortion??" follows 9 months on the heels of an Indian Express article about Delhi housing headlined "Paying too high a price for living."

New short-term leases are escalating dramatically in price. AID was unable to secure several badly needed new leases this past summer. One, a modest 4 bedroom plus study, reportedly leased for \$32,308 p.a. to a German firm; another of similar description was lost to the German Embassy for a figure in excess of the \$29,539 p.a. the landlord first agreed to with AID. Last spring the British High Commission paid \$27,692 p.a. for 2 houses for which AID was negotiating. (Rental figures are often hard to substantiate. Owners ask for and, in many cases apparently get off shore payments in hard currency, as well as other payments with no paper trail.) Fewer desirable houses appear on the rental market and competition for those houses is very keen. Owners are being forced into their own properties by retirement from government service and regulations governing occupancy of government housing.

Property being offered to AID is increasingly expensive to make ready. Landlords who are financially unable or unwilling to make needed repairs and improvements offer their properties to the U.S. Mission, looking for plumbing and electrical upgrades as well as cosmetic improvements. The costs of making these necessary upgrades have escalated steadily over the past several years; one inch pipe has gone from \$.85 per running foot to \$1.23 in 3 years time; water

storage tanks from \$.11/litre to \$.19/litre today, contract labor costs escalated 24% on October 1, 1987.

Lease renewals on properties that are already up to standard are increasingly difficult to negotiate; landlords demand exorbitant increases, or, worse still, refuse to negotiate at any price. Recent Embassy GSO liaison with Western Embassies revealed that the British High Commission has signed four lease renewals for three and four bedroom non-representational houses ranging from US \$30,461 to US \$32,307 P.A. The Dutch Embassy has signed a US \$32,307 non-representational renewal and a new lease for a representational house at US \$41,538. Most Western Embassies are under heavy landlord pressure to either pay the short-term going rate of US \$41,500 to US \$55,384 or prepare to vacate as soon as the lease expires. Many landlords are reclaiming their houses (refusing to renew leases with tenants) in order to build a second unit. When these apartments appear on the market, they often have shared entrances and driveways, which make them difficult to secure. Employee expectation is also a factor in the housing difficulties; newcomers often have an outdated and unrealistic view about housing in Delhi.

In order to alleviate the problems here, AID/India needs

1. An increase and extension of the make-ready cost waiver which expires in December 1987. \$7000 per unit will cover the costs for the time being.

2. Quick response to requests to exceed \$25,000 per year on short-term leases. AID/India request in May 1987 was granted. However, during the time required to get an answer, the landlord received two more attractive offers, and accepted one for \$36,923 p.a. rather than the \$29,539 p.a. AID was prepared to pay.

3. Flexibility in use of existing resources. It is necessary to lease well ahead of employee arrival at Post - to grab properties when they are available and perhaps to carry one or two in excess of immediate known demand in order to cover unexpected losses. Ten leases expire during this fiscal year. Two landlords have already put us on notice that they will not renew or renegotiate.
AID/India is

- 1) Working at expanding our contacts among landlords and rental agents, in order to have early notice of properties coming on the rental market.

2. Making more creative use of existing resources (A three-family move is underway to more equitably house families within the AID leased residences).

3. Seeking increased co-operation with other agencies in the Mission, in order to make best use of properties that are already under USG lease.

With co-operation from AID/W, AID/India will continue to seek solutions to an increasingly resistant problem.

NEW PROJECT DESCRIPTION (NPD)

CENTER FOR TECHNOLOGY DEVELOPMENT (CTD)

I. IDENTIFICATION OF PROBLEM: The Government of India (GOI) is committed to expansion of India's ability to generate and effectively utilize technology to spur economic growth. The Seventh Five Year Plan spells out the strategic role for Science and Technology (S&T) in considerable detail. India has developed a substantial human resource base in S&T and a significant basic research capability in many fields. But the institutional relationships among industry, government, academia and the national research institutions are such that the rate of adaptation and commercialization of new technologies remains sub-optimal. There is growing recognition of this problem in India, and a growing impetus to find more effective approaches to the utilization of the country's institutional, financial and human resource endowment.

II. BACKGROUND: The Center for Technology Development (CTD) represents an extension of USAID/India's experience with commercial technology development, which begun with the Program for the Advancement of Commercial Technology (PACT) and has continued with the Program for Advancement of Commercial Energy Research (PACER) project. To further enlarge on the range of approaches to technology development, in early 1987 USAID/I began to explore a possible regional focus to supplement the respectively industry-wide and sector-specific foci of the above two projects. This resulted in a major conference in March 1987 in the city of Bangalore, in Karnataka State in South India, on the theme of technology development in a regional setting. The conference brought together representatives of industry, state government, the banking sector and academia and resulted in a commitment by the local leadership in Bangalore to accelerate technology development in that city.

Subsequent to the March conference, USAID contracted with SRI International to prepare a study of strategic choices for Bangalore. The study will be presented to Karnataka Focus Group at a conference on December 11, 1987. It is expected to provide the

basis for a plan of action to be implemented by the Center for Technology Development. This is a new non-governmental organization now being established to catalyze a broad range of actions involving human resource development, technology transfer, research and development within industry, and to support new areas such as biotechnology and informatics. This Center is being chartered and has the full support of the Government of Karnataka and DEA.

III. MISSION STRATEGY: USAID/India's Research and Technology Development (R&TD) strategy has been reviewed and the technology development thrust, strongly endorsed in two recent investigations (Robinson and Smuckler Reports), is being incorporated as a key element of the FY 1990 CDSS

The CTD program serves the R&TD objective by expanding USAID's support for science and technology. It also provides a means of fostering private sector development in India. Equally important, the CTD program will serve as a vehicle for considerable policy dialogue on such fundamental issues as the liberalization, technology access, and privatization. The program should also open further opportunities for trade and investment by US companies.

IV. THE PROJECT: The moving force for this program will be the Center for Technology Development, a registered (non-profit) society under the laws of Karnataka State but having an all-India mandate. The Honorary Chairman of the CTD Steering Committee, called the Technology Development Board, will be Abid Hussain, a member of the Government of India (GOI) Planning Commission; the head of the Secretariat, the operating arm of the CTD, will be the Chairman of the Industrial Credit and Investment Corporation of India (ICICI). The operations and innovations established by the CTD will be analyzed by the Planning Commission and Indian DFI's from the standpoint of precedent and replicability to a broader Indian context. This a key linkage which gives the project the same potential for broader impact as PACT is achieving and we hope to achieve with PACER.

AID assistance will be through a grant to ICICI, which will serve as the budgetary counterpart organization under the GOI's rules for programming of the foreign assistance. AID funds will provide technical assistance, training, and commodities to the CTD. Key areas in which AID assistance is expected to be concentrated are: 1) strategic planning for manpower development, regulatory reform, and industry-university linkages; and 2) the establishment of one or more industry incubators or centers of excellence devoted to such fields as biotechnology and post-harvest technology.

V. MISSION TECHNICAL EXPERTISE: The Mission has developed considerable familiarity with technology development issues as a

result of working with projects in this area. USAID/India has a JCC on its staff, Dr. David Mears, who has worked with engineering centers of excellence at Rutgers University. Further, we have worked with several consultants and consulting organizations in the pre-planning "catalytic" phase of this program and have knowledge of their capabilities.

VI. ISSUES: No issues of special importance have been identified to date.

VII. DELEGATION OF PID APPROVAL AUTHORITY: The PID should be reviewed/approved in AID/W, in keeping with the pattern of the previous technology development projects.

VIII. BUDGET: The total life-of-project AID funding level is estimated at \$12.5 million, with an obligation target date of the fourth quarter of FY 88. Besides AID funding, the GOI and other participants will contribute equivalent of \$5.0 million each. Two persons team for six person weeks of TDY/consultancy assistance, during March/April, will be required to draft the PP. The estimated cost of this TDY assistance, to be provided with PDS funds, is \$20,000.

IX. DESIGN SCHEDULE:

Activity	Completion Date
1. Draft PID	December 1987
2. Mission Review Committee Meeting	January 1988
3. Mission approve PID	January 1988
4. AID/W Review of PID	January 1988
5. Recruit/Contract for Design Assistance	Jan/February 1988
6. Design Team in India	March/April 1988
7. Draft PP provided	May 1988
8. GOI Review PP	June 1988
9. Mission finalizes PP/ProAg	July 1988
10. Sign Pro. Ag.	August 1988

NEW PROJECT DESCRIPTION (NPD)

NATIONAL LABORATORY FOR QUALITY CONTROL OF BIOLOGICALS

I. IDENTIFICATION OF PROBLEM: Recognizing that vaccination is one of the most cost-effective health interventions available, the Government of India (GOI) has embarked on an ambitious plan of expanding vaccine distribution, production and quality control with the objective of universal immunization within the 7th Plan Period (1985-1990). As a part of this effort, the GOI and USG signed a Memorandum of Understanding (MOU) in August 1987 on the Vaccine Action Program (VAP) designed to expand U.S. technical assistance in this area.

At the present time, all of India's requirement for polio vaccine and much of its requirements for other vaccines must be imported. Efforts to expand indigenous production capabilities and bio-technical innovation and collaboration with other countries have been substantially slowed due to the lack of sufficient confidence on the part of the Indian Government and public that Indian regulatory agencies have the necessary tools, authority and expertise to protect the appropriate Government/Public interest.

Though identified in the current (7th) and previous Five Year Plans as an important national need, construction and staffing of the National Institute for the Quality Control of Biologicals (NIQCB) has yet to begin. There is currently no facility in the country with the necessary technical experience, facilities, staff structure and authorization to provide this regulatory function.

II. Background: In 1985, USAID with the GOI signed the Biomedical Research Support Project (386-0492) which made available \$1,260,000 in Grant and Loan Support through the National Institute of Quality Control of Biologicals Subproject. Condition Precedent to disbursement of funds in this subproject was made on the GOI's demonstration of progress on construction of its proposed new facility.

In March of 1986, Dr. Edward B. Seligmann, formerly of the U.S. Food and Drug Administration (USFDA), visited India at USAID's request to review and make recommendations on the GOI proposal for the NIQCB. This included detailed discussions with Dr. S.N. Saxena, Director-Designate of the Institute and officials of the Ministry of Health & Family Welfare. Since that time, various FDA and USPHS officials and scientists have visited India for activities related to this and other activities designed to provide technical assistance and U.S. institution liaison with the laboratories which loosely make up the institutional base of the Drug Controller of India. Their efforts have been uniformly well received by their Indian counterparts.

In April 1987, the GOI informed USAID of its revised plan for the NIQCB as a proposed independent institute with a total estimated budget of Rs.15.94 crores and invited increased U.S. participation in its

efforts. Though the funding for the new institute is within the GOI budget and the Expenditure Finance Committee (EFC) Memorandum has been approved, the current fiscal situation of the GOI, exacerbated by the drought, has brought the project to a near standstill. This has substantially impaired U.S. efforts to implement and facilitate a wide range of collaborative undertakings outlined under the Vaccine Action Program - Memorandum of Understanding (VAP-MOU).

III. Mission Strategy: USAID/India's strategy in the health sector has consistently and strongly emphasized both institutional development and self-sufficiency as well as a substantially expanded immunization effort as a central part of the Child Survival Strategy.

An emerging strategy for long term collaboration envisions using Institutional Development Projects to build the necessary operational linkages between the divisions of the U.S. Public Health Service [principally the Centers for Disease Control (CDC), the Food and Drug Administration (FDA) and the National Institute of Health (NIH)] and their GOI counterpart organizations. This strategy would seek to internalize those linkages in concert with a programmed reduction of USAID activities in this sector. The National Institute for the Quality Control of Biologicals and its proposed long term collaborative relationship with the Center for Biologicals of the USFDA represents a crucial and achievable model for this relationship.

The USFDA is highly regarded in the GOI and within the Indian scientific community. This undertaking will represent the first large scale Indo-US collaboration in the regulatory sector which has been identified by the GOI as requiring substantial upgrading.

Assisting the GOI in enhancing the scientific rigor and regulatory vigor of this sector has been identified by the USFDA as a priority undertaking to assure the quality of Indian origin products which find their way to the U.S. domestic market. Similarly, marketing of U.S. origin biotechnology products or technologies in India, including human and animal vaccine, is likely to become increasingly more difficult in the absence of considerable Indian Government and Public confidence in the regulatory sector.

IV. The Project: The project is envisioned to encompass 6 aspects of the NIQCB: 1. Providing technical assistance, principally through a PASA with the USFDA, for institutional design including facilities and personnel; 2. Providing long and short term training, principally through a PASA with the USFDA, both in the U.S. and in India; 3. Providing assistance with the acquisition of U.S. laboratory equipment and technologies; 4. Providing assistance for the construction of the facility; 5. Establishing a mechanism for long term technical collaboration between the USFDA and the Drug Controller of India including the exchange of product testing data; and 6. Establishing a

mechanism for long term collaboration and dialogue between the Drug Controller of India and the USFDA on regulatory policy to include, but not to be confined to, the area of Biologicals and Biotechnology.

V. Mission Technical Expertise: The Mission currently has an M.D., Ph.D. trained US-FSO with Congressional staff experience in USFDA oversight and regulatory issues designated to direct the project. It is envisioned that throughout the process of project design and implementation, the Mission will draw extensively on staff resource of the USFDA for their technical and policy expertise. FDA personnel with familiarity and experience in India and internationally regarded expertise have been tentatively identified. The USFDA and USPHS continue to express their strong support for the undertaking and willingness to provide the necessary expertise. It is proposed that a PASA be negotiated and executed as soon as possible with the USFDA to provide TDY and U.S. based assistance for one FTE x 3 month for preparation of Project Paper (PP).

VI. Issues: A number of important issues central to project design, implementation and long-term benefits have been identified and are currently being addressed as follows: 1. Does the current GOI-NIQCB design plan adequately anticipate; a) current and projected volume requirements for product testing of imported and indigenously produced vaccines and other biologicals; b) incorporation of anticipated short and mid-term technological advances in regulatory methodologies, and c) a strategy for 'Good Manufacturing Practice' compliance as well as end-product testing. 2. How will existing GOI hiring and promotion practice, the planned staffing pattern and human resource development plans converge to assure the long term scientific vitality of the NIQCB?

3. Administratively, how will the NIQCB regulatory responsibilities coincide effectively with the Drug Controller of India's regulatory authority? and 4. How can self-sustaining mechanisms be established between the USFDA and the Drug Controller of India to assure long term technical and regulatory policy collaboration?

VII. PID APPROVAL AUTHORITY: The PID will be reviewed/approved in AID/W.

VIII. Budget: The total life-of-project funding level is estimated at \$18 million. A target date for obligation is the fourth quarter of FY 1988. Four months of TDY/consultancy assistance for preparation of the PID and PP has been requested (\$ 50,000) for PD&S funds to commence February 1, 1988.

IX. Design SCHEDULE:

Activity	COMPLETION Date
1. Discussions with GOI	Ongoing
2. Draft NPD	November 25, 1987
3. Discussion with FDA	December 10, 1987
4. Formation of Joint Technical Working with USAID/FDA/GOI/MOHW	January 15, 1988
5. Commence PASA with USFDA	February 1, 1988
6. PID Draft/Review/Approval	Feb/March/April/1988
7. Draft PP	April/May/June/1988
8. Mission Approval PP/ProAg	June/July 1988
9. Sign Pro. Ag.	July 1988

INDIA PIPELINE ANALYSIS AS OF SEPTEMBER 30, 1987

I. EXISTING PROJECTS

Proj	Project Title	FY	LOP Funding	Actual or Estimated Obligation	Cumulative Obligation	Actual or Estimated Mortgage Commitment	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Estimated Months Forward
467	Rajasthan Medium Irrigation	80	36,250	15,500	15,500	20,750	15,495	0	0	15,500
467		81	0	20,000	35,500	750	20,000	0	0	35,500
467		82	0	0	35,500	750	0	1,152	0	34,348
467		83	0	750	36,250	0	520	5,261	6,413	29,837
467		84	0	0	36,250	0	0	12,466	18,879	17,371
467		85	0	0	36,250	0	0	9,093	27,972	8,278
467	(deob) (PACD extension)	86	(200)	(200)	36,050	0	0	7,801	35,773	277
467		87	0	0	36,050	0	0	15	35,788	262
467	(deob)	88	(262)	(262)	35,788	0	0	0	0	0
470	Agricultural Research	83	20,000	6,500	6,500	13,500	0	0	0	6,500
470		84	0	3,500	10,000	10,000	0	0	0	10,000
470		85	0	4,000	14,000	6,000	0	55	55	13,945
470		86	0	3,000	17,000	3,000	0	686	741	16,259
470		87	0	3,000	20,000	0	6,555	1,732	2,473	17,527
470		88	0	0	20,000	0	8,500	6,000	8,473	11,527
470		89	0	0	20,000	0	4,945	5,500	13,973	6,027
470		90	0	0	20,000	0	0	3,000	16,973	3,027
470		91	0	0	20,000	0	0	1,900	18,873	1,127
470	(2 year PACD extension)	92	0	0	20,000	0	0	1,127	20,000	0
471	Fertilizer Promotion	79	101,000	22,000	22,000	79,000	0	0	0	22,000
471		80	0	44,000	66,000	35,000	0	0	0	66,000
471		81	0	35,000	101,000	0	100,999	0	0	101,000
471		82	0	0	101,000	0	0	66,335	66,335	34,665
471		83	0	0	101,000	0	0	66,611	66,611	34,389
471		84	0	0	101,000	0	0	31,972	98,583	2,417
471	(PACD extension)	85	0	0	101,000	0	0	2,222	100,805	195
471		86	0	0	101,000	0	0	194	100,999	1
471	(deob)	87	(1)	(1)	100,999	0	0	0	100,999	0
474	Alternative Energy Research	82	5,000	5,000	5,000	0	0	0	0	5,000
474		83	0	0	5,000	0	0	214	214	4,786
474		84	0	0	5,000	0	0	530	744	4,256
474		85	0	0	5,000	0	0	874	1,618	3,382
474	(Amendment)	86	2,000	2,000	7,000	0	0	1,133	2,751	4,249
474		87	0	0	7,000	0	0	1,090	3,841	3,159
474	(3 yr PACD extn)(deob)	88	(1,000)	(1,000)	6,000	0	4,258	1,090	4,841	1,159
474		89	0	0	6,000	0	300	659	5,500	500
474		90	0	0	6,000	0	700	500	6,000	0
475	M.P. Social Forestry	81	25,000	4,000	4,000	21,000	0	0	0	4,000
475		82	0	10,000	14,000	11,000	0	0	0	14,000
475		83	0	11,000	25,000	0	18,090	4,183	4,183	20,817
475		84	0	0	25,000	0	0	2,870	7,053	17,947
475		85	0	0	25,000	0	0	2,933	9,986	15,014
475	(deob)	86	(6,900)	(6,900)	18,100	0	0	7,608	17,594	506
475		87	0	0	18,100	0	0	(806)	16,788	1,312
475	(deob)	88	(1,312)	(1,312)	16,788	0	0	0	16,788	0

NOTE* Indicate cumulative estimated commitment of funds

INDIA PIPELINE ANALYSIS AS OF SEPTEMBER 30, 1987

I. EXISTING PROJECTS

Proj	Project Title	FY	LOP Funding	Actual or Estimated		Actual or Estimated Mortgage	Actual or Estimated Commitment	Actual or Estimated Expenditures	Actual or Estimated Cumulative Expenditures	Estimate Pipeline	Estimated Months Forward Funding
				Obligation	Obligation						
476	Integrated Child Dev. Servi	83	17,000	2,000	15,000	0	0	0	0	2,000	5
476		84	0	11,100	3,900	0	0	670	670	12,430	108
476		85	0	3,900	0	0	0	457	1,127	15,873	96
476		86	0	0	0	0	0	1,801	2,928	14,072	48
476		87	0	0	0	0	0	3,583	6,511	10,489	24
476		88	0	0	0	0	14,754	3,100	9,611	7,389	12
476		89	0	0	0	0	1,800	4,300	13,911	3,089	6
476	(1 year PACD extension)	90	0	0	0	0	446	3,089	17,000	0	0
476		91	0	0	0	0	0	0	17,000	0	0
478	Maharashtra Social Forestry	82	30,000	30,000	0	0	0	0	0	30,000	0
478		83	0	0	0	0	0	1,524	1,524	28,476	84
478		84	0	0	0	0	0	3,960	5,484	24,516	72
478		85	0	0	0	0	0	1,619	7,103	22,897	70
478		86	0	0	0	0	0	5,447	12,550	17,450	60
478		87	0	0	0	0	25,961	7,864	20,414	9,586	24
478		88	0	0	0	0	839	3,200	23,614	6,386	20
478		89	0	0	0	0	0	1,800	25,414	4,586	18
478		90	0	0	0	0	0	1,386	26,800	3,200	10
481	Maharashtra Irr. Tech & Mgt	82	47,000	47,000	0	0	0	0	0	47,000	72
481		83	0	0	0	0	0	1,360	1,360	45,640	60
481		84	0	0	0	0	0	4,812	6,172	40,828	60
481		85	0	0	0	0	0	4,868	11,040	35,960	30
481		86	0	0	0	0	0	28,733	39,773	7,227	18
481		87	0	0	0	0	45,464	5,392	45,165	1,835	6
481	(18 mo. PACD extn)(deob)(reo)	88	(400)	(400)	0	0	1,136	1,435	46,600	0	0
483	M.P. Minor Irrigation	83	46,000	35,100	10,900	0	0	0	0	35,100	84
483		84	0	10,900	0	0	0	710	710	45,290	72
483		85	0	0	0	0	0	874	1,584	44,416	60
483		86	0	0	0	0	0	3,399	4,983	41,017	48
483		87	0	0	0	0	0	4,672	9,655	36,345	36
483		88	0	0	0	0	33,529	11,000	20,655	25,345	24
483		89	0	0	0	0	7,000	14,000	34,655	11,345	36
483		90	0	0	0	0	3,500	7,500	42,155	3,845	0
483	(2 year PACD extension)	91	0	0	0	0	1,971	3,845	46,000	0	0
484	Irrigation Mgt. & Training	83	51,000	13,000	38,000	0	0	0	0	13,000	120
484		84	0	6,000	32,000	0	0	384	384	18,616	120
484		85	0	2,000	30,000	0	0	295	679	20,321	120
484		86	0	6,500	23,500	0	0	1,913	2,592	24,908	72
484		87	0	4,200	19,300	0	0	4,008	6,600	25,100	48
484		88	0	0	31,700	0	25,869	8,000	14,600	17,100	36
484		89	0	6,000	37,700	0	4,500	11,000	25,600	12,100	24
484	(2 years PACD extension)	90	0	7,000	6,300	0	6,500	12,200	37,800	6,900	12
484		91	0	0	6,300	0	1,000	5,900	43,700	1,000	5
484		92	0	0	6,300	0	1,000	1,000	44,700	0	0

NOTE* Indicate cumulative estimated commitment of funds

INDIA PIPELINE ANALYSIS AS OF SEPTEMBER 30, 1987

I. EXISTING PROJECTS

Proj	Project Title	FY	LOP Funding	Actual or Estimated Obligation	Cumulative Obligation	Actual or Estimated Mortgage	Actual or Estimated Commitment	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Actual or Estimated Pipeline	Estimated Months Forward
485	Family Planning Comm & Mktg	83	47,000	16,600	16,600	30,400	0	0	0	16,600	45
485		84	0	10,400	27,000	20,000	0	0	0	27,000	90
485		85	0	20,000	47,000	0	0	0	0	47,000	180
485		86	0	0	47,000	0	0	0	0	47,000	180
485	(deob) (reob \$2 mil.)**	87	(32,000)	(32,000)	15,000	0	1,129	192	192	14,808	60
485	(Amdt. & 3 yr PACD extn)	88	2,000	2,000	17,000	0	7,000	2,900	3,092	13,908	60
485		89	0	0	17,000	0	4,000	3,100	6,192	10,808	48
485		90	0	0	17,000	0	3,000	4,300	10,492	6,508	30
485		91	0	0	17,000	0	1,871	4,000	14,492	2,508	18
485		92	0	0	17,000	0	0	2,100	16,592	2,408	3
485		93	0	0	17,000	0	0	408	17,000	0	0
487	Development & Mgt. Training	82	6,200	2,400	2,400	3,800	0	0	0	2,400	0
487		83	0	1,200	3,600	2,600	0	50	50	3,550	180
487		84	0	2,600	6,200	0	0	185	235	5,965	120
487		85	0	0	6,200	0	0	574	809	5,391	72
487		86	0	0	6,200	0	0	861	1,670	4,530	36
487	(Amendment)	87	1,776	1,776	7,976	0	3,752	1,565	3,235	4,741	30
487		88	0	0	7,976	0	2,900	1,990	5,225	2,751	18
487		89	0	0	7,976	0	1,324	1,500	6,725	1,251	6
487	(2 year PACD extension)	90	0	0	7,976	0	0	1,251	7,976	0	0
489	Hill Areas Land & Water Dev	84	54,000	17,000	17,000	37,000	0	0	0	17,000	72
489		85	0	3,000	20,000	34,000	0	0	0	20,000	72
489		86	0	24,000	44,000	10,000	0	1,030	1,030	42,970	108
489		87	0	8,000	52,000	2,000	7,634	2,303	3,333	48,667	96
489		88	0	0	52,000	2,000	7,500	6,700	10,033	41,967	72
489		89	0	0	52,000	2,000	9,000	7,600	17,633	34,367	60
489		90	0	2,000	54,000	0	11,000	7,500	25,133	28,867	44
489	(2 year PACD extension)	91	0	0	54,000	0	7,500	15,000	40,133	13,867	28
489		92	0	0	54,000	0	7,367	10,000	50,133	3,867	6
489		93	0	0	54,000	0	4,000	3,867	54,000	0	0
490	Maharashtra Minor Irrigatio	84	50,000	25,900	25,900	24,100	0	0	0	25,900	0
490		85	0	24,100	50,000	0	0	0	0	50,000	120
490		86	0	0	50,000	0	0	1,448	1,448	48,552	60
490		87	0	0	50,000	0	35,443	9,992	11,440	38,560	44
490		88	0	0	50,000	0	9,500	11,800	23,240	26,760	24
490		89	0	0	50,000	0	5,057	15,000	38,240	11,760	12
490		90	0	0	50,000	0	0	11,760	50,000	0	9
492	Biomedical Research Support	85	13,100	4,400	4,400	8,700	0	0	0	4,400	120
492		86	0	3,700	8,100	5,000	0	42	42	8,058	108
492		87	0	4,000	12,100	1,000	0	231	273	11,827	96
492	(Amendment)	88	3,900	1,000	13,100	3,900	4,448	800	1,073	12,027	60
492		89	0	2,000	15,100	1,900	4,500	2,400	3,473	11,627	42
492		90	0	1,900	17,000	0	4,700	3,600	7,073	9,927	36
492		91	0	0	17,000	0	2,900	3,600	10,673	6,327	28
492		92	0	0	17,000	0	452	2,247	12,920	4,080	18
492		93	0	0	17,000	0	0	2,500	15,420	1,580	4
492	(2 year PACD extension)	94	0	0	17,000	0	0	1,580	17,000	0	0

NOTE* Indicate cumulative estimated commitment of funds

** Excludes obligation of Dols. 5.2 million on unilateral buy-in/OPG activities

INDIA PIPELINE ANALYSIS AS OF SEPTEMBER 30, 1987

I. EXISTING PROJECTS

Proj	Project Title	FY	LOP Funding	Actual or Estimated Obligation	Cumulative Obligation	Actual or Estimated Mortgage Commitment	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Estimated Months Forward
494	PACER	87	20,000	5,000	5,000	0	0	0	5,000	0
494		88	0	5,000	15,000	1,000	200	200	4,800	108
494		89	0	2,000	13,000	3,000	800	1,000	6,000	48
494		90	0	2,000	11,000	5,000	2,400	3,400	5,600	24
494		91	0	3,000	8,000	5,000	4,400	7,800	4,200	18
494		92	0	2,500	12,000	3,000	4,200	12,000	2,500	12
494	(1 year PACD extension)	93	0	3,000	17,500	4,000	4,800	16,800	700	6
494		94	0	2,500	20,000	0	3,200	20,000	0	0
495	National Social Forestry	85	80,000	18,600	18,600	0*	0	0	18,600	0
495		86	0	21,800	40,400	0*	10,290	10,290	30,110	48
495		87	0	11,500	51,900	19,011*	5,682	15,972	35,928	36
495		88	0	0	51,900	28,100	12,000	27,972	23,928	24
495	(Auth. Amendment)	89	0	15,000	66,900	22,989	14,500	42,472	24,428	20
495	(2 year PACD extension)	90	0	13,100	80,000	15,000	14,800	57,272	22,728	20
495		91	0	0	80,000	4,000	14,800	72,072	7,928	18
495		92	0	0	80,000	0	7,928	80,000	0	7
496	PACT	85	10,600	4,000	4,000	0*	0	0	4,000	0
496		86	0	2,426	6,426	4,174	26	26	6,400	120
496	(Amendment)	87	0	1,674	8,100	2,500	408	434	7,666	60
496		88	2,500	5,000	13,100	1,632*	3,000	3,434	9,666	30
496		89	0	0	13,100	4,800	4,900	8,334	4,766	20
496	(1 year PACD extension)	90	0	0	13,100	968	3,400	11,734	1,366	7
496		91	0	0	13,100	0	1,366	13,100	0	0
500	Contraceptive Dev. & Rep.Im	85	1,000	1,000	1,000	1,000	0	0	1,000	36
500		86	0	0	1,000	0	417	417	583	24
500		87	0	0	1,000	0	559	976	24	2
500	(Amendment & PACD extension)	88	1,500	1,500	2,500	800	340	1,316	1,184	18
500		89	0	0	2,500	800	800	2,116	384	6
500	(2 year PACD extension)	90	0	0	2,500	0	384	2,500	0	0
503	Vaccine & Imm. Development	87	6,000	3,000	3,000	0	0	0	3,000	72
503		88	0	0	3,000	400	200	200	2,800	38
503		89	0	1,500	4,500	1,200	400	600	3,900	48
503		90	0	1,500	6,000	1,800	900	1,500	4,500	40
503		91	0	0	6,000	2,000	1,600	3,100	2,900	28
503		92	0	0	6,000	600	2,000	5,100	900	12
503		93	0	0	6,000	0	900	6,000	0	0
504	Child Survival Health Supp	86	65,000	22,000	22,000	43,000	0	0	22,000	0
504		87	0	0	32,000	43,000	0	0	22,000	60
504		88	0	10,000	33,000	18,000	17,000	17,000	15,000	12
504		89	0	6,000	38,000	15,000	15,000	32,000	6,000	4
504		90	0	5,000	43,000	5,000	5,000	37,000	6,000	6
504	(2 year PACD extension)	91	0	6,000	49,000	8,500	8,000	45,000	4,000	5
504		92	0	7,000	56,000	11,000	10,500	55,500	500	1
504		93	0	9,000	65,000	7,500	9,500	65,000	0	0

NOTE* Indicate cumulative estimated commitment of funds

INDIA PIPELINE ANALYSIS AS OF SEPTEMBER 30, 1987

I. EXISTING PROJECTS

Proj	Project Title	FY	LOP Funding	Actual or Estimated Obligation	Cumulative Obligation	Actual or Estimated Mortgage	Actual or Estimated Commitment	Actual or Estimated Expenditures	Actual or Estimated Expenditures	Estimate Forward Pipeline Funding	Estimated Months
511	PVOH - II	87	10,000	3,500	3,500	6,500	0	0	0	3,500	0
511		88	0	0	3,500	6,500	32	150	150	3,350	10
511		89	0	1,000	4,500	5,500	750	750	900	3,600	60
511		90	0	1,000	5,500	4,500	1,500	1,400	2,300	3,200	36
511		91	0	2,000	7,500	2,500	3,750	2,200	4,500	3,000	30
511		92	0	2,500	10,000	0	2,500	2,500	7,000	3,000	24
511		93	0	0	10,000	0	1,500	1,500	8,500	1,500	18
511		94	0	0	10,000	0	0	1,000	9,500	500	6
511		95	0	0	10,000	0	0	500	10,000	0	0

NOTE* Indicate cumulative estimated commitment of funds