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MID-TERM EVAL

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DEVELOPMENT ASSOCIATES, INC.

MANAGEMENT AND GOVERNMENTAL CONSULTANTS

USAID - SUPPORTED TRAINING IN INDIA
A REVIEW OF THE
DEVELOPMENT AND MANAGEMENT
TRAINING PROJECT (386-0487)
AT MID-TERM (1982-1990)

Submitted To:

USAID/INDIA
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I. EXECUTIVE SUMMARY

A. The DMT Project, after a shaky start, has become in the past year a successful activity contributing significantly to GOI and USAID Mission objectives. It is only now, in terms of its maturation, at mid-point, hence it is appropriate that the project, as DMT I, be extended to June 30, 1990. Such extension is particularly justified by the fact that, during the extended period, the project will be taking advantage of the lessons that have been learned thus far in mounting new sub-projects. This process has already begun. With DMT I extended to 1990, the need to decide on a DMT II follow-on has become less urgent. It is the consultants' judgment, however, that such a follow-on project is more likely than not to be found desirable. Meanwhile, on going DMT I experience should continue to be studied for guidelines as to how best to design DMT II.

B. The most significant finding of this evaluation is the judgment that the in-country, in service training element is substantially more important than the U.S. training element and more important than had been realized at the start. Further project development should build on this finding.

C. The value and importance of U.S. trainers as participants in the in-country training course was initially overrated. Less use of U.S. experts than anticipated has been made, but the reality is that they were not needed. For many in-country courses, the use of U.S. experts is superfluous. The Indian experts available are more than sufficient. Where they are not, and a U.S. expert is thus needed, the Indian course designers will be the first to know. Foreign experts who do not add a vital element not otherwise available are an embarrassment.

D. The U.S. training element, while of lesser relative importance than first thought, has significant values if utilized properly. Such values will be enhanced as the use of U.S. training funds becomes more structured.

E. The slow disbursement problem that the project experienced from 1982 to 1986 has been resolved as have the issues raised in the Development Associates evaluation of December 1984. There are, however, pockets of resistance remaining, notably in the agriculture health and energy and environment areas where more adequate use could be made of available funds.

F. As emphasis on in-country training continues and intensifies, consideration should be given to ways to strengthen the many Indian training institutions involved. Present practice is to pay the costs of the course. It is suggested that for the sake of the multiplier effect, consideration be given to more general institutional support concurrently with course support. This would help the next DMT course and also enhance the ability of the institution better to serve its continuing general clientele and public, irrespective of DMT sponsored courses.

G. In rationalizing and strengthening in-country training activities, the Project should make maximum use of the firmly held Indian belief in the principle of "Training the Trainers".

H. In the past year, the project has been increasingly involved with projects outside the IIPA guidelines, in the private sector. While some have been private industry projects, the great majority were training courses sponsored by private women's organizations in promotion of a greater role for women in Indian Development. This has been a major positive development. Such projects should be further encouraged. The women's program is going especially well and has significant momentum. More work is needed, however, to involve further the main stream of the private industrial sector.

I. The method planned by the USAID Mission and DEA for funding Amendment #4 to the DMT project agreement threatens to make this Evaluation Report irrelevant and its recommendations

inoperable. The costs of the sub-projects to be financed under the amendment is estimated at \$4.1 million with, however, only \$1.766 million of this total to be newly funded. The rest would come from diverting the undisbursed balance in the DMT account as of June 30, 1988, leaving no funds available for normal DMT activities after that date.

This Evaluation has identified from project experience those elements of the DMT Project that have proven to be most effective. The evaluation's basic recommendation is that any DMT follow-on should be built on these elements. They revolve around the highly cost-effective In-Country Training family of elements. It is suggested that these elements be strengthened and extended --in the configuration that is emerging from experience, while also adding emphasis to the involvement of the private sector and women. However, if amendment #4 is to have the effect of diverting over \$2 million from "normal" DMT activities to the support of the 4 macro sub-projects contemplated in the amendment, there would be no funds left with which to implement these recommendations. DMT's in-country training activities could function for only 9 months more, unless some adjustment is made. One such adjustment would be to full-fund the amendment, leaving the DMT funds needed for its in-country program intact and available through the DMT project's new PACD. At DMT's current disbursement rate, the balance of funds expected to be available on July 1, 1988 would appear to suffice through June 1990. An alternative would be to plan to launch DMT II in July 1988 with funding appropriate to a new project design growing out of this evaluation.

J. Assuming that the Amendment #4 funding issue is to be resolved satisfactorily, the consultants recommend that favorable consideration continue to be given to a follow-on DMT project, and that such follow-on project should be structured around 6 principal focuses:

- 1) A focus on In-country, in service training
- 2) A focus on middle to low level technical and managerial training
- 3) A focus on using existing Indian training institutions
- 4) A focus on using such already "institutionalized" training entities en banc, as an integrated network.
- 5) A focus on the "Training of Trainers" as the program's key methodological technique
- 6) A focus on management training: Both technical and management training would be provided but with DMT's special focus on management.

Finally, the consultants recommend that the DMT follow-on project be administered jointly by USAID's management staff and DEA, as at present, but that they enlist the contractual assistance of a joint venture in carrying out day to day project implementation.

II. INTRODUCTION

The Consultants, Dr. Arthur Byrnes, President of E.C.I. International and Mr. Robert Culbertson of Development Associates, Inc., spent three weeks in India in August 1987 reviewing the performance and the progress of the Project to date. They discussed the Project with Indian Government Officials concerned, both in the relevant technical ministries and in the Department of Economic Affairs (DEA) of the Ministry of Finance. This department coordinates the multi-faceted project for the GOI. The Consultants also discussed the project with officials of the USAID Mission, both with those in its concerned technical offices and with the Mission project implementation officials involved. Most importantly, the Consultants studied at first hand a number of the in-country training courses and the record of U.S. Training grants under the project. They conferred with those conducting the in-country courses, and reviewed a number of specific courses so as to gain a first hand understanding of the scope, content, and impact of the actual training. In several instances, they were able to sit in on the training sessions themselves. Dr. Byrnes traveled to four of the in-country training centers in the Bombay region, meeting sponsors, faculty, and participants. Mr. Culbertson journeyed similarly to Bangalore and Coimbatore where he reviewed training programs of the Institute for Social and Economic Change and the Sri Avina Shilingam College of Home Sciences.

In addition, the Consultants reviewed the USAID's files on the project. Each in-country training program has a separate file, including both course outlines and course evaluations encompassing post/facto reports on each of the courses, and participants evaluations as well. For recipients of U.S. and 3rd country study grants, the Mission also maintains a file on each participant including his or her evaluation of the worth of the training received. A sample of these was reviewed.

Mrs. Elisabeth Millard and Miss Nina Nagpal arranged all of the consultants' appointments with officials and trainers, and one or the other accompanied them on each occasion, except for the journeys to Bombay, Bangalore, and Coimbatore.

III. PRINCIPAL FINDINGS

A. The DMT Project is sound conceptually, is affording USAID/INDIA the opportunity to make significant contributions to Indian development, is at present being administered well, and has achieved a satisfactory rate of disbursement. The problems of an unsatisfactory activity level were severe until a year ago, but have now been largely dissipated. The DMT Project faces FY 1988 and beyond with the principle problems before it being in the nature of how to maximize the clear opportunities it has to contribute to development, rather than how to relieve administrative difficulties.

B. The most significant finding emerging from this evaluation of the DMT Project is that its in-country, in-service training element is substantially more important than it has been generally credited with being. In the consultants' view, it is significantly more important, not only than it was earlier thought, but also more important than the U.S./3rd country training element of the project. While the two elements are not strictly parallel or comparable--one is apples, the other oranges and each has its separate role to play--there are interactions and it is possible to accord priorities in light of the larger scope of over-all USAID and G.O.I. development priorities. In this light, the Consultants believe that the in-country training program should have a clear priority over training abroad. Moreover, it is their view that the U.S./3rd country element should be, in large part, directly supportive of the in-country element. That is, an important proportion of those sent for study/observation abroad under the DMT Project should be persons from the in-country training program who would return to India better equipped to carry that program forward. Other desirable structured uses of the U.S./3rd country element are also noted below. The point is emphasized here, however, because of a further significant finding related to the in-country training element, which is that: Its importance today and in the recent past is substantially below its potential. India's impressive infrastructure of training institutes, government training services, public service corporations, and private trust training programs, at

federal, state, and local levels have so far not been taxed by the DMT Program. This network of existing training facilities at the middle and lower technical levels appears to have a strong potential for contributing much to India's goal of keeping the pace of human resource development equal to the pace of physical resources development and economic growth.

C. The role of U.S. Trainers as key participants in the in-country training sub-projects was probably over-valued at the start of the DMT Project. U.S. expert "teachers" or resource persons have been utilized but to a lesser degree than contemplated. In the Consultants' view, demand correlates highly with need. Most of the training centers: government, public corporation or private trust, know when they need outside help. It occurs when they desire to present new cutting edge elements of the technologies they are dealing in, that they don't yet possess. Another set of reasons for minimal use of U.S. experts in India revolves around the difficulties of getting the right person to the right place at the right time. While there appears to be a lesser need than expected, it is important that the needs that are identified be met. Except where, as in the case of the Ministry of Environment and the E.P.A., the Indian institution can count on a continuing "service" relationship with a competent U.S. agency, there is at present no effective administrative mechanism for bridging the gap between the relatively long notice the right U.S. expert needs, once found, and the unavoidably short notice the Indian institution can offer. That the need for U.S. experts is less than thought should make it easier for the USAID and the G.O.I. to solve this problem.

D. Project experience to date suggests that the U.S. training element could usefully be further structured. A good example of how this can be done is the illustrative sub-project included in the proposed DMT Project amendment involving the Council on Scientific and Industrial Research. This sub-project would provide for the focusing of more than \$1 million of project resources on a single carefully designed, cohesive program of Scholar-Scientist exchanges,

in which all U.S.-bound Indian participants as well as all Indian-bound U.S. participants would be sharing the same basic program goals. Such further structuring, however, should not be so thorough as to endanger one of DMT's greatest strengths--its flexibility and adaptability to the meeting of unforeseen needs. Until now, the U.S. training element of the project, while keyed in principle to the IIPA program structure was also remarkably adaptable to meeting the needs that arose. It is important that the retention of this capacity to respond flexibly be safeguarded. This can be accomplished while at the same time recognizing that the bulk of U.S./3rd country training resources can be systematically pre-programmed.

E. The issue of an inadequate rate of disbursements is no longer an issue. From an all but no disbursements rate at the end of 1984, some two years into the life of the project, progress has been made to the point of achieving a current monthly average disbursement rate of approximately \$100,000. This rate has been achieved only in the last year. Had it been achieved early in the project and sustained, it would have exhausted all available project funds by the PACD currently in effect (June 30, 1988).

F. The issue of there being subject areas of highest priority not adequately utilizing funds available remains, but is progressively abating as it has been possible to focus attention on the lagging technical fields, in place of having to be concerned with the entire portfolio.

G. A new emphasis on in-country, in-service training utilizing the country's network of mid-level training institutions, as proposed above, would suggest, if not require, attention to strengthening the network and its institutions in various general ways going beyond direct course by course support. Strengthening the institutions would not only improve their DMT course performance, but also enhance total institutional performance as well, which is a way of multiplying the impact of the DMT input. The most obvious ways to help a training center or an institute or a

training wing of a Ministry or a State Government training center include library acquisitions and basic training tools such as slide and movie projectors. They also include upgrading trainers through special courses given in India. In addition, U.S. training for selected faculty, as has been previously noted, would be useful. Such strengthening of India's myriad training institutes as an integral part of specific DMT course support would be an effective way to institutionalize the program permanently, the beneficial effects being enjoyed long after PACD, by many hundreds of participants who will never have heard of DMT.

H. The consultants have observed that the concept of "training the trainers" is embraced more fervently in India than, perhaps, in any other developing country. The presence of this implicit belief that training trainers who will in turn train others, including to train, is an important reason why attention to strengthening the training institutional network is likely to work. Training trainers is the consensus way to go in India and, in the consultants' view, is a phenomenon not to be ignored. In G. above, the opportunity to select "faculty" (trainers) for "advanced study" was noted as one way to accomplish this. The simple expedient of regarding each training course, at whatever time or level, as one in which today's trainees become tomorrow's trainers is, of course, another. A third approach was suggested to the consultants by knowledgeable Indian experts during the course of their inquiry. These experts suggested a model or modular course development approach in which, in a given field, India's best, top-ranking training and research institutions would, given due time and resources, develop specific training courses of a high level, model, state-of-the-art nature. At this level external experts might be utilized as resource persons where warranted and useful. Courses so designed, then, would be given to the first ring of trainers by the designing institution itself. Such trainers would then be available to train the next ring, and so on. Moreover, the "model" course could also be acquired and adapted by institutions throughout India that wanted it, to start their own descending rings game. This approach would be particularly appropriate for development management training.

IV. METHODS USED IN ANALYSIS

To gain knowledge about the project--its design, inception, implementation, progress to date, people involved, programs conducted and planned, obstacles, problems, and the future--a variety of methods were employed.

Discussions were held with Mission and U.S. Embassy personnel, and with officers in the various ministries, departments, and agencies of the G.O.I. Conversations took place with private sector company officials as well as with other representatives of the private sector who had an interest in or experience with the DMT project, notably women's organizations in the private sector.

Visits were made to actual sites in Delhi, Bombay, Bangalore, and Coimbatore where training was then currently in progress. Observations of programs were made and views of participants sought. Physical conditions were noted, techniques were observed and discussed. Experience with the past programs and plans for future courses and other activities were reviewed as was the existing documentation pertinent to the DMT project.

Interviews were conducted with project directors of Indian organizations and their key staff officers who have offered programs sponsored by DMT. Interviews were also conducted with participants who were recipients of training under the DMT project. Some of these participants had their training in India, others in the United States.

Materials pertaining to course design, handouts, printed materials, visuals, and other training aids were presented to the consultants by the course managers and were discussed.

Evaluations of the courses, workshops and seminars held in India are regularly made by the organizations managing the training activity. These were read and noted. In a number of cases the consultants were able also to talk with participants about their reactions to the courses.

Participants returning from the United States were interviewed by the Mission training office and asked to evaluate their particular program with a prepared evaluation form. These were also reviewed.

In some of the courses held in India, the managing Indian organization requested the instructor to evaluate the program. Where this was done, these instructor evaluations were read and noted.

As a prelude to doing the actual survey of the DMT project, documents relevant to the project were requested and used, as follows:

1. The major written materials were the Mission official documents particularly the AID Project Paper 386-0487, Indian Development and Management Training; the Project Agreement; and the current Country Development Strategy Statement.

2. The Indian Institute of Public Administration study; Training Plans for Development and Management Training Project, Overall and Sectoral Reports. The research and resulting report were completed under a USAID/India contract (386-0478-C-4007-00, dated 23 January 1984) and released September 1985. The overall study contains an overview of all the sectoral reports and describes the details regarding scope of work, methodology, programs of common interest, and implementation guidelines. The sectoral works are blueprints for the G.O.I. and the USAID Mission to follow in implementation of the DMT project.

Under a contractual arrangement with USAID, Development Associates, Inc. did an earlier evaluation of Mission training, including the DMT project, and submitted USAID - Supported Training in India: An Analysis in December 1984. The study reviewed the project's progress from inception thru 1984 and looked at the problems associated with project implementation constraints.

In February 1987, a study was conducted for the Mission, "To strengthen and expand the pool of Indian personnel trained in development related fields". It is entitled: Omnibus Training Project (DMT follow-on). The study was made by Mr. J.R. Swallow and suggests: objectives; means of implementation; fields to be covered; samples of U.S. Organizations to be involved; reasons for an omnibus training project (DMT-type) vs. project related training; disadvantages of omnibus training project; differences of a new omnibus training project from DMT; tasks of contractors/implementing agencies; and a DMT evaluation approach.

V. PROJECT DESCRIPTION AND BACKGROUND

The original Development and Training Project (DMT) was agreed up by the Mission and Government of India (GOI) in September of 1982. The project was to have had a life of four years and nine months, until Jun 1987. A grant obligation of \$6,100,000 by the United States and an Ind contribution of \$2,100,000 were included in the agreement. Approximate 1,300 participants would receive managerial and technical training in s term, less than nine months, duration. Some 1,200 of the participants would be trained in India and approximately 100 would be trained in the U.S., or third countries. The project's purpose has been to strengthen managerial and technical capabilities of public, and where appropriate, private sector manpower in areas of GOI and USAID collaboration and/or priority.

The project later received an additional U.S. contribution of \$100,000 and the project life was extended to June 1988.

The original project specifically reserved 15% of the training opportunities exclusively for women.

No particular percent or numerical target was suggested or reserv for training in the private sector.

As of September 1987, the total number of participants trained in this project was approximately 2,900. Some 129 Indian participants had received training in the U.S. The balance were participants in a broad ranging series of technical and management courses given within India b the relevant Ministries and training centers selected by them to offer training.

The DMT project is now being amended to increase funding by \$1,776,000 and to extend its existence for two years. The G.O.I. will contribute an additional 500,000 in Rupees, as the U.S. total goes to \$7,976,000. The ratio of U.S. to G.O.I. contributions thus remains at to 25%.

Progress Since Development Associates' 1984 Evaluation

The December 1984 Evaluation prepared by Development Associates pointed up a number of deficiencies in the project. The project had, indeed, gotten off to a slow start having expended less than 10% of the funds intended to be disbursed by the end of 1984. The D.A. evaluation attributed the causes as follows:

A. Ministry of Finance involvement slowed the process "though possibly less than USAID personnel currently believe".

B. Ministry Training Plans were from inadequate to non-existent.

C. The role envisaged for U.S. training teams intended to help give courses in India was being clouded by the incorrect identification of the "teams" Indian hosts, expected to be ministry training cells.

D. Red-tape was slowing the U.S. participants part of the program.

E. USAID Project Management had been too passive.

In the ensuing 2 1/2 years, the following has transpired in relation to these five points:

1. Ministry of Finance involvement has become increasingly beneficial to the project. DEA perhaps did not adequately market "its" resource (DEA is the grantee) in the beginning and cannot today be said to be promoting its utilization a la Benton and Bowles, but it is clearly a plus factor in matching project resources to line ministry needs. In short, DEA has become an active, participating, coordinator. It is currently conducting its own evaluation of the project, ministry by ministry. Meanwhile,

disbursements have increased dramatically. At the end of this chapter will be found tables showing the chronology of increased project activity, in both the in-country courses and the U.S. training areas.

2. Ministry Training Plans, aided by the IIPA study, have come to be reasonably satisfactory. The consultants did not have in the time allowed the opportunity to review comprehensive current Ministry plans but all the evidence--mainly the wealth of projected individual training courses for which funds are being sought--suggests that lack of knowing what they want to do next is no longer a constraint.

3. As noted elsewhere, the idea of the in-country training program being led by U.S. expert training teams never did fly; the need for U.S. experts was overrated. The in-country training element has emerged as the highly active core of the DMT program, staffed essentially by India's own trainers. It is being a resounding success. More than 125 courses averaging 2-1/2 weeks per course have been conducted, most of them in the current year.

4. Red tape is still slowing the participant training process but project management has taken the DA evaluation message to heart: "Relax and live with it". This strategy may well have speeded the processes. In any event, the number of U.S. training participants processed has risen from 7 in 1983 to more than 40 in each of 1986 and 1987 as follows:

1983	-	7
1984	-	19
1985	-	18
1986	-	44
1987	-	42

Tables following this chapter provide a further breakdown as to public and private sectors and percentage of women participants.

5. USAID Project Management is no longer passive. Approximately a year ago, the Mission named a U.S. project manager and more recently employed a professional Indian program analyst. This strengthening of staff available to manage the project, along with other factors such as DEA's own growth and increasing interest in USAID technical divisions and ministries, appears to have been responsible for the dramatic growth of the program in FY 1987. Disbursements for in-country training are now expected to remain at the level achieved in 1987--approximately \$1 million per year through the PACD contemplated in the project amendment now all but consummated.

While direct project management has thus been substantially enhanced, the picture as to the collaborative efforts of USAID's technical divisions remains unclear. It will be recalled that in the DA Inc. evaluation of 1984, it was indicated that the technical offices were having difficulties because their counterpart ministries did not have adequate training plans and did not like having to develop such plans for the review of DEA. The early conception that the USAID Offices and the Technical Ministries could cook up the needed sub-projects proved to be flawed by the involvement of DEA. Although the IIPA study, whose recommendations became operational in 1985 helped greatly to develop training plans acceptable to both line ministries and DEA, it appears

that some USAID technical offices were able to take fuller advantage of this on behalf of their client-hosts than others. Notables in this were the categories of Irrigation, Women in Development, and "Other". What seems to have been learned early-on after the IIPA blueprint became operational is that a vigorous Technical Office of the USAID, in cooperation with TD&E can readily program significant amounts of training funds through DMT in furtherance of its goals. In relation to the quantities of DMT resources allocated to them Energy, Environment, Agriculture, and Health still lag behind. There is evidence, however, that this is changing. The consultants wish simply to point out to the USAID that the established successes achieved in Irrigation and Women in Development indicate that nothing organic or structural stands in the way of adequate programming of DMT funds in any of the subject areas of concern to the USAID Mission.

In concluding its 1984 Evaluation of DMT Development Associates, Inc. made six recommendations.

One of the tasks of this evaluation has been to look at those recommendations and assess the extent to which they have been implemented.

The first recommendation was that the DMT project be continued (though perhaps redesigned) and work begun soon on a follow-on project for FY 1986 or FY 1987, appropriately developed to reflect lessons learned.

Mission Action: The project is continuing. The project terminal date has been extended from June 30, 1987 to June 30, 1990. The Mission is now programming activities for extension, while also considering the design of a longer range project.

The second recommendation was that rather than attempting to avoid difficult regulations and procedures, the Mission should try to work as effectively as possible within the GOI system.

Mission Action: The cumbersome approval procedures involving GOI still exist. USAID officers have made accommodations to the system. There was little evidence to be found, however, that there had been any break-through in changing the cumbersome processes by which proposed projects are approved.

In effect this recommendation has been carried out by the Mission.

The third recommendation was for the Mission to move immediately to identify U.S. training institutions best qualified to link with Indian counterparts.

Mission Action: The Mission has made some progress, but much more could be accomplished to identify for cooperating GOI ministries likely U.S. institutions for productive linkages, and to assist in the negotiating of such linkages. The Mission has been correct in letting the GOI take the lead in this matter, but the time has come to begin concluding fruitful relationships in which the GOI has taken the lead.

The fourth recommendation was for the Mission to begin immediately to identify a proper contracting mode or modes for implementing the linkage relationships envisaged in DMT.

Mission Action: This recommendation is difficult to achieve. D.A. Inc. suggested four possibilities. However, each had a qualifier pointing out its inherent problem or implementing difficulty. The Mission has made little headway in implementing this recommendation.

The fifth recommendation was that the Indian Institute of Public Administration (IIPA) be given a continuing role in the development of training plans and strategies for DMT.

Mission Action: The Mission recognizes that the IIPA has indeed served a useful function professionally and politically. Its work has given the DMT shape and form and has spelled out details which are generally accepted by G.O.I. entities as well as USAID/India. The Mission recognizes these contributions as valuable and as having a continuing impact on the program. But it has stopped short of "contracting out" to IIPA the continuing job of programming and managing DMT's sub-projects.

The sixth and last recommendation suggested that the Mission review and revise downward in scope the DMT-related contract of the Center For Development Studies. This contract had called for a smotheringly fulsome program of subproject evaluation.

Mission Action: The Center for Development Studies went out of existence before what were regarded as excessively burdensome evaluation instruments could be activated. The Mission did not attempt to find a substitute for CDS and thus, by default, carried out the recommendation. This is not to say that the Mission and DMT management do not now have a sub-project evaluation program. Every course, seminar and workshop is self-evaluated and these reports are reviewed both by the sponsoring Indian entities and by the Mission. Each U.S. participant's program is reviewed and graded. The main problem is that, because of staff shortages, adequate analysis of the data available on the sub-projects, successes and failures, has not been possible.

PUBLIC SECTOR TRAINING PROGRAMS UNDER THE DMT
1983-87

ENERGY

<u>Course Name</u>	<u>Organization</u>
1. Upgrading Operational and Maintenance Skills	Power Engineers Training Society
2. Manpower Planning and Human Resource Development Scheduled for Nov. & Dec. respectively	Power Engineers Training Society

OTHERS

<u>Course Name</u>	<u>Organization</u>
1. Network Planning and Performance Ministry of Communication	Dept. of Telecommunications
2. Training Course on Bioinformatics Ministry of Science and Technology	Dept. of Bioinformatics

HANDICAPPED

<u>Course Name</u>	<u>Organization</u>
1. Workshop on Application of Behavioral Procedures	National Institute of Mentally Handicapped, Secunderabad
2. Training of Vocational Instructors and Counselors (3 courses)	Ali Yuvar Jung National Institute of Hearing Handicapped, Bombay
3. Training of Trainers of Hearing Handicapped (2 courses)	Ali Yuvar Jung National Institute of Hearing Handicapped, Bombay

WOMEN & CHILD

DMT Program for University
Personnel in Extension

Indian Univeristy
Association for
Continuing Education,
New Delhi

AGRICULTURE

Course Name

Organization

- | | |
|---|---|
| 1. Crop Insurance | Vaikunth Mehta National Institute of Crop Insurance, Pune |
| 2. Weather & Crop Forecasting | Indian Agricultural and Statistical Research Institute, New Delhi |
| 3. Dairy Plant Management | National Dairy Development Board, Gujarat |
| 4. Farm Water Management | Indian Agricultural Research Institute, New Delhi |
| 5. Training Course on Acquaculture | Central Institute of Freshwater Acquaculture, Orissa |
| 6. Management Systems in Agriculture | Computer Maintenance Corporation of India, New Delhi |
| 7. Food Pricing and Marketing Policies | Institute of Social and Economic Change, Bangalore |
| 8. Development of Database in Soil | Soil Conservation Training Center, & Water Conservation, Hazaribagh |
| 9. Planning, Implementation & Evaluation of Agricultural Projects | Indian Institute of Public Administration, New Delhi |
| 10. Soil Survey & Land Use Planning | Tamil Nadu Agricultural University |

- | | |
|--|---|
| 11. Development of Organic Manures and Biofertilizer | Indian Agriculture Research Institute, New Delhi |
| 12. Soil Testing & Fertilizer Use | Punjab Agriculture University |
| | Rajendra Agriculture University, Patna, Bihar |
| | Gujarat Agricultural University Junagadh, Gujarat |
| | Andhra Pradesh Agriculture University, Hyderabad |
| 13. Dairy Plant Management | National Dairy Development Board, Gujarat |
| 14. Communications Technology | G. B. Pant University, Uttar Pradesh |
| 15. Communications Technology | Tamil Nadu Agricultural University |
| 16. Extension Management | Indian Agricultural Research Institute, New Delhi |
| 17. Extension Managment | University of Agricultural Science Bangalore |
| 18. Integrated Pest Management | Central Plant Protection Training Institute, Hyderabad |
| 19. Fertilizer, Quality Control | Central Fertilizer Quarantine Control and Training Institute Faridabad, Haryana |
| 20. Terracing, Contour Bunding and Land Development | Soil Conservation and Training Center Hazaribagh, Bihar |

- | | |
|--|--|
| 21. Training of Trainers in the Selection, Operation and Maintenance of Agricultural Machinery | Central Farm Machinery Training and Testing Institute, Budni |
| 22. Water Harvesting & Reuse of Rainwater | Indian Council of Agriculture Research, New Delhi |

IRRIGATION

Course Name

Organization

1. Six Courses

Water and Power
Consultancy Services
(WAPCOS)

- 1) Planning, Implementation and Monitoring of Irrigation Projects
 - 2) Course on multidisciplinary approach to Irrigation Management
 - 3) Course on Sprinklers and Drip Irrigation
 - 4) Course on Topographic Survey and Geodetic Measurements for Water Resources Development and Dam Surveillance
 - 5) Course on Planning and Management of Construction and Earth Moving Equipment
 - 6) Course on Management Techniques for Water Resources Utilization
2. Workshop on Exchange of Experiences in Operational Application of Mathematical models

Indian Institute of
Technology, New Delhi

3. Three Preparatory Courses

Central Water Commission

- 1) Systems Mathematics
- 2) Computer Programming
- 3) Water Resources Systems and the CSU mobile course on Water Resources System Engineering

4. 15 Courses

WAPCOS

- 1) Planning and Implementation of medium and small Irrigation projects
- 2) Modernization of Irrigation Projects
- 3) Management of Ground Water Supply for Urban and Rural Areas
- 4) Planning design and Implementation of High Dams
- 5) Water Supply and Sanitation Management
- 6) Command Area Development
- 7) Irrigated Agriculture in Arid Areas
- 8) Geotechnical Investigations and Studies for Water Resources Development
- 9) Management techniques for Water Utilization for Irrigation
- 10) Mini/Micro hydroelectric Development on Canals
- 11) Earthmoving and Construction Equipment Management
- 12) Waterlogging and drainage problem in Coastal Areas
- 13) Planning, Implementation and Operation of Irrigation Projects

14) Land Development for Irrigation

15) Multidisciplinary Approach to
Irrigation Management

5. Advances in Water Resource Planning

Central Water Commission
(CWC)

6. Ten Courses

CWC

1) Water Management Policies
and Practices

2) Collection Storage Retrieval
and Processing of Hydrological
Data

3) Computer Programming and its
Application in Water Resources
Planning

4) Computer Programming for designing
of Concrete/Masonry and Rockfill
dams

5) Engineering Geology, Geophysical
Investigations and Foundations
Treatment

6) Project Planning, Implementation
and Evaluation

7. 15 Courses (1987-88)

WAPCOS

1) Salinity Control in Irrigation
Projects

2) Research Analysis and
Instrumentation for Hydraulic
Structure

3) Water Management in Rice
Base Irrigation Systems

4) Tank Irrigation and Water
Harvesting Structures

5) Operation and Maintenance
of Irrigation Canal Systems

- 6) Conservation of Drinking Water in Distribution System
 - 7) Pressure System of Irrigation
 - 8) Conjecture use of Surface and Ground Water
 - 9) Master Plan for Water Resources Development
 - 10) Real Time data for Water Resource Projects
- And 5 Seminars

ENVIRONMENT

Course Name

Organization

- | | |
|--|---------------------------------|
| 1. Land Treatment and Application of Domestic Sewage | Ganga Project Directorate (GPD) |
| 2. Industrial Waste Water Recycling & Reuse | GPD |
| 3. Biological Conservation and Biomonitoring of Receiving Waters | GPD |
| 4. Riverfront Conservation and Instream uses | GPD |

HEALTH

Course Name

Organization

- | | |
|---|--|
| 1. New Horizons in Hospital Management | All India Institute of Medical Sciences, New Delhi |
| 2. Management Information System for Health Services | Indian Institute of Management, Bangalore |
| 3. Three Courses | Faculty of Management Studies, New Delhi |
| 4. Two Courses | National Institute of Health and Family Welfare, New Delhi |
| 5. Training Course on Epidemiological Health Planning | National Institute of Communicable Diseases, New Delhi |
| 6. Management Development for Health Administration | Indian Institute of Public Administration, New Delhi |

The tables and charts that follow indicate graphically how slow DMT disbursements were in the early years and how rapidly they rose to a level signifying satisfactory performance in FY1986 and especially in FY 1987.

The first table is entitled: Development and Management Training Project (1982-87): Record of Funds Allocations and Disbursements; By Category, by In-Country or U.S. Training, and by Fiscal Year. It shows disbursements both by year and cumulatively as well as by subject category and by U.S. vs In-country training.

The second table is entitled Status of Funds: Development and Management Training Project at June 30, 1986 and as of the End of FY 1987. This table focuses on 1986 and 1987 and provides for a breakdown by subject category, but not as to In-country vs U.S. training within each category.

Both tables show the relatively sudden increase in project activity in late FY 1986 and throughout FY 1987. Both show that in terms of subject categories, Irrigation has been by far the most active followed by Social Welfare (Women in Development) and Agriculture and Forestry, after a slow start. Health began more actively than most other categories but expended no funds after FY 1985 on In-Country training and only 9% of its total allocation for U.S. participant training. As of the end of FY 1987 DMT's Health category shows an unexpended balance of 68% of its original allocation of funds. Energy and Environment are still farther behind, on the record, although both categories began in late FY 1987 to utilize DMT funds for In-country training and have plans to become substantially involved in several series of In-Country Seminars and Workshops in 1988 and 1989.

Two bar charts follow the second table showing graphically the upsurge of activity in 1986 and especially 1987.

The tables and the chart can be studied so as to reveal various aspects of the history of DMT's activity performance levels since 1982. The more important observations from such study are as follows:

1. From 1982 through 1986 the annual rate of disbursement had averaged 6% of the allocation. In FY 1987 alone, 21% of the allocation was expended.

The corresponding figures for In Country vs. U.S. participant training are:

<u>In Country</u>	
1982 through 1986	4.8% per year
1987 alone	22%
<u>U.S. Participant Training</u>	
1982 through 1986	9.2%
1987 alone	18%

By virtue of DMT's strong performance in 1987, cumulative DMT disbursement went from 30% of total allocations in the end of FY 1986 to 51% by the end (Sept estimated) of 1987. By late in FY 1987 the average monthly rate of DMT disbursements had reached \$15,000 per month or \$1,380,000 on an annual basis. Had this level of operation been achieved at the start of the project and continued, all project funds would have been expended prior to the original end of project date, June 30, 1987.

The five tables following show the DMT's U.S. Participant training activity for each of FY 1983, 1984, 1985, 1986 and 1987. The data are recorded, within each year's table, by Sector or category, men and women, and public vs. private sector.

DEVELOPMENT AND MANAGEMENT TRAINING PROJECT (1982-87)
 RECORD OF FUNDS ALLOCATIONS AND DISBURSEMENTS,
 By Category, In-country or U.S. Training and Fiscal Year

Category	Funds Allocated (\$000')	Disbursements 1982-84		Disbursements 1985			Disbursements 1986			Disbursements 1987		
		Amount	% of Allocation	Amount	Cumulative Disbursement FY 1985	% of allocation	Amount	Cumulative thru FY 1986	% cum. of allocation	Amount	Cumulative Thru FY 1987	% cum. of allocation
Agricultural Research												
a. Total	56											
b. For In-country training								0	0	18,653	32,306	58
c. For U.S./3rd country training							13,653	13,653	24	18,653	32,306	58
Agriculture and Forestry												
a. Total	1,177	7,505		7,794	15,299	1	175,007	190,306	16	271,023	461,329	39
b. For In-country training		-		-		-	157,060	157,060	13	178,355	335,415	28
c. For U.S./3rd country training		7,505	.63	7,794	15,299		17,947	33,246	3	92,668	125,914	11

Category	Funds Allocated (\$ 000')	Disbursements 1982-84		Disbursements 1985			Disbursements 1986			Disbursements 1987		
		Amount	% of Allocation	Amount	Cumulative Disbursement FY 1985	% of allocation	Amount	Cumulative thru FY 1986	% cum of allocation	Amount	Cumulative Thru FY 1987	% cum. of allocation
3. Energy												
a. Total	668						0	0	0	17,302	17,302	2
b. For In-country training							0	0	0	17,302	17,302	2
c. For U.S./3rd country training							0	0	0	-	-	0
4. Environment												
a. Total	907									34,300	40,600	5
b. For In-country training							0	0	0	34,300	34,300	4
c. For U.S./3rd country training							6,300	6,300	.64	-	6,300	1
5. Health												
a. Total	907						105,170	105,170	12	68,039	290,012	32
b. For In-country training										-	105,170	12
c. For U.S./3rd country training		56,200	6	42,333	98,533	11	18,270	116,803	13	68,039	184,642	20

WU
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Category	Funds Allocated (\$000')	Disbursements 1982-84		Disbursements 1985			Disbursements 1986			Disbursements 1987		
		Amount	% of Allocation	Amount	Cumulative Disbursement FY 1985	% of allocation	Amount	Cumulative thru FY 1986	% cum of allocation	Amount	Cumulative Thru FY 1987	% cum. of allocation
6. Irrigation												
a. Total	847											
b. For In-country training				123,657	123,657	14	610,347	734,007	86	380,830	1,114,830	131
c. For U.S./3rd country training										369,000	1,103,000	130
										11,830	11,830	1
7. Social welfare												
a. Total	732											
b. For In-country training										345,250	352,880	48
c. For U.S./3rd country training							7,630	7,630	1	326,486	326,486	44
										18,764	26,394	4
8. Other Training*												
a. Total	656											
b. For In-country training										134,395	556,832	84
c. For U.S./3rd country training		128,892	19	98,125	227,017	34	195,460	422,437	64	30,705	30,705	4
										103,690	526,127	80

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Category	Funds Allocated (\$000')	Disbursements 1982-84		Disbursements 1985			Disbursements 1986			Disbursements 1987		
		Amount	% of Allocation	Amount	Cumulative Disbursement FY 1985	% of allocation	Amount	Cumulative thru FY 1986	% cum of allocation	Amount	Cumulative Thru FY 1987	% cum. of allocation
TOTAL TRAINING FUNDS												
a. Total	5,950											
b. For In-country training	4,350					1,787,000	30	1,269,792	3,056,792	51		
c. For U.S./3rd country training	1,600					1,057,000	24	956,148	2,013,148	46		
						730,000	46	313,644	1,043,644	64		
Evaluation and Monitoring	150					51,000	34	36,000	87,000	57		
Contingencies	100					0	0	0			1	
GRAND TOTALS	6,200					1,838	30	1,305,792	3,143,792	51		

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STATUS OF FUNDS: DEVELOPMENT AND MANAGEMENT TRAINING PROJECT
AT JUNE 30, 1986 AND AS OF END OF FY 87

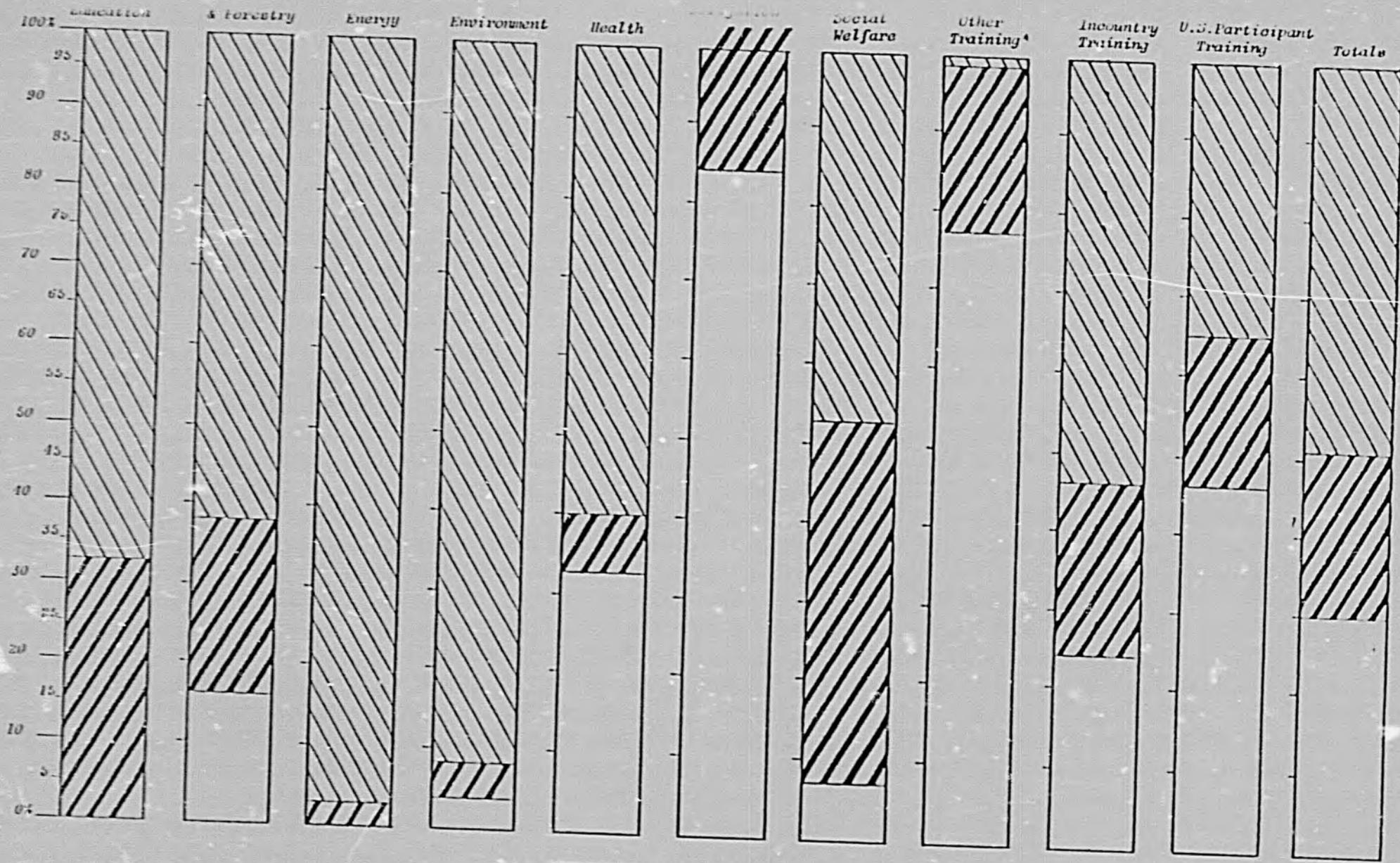
A. By Category	ALLOCATED	PLANNED DISBURSEMENTS AT 6/30	PLANNED % OF TOTAL	ACTUAL DISBURSEMENT THRU 6/86	SPENT FINAL QUARTER 86	BALANCE SEPT. 30, 1986	AS OF SEPT. 30, 1986 ACTUAL DISBURSEMENTS AS % OF TOTAL FUNDS ALLOCATED	1987 DISBURSEMENTS THRU AUGUST 31, 1987 PROJECTED TO SEPT. 30		
	\$'000s	\$'000		\$'000s	\$'000s	\$'000s		AMOUNT	CUMULATIVE	% OF ALLOCATION; DISBURSEMENT AS
Agricultural Research and Education	56	46	82	0	0	56	-	18,653	18,653	33
Agriculture & Forestry	1,177	966	82	26	157	994	16	271,023	454,023	38
Energy	668	548	82	-	-	668	-	17,302	17,302	3
Environment	907	745	82	9	29	869	4	34,300	72,300	8
Health	907	745	82	232	67	608	33	68,309	367,309	40
Irrigation	847	695	82	713	-	134	84	369,238	1,082,000	-*127
Social Welfare	732	601	82	3	46	683	7	345,250	394,250	53
Other Training	656	539	82	448	57	151	77	134,395	639,395	98
Evaluation & Monitoring	150	123	82	51	0	99	34	36,000	87,000	58
TOTAL	6,200	5,108	82	1,482	356	4,362	30	1,293,780	3,132,232	51%

* Overspent. An additional allocation was made to the Irrigation Sector. Present Irrigation Sector Allocation is \$1,368,000

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	ALLOCATED \$'000s	PLANNED DISBURSE- MENTS AT 6/30 \$'000	PLANNED % OF TOTAL	ACTUAL DISBURSEMENT THRU 6/86 \$'000s	SPENT FINAL QUARTER 86 \$'000s	BALANCE SEPT. 30, 1986 \$'000s	AS OF SEPT. 30, 1986 ACTUAL DISBUR- SEMENTS AS % OF TOTAL FUNDS ALLOCATED	1987 DISBURSEMENTS		
								THRU AUGUST 31, 1987 PROJECTED TO SEPT. 30 AMOUNT	CUMULATIVE	% OF ALLO- CATION DISBURSEMENT AS
U. In-country-US Training	\$'000s	\$'000		\$'000s	\$'000s	\$'000s				
In-country	4,350	3,567	82	880	177	3,293	24	956,148	2,013,148	46%
U./Third Country	1,600	1,312	82	551	179	870	46	313,644	1,043,644	65%
TOTAL	5,950*	4,885	82	1,431	356	4,163	30	1,269,792	3,056,792	51%

* 6.2 billion minus set asides for Evaluation and Contingencies (\$250,000)



*Primarily U.S. participant training.
 **Overpent \$521,000 transferred from other categories.

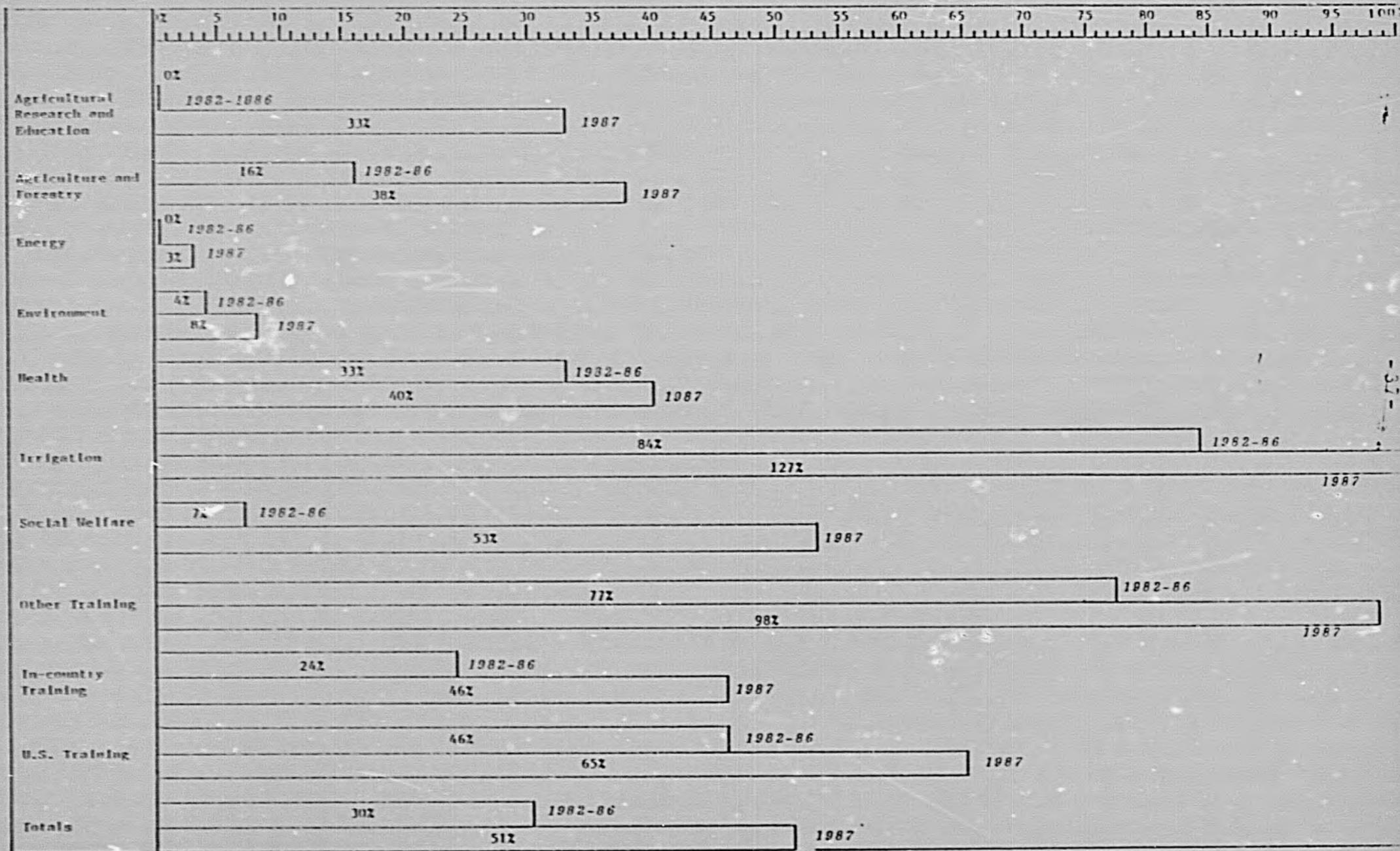
Thru
 FY86
 (1982-86)

FY
 1987

Unexpended
 Balance

CUMULATIVE DHT EXPENDITURES AS A PERCENTAGE OF LOP ALLOCATIONS
 FY 1982 through FY 1986 vs. FY 1987

[By Subject Area and In-country vs. U.S. Participant Training]



These data show, first, that from a total of 7 Participants in FY 1983 the annual level had risen by 1986 to 44 and was sustained in 1987 at 42 participants. Second, they reveal that of a total of 129 participants 105 were men in the public sector, 19 were women in the public sector, and that there were 5 from private sector, four of whom were women.

The data from the 5 tables may be summarized semi-graphically as follows:

	<u>Public Sector</u>		<u>Private Sector</u>		<u>Totals</u>
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	
1983	6	1	-	-	7
4	16	2	-	1	19
5	15	2	-	-	17
6	36	5	-	3	44
7	<u>32</u>	<u>9</u>	<u>1</u>	-	<u>42</u>
TOTALS	105	19	1	4	129

As to Subject Category, the breakdown of the 129 Participants was as follows:

Category	1983	1984	1985	1986	1987	Totals	% of Totals
Health	4	5	5	8	3	25	19.4%
Agriculture	-	-	-	11	13	24	19%
Energy	-	-	-	-	2	2	1.6%
Social Welfare	-	2	-	-	8	10	7%
Irrigation	-	-	-	-	-	-	
Environment	-	-	-	-	-	-	
Others	3	12	12	25	16	68	53%
Totals	7	19	17	44	42	129	100%

PROJECT: DEVELOPMENT AND MANAGEMENT
TRAINING PROJECT (386-0487)
PARTICIPANT TRAINING

TOTAL NO. OF PARTICIPANTS: 7

FY-1983

<u>S. NO.</u>	<u>SECTOR</u>	<u>PUBLIC SECTOR (INCLUDING GOI UNDERTAKINGS)</u>		<u>PRIVATE SECTOR</u>	
		<u>MEN</u>	<u>WOMEN</u>	<u>MEN</u>	<u>WOMEN</u>
1.	Health	3	1	-	-
2.	Agriculture and Forestry				
3.	Recommendation of the Working Group on Agric. Inputs and Allied Technology				
4.	I.C.A.R.				
5.	Energy				
6.	Social Welfare				
7.	Irrigation				
8.	Environment				
9.	Others	3	-	-	-
TOTAL:		<u>6</u>	<u>1</u>	<u>-</u>	<u>-</u>

PROJECT: DEVELOPMENT AND MANAGEMENT
TRAINING PROJECT (386-0487)
PARTICIPANT TRAINING

TOTAL NO. OF PARTICIPANTS: 19

FY-1984

<u>S. NO.</u>	<u>SECTOR</u>	<u>PUBLIC SECTOR (INCLUDING GOI UNDERTAKINGS)</u>		<u>PRIVATE SECTOR</u>	
		<u>MEN</u>	<u>WOMEN</u>	<u>MEN</u>	<u>WOMEN</u>
1.	Health	5	-	-	-
2.	Agriculture and Forestry				
3.	Recommendation of the Working Group on Agric. Inputs and Allied Technology				
4.	I.C.A.R.				
5.	Energy				
6.	Social Welfare	1	-	-	1
7.	Irrigation				
8.	Environment				
9.	Others	10	2	-	-
TOTAL:		<u>16</u>	<u>2</u>	<u>-</u>	<u>1</u>

PROJECT: DEVELOPMENT AND MANAGEMENT
 TRAINING PROJECT (386-0487)
 PARTICIPANT TRAINING

TOTAL NO. OF PARTICIPANTS: 18

FY-1985

<u>S. NO.</u>	<u>SECTOR</u>	<u>PUBLIC SECTOR (INCLUDING GOI UNDERTAKINGS)</u>		<u>PRIVATE SECTOR</u>	
		<u>MEN</u>	<u>WOMEN</u>	<u>MEN</u>	<u>WOMEN</u>
1.	Health	5	-	-	-
2.	Agriculture and Forestry				
3.	Recommendation of the Working Group on Agric. Inputs and Allied Technology				
4.	I.C.A.R.				
5.	Energy				
6.	Social Welfare				
7.	Irrigation				
8.	Environment				
9.	Others	10	2	-	-
TOTAL:		<u>15</u>	<u>-2</u>	<u>-</u>	<u>-</u>

PROJECT: DEVELOPMENT AND MANAGEMENT
TRAINING PROJECT (386-0487)
PARTICIPANT TRAINING

TOTAL NO. OF PARTICIPANTS: 44

FY-1986

<u>S. NO.</u>	<u>SECTOR</u>	<u>PUBLIC SECTOR (INCLUDING GOI UNDERTAKINGS)</u>		<u>PRIVATE SECTOR</u>	
		<u>MEN</u>	<u>WOMEN</u>	<u>MEN</u>	<u>WOMEN</u>
1.	Health	4	4	-	-
2.	Agriculture and Forestry	9	-	-	-
3.	Recommendation of the Working Group on Agric. Inputs and Allied Technology				
4.	I.C.A.R.	2	-	-	-
5.	Energy				
6.	Social Welfare				
7.	Irrigation				
8.	Environment				
9.	Others	21	1	-	3
TOTAL:		<u>36</u>	<u>5</u>	<u>-</u>	<u>3</u>

PROJECT: DEVELOPMENT AND MANAGEMENT
 TRAINING PROJECT (386-0487)
 PARTICIPANT TRAINING

TOTAL NO. OF PARTICIPANTS: 42

FY-1987

<u>S. NO.</u>	<u>SECTOR</u>	<u>PUBLIC SECTOR (INCLUDING GOI UNDERTAKINGS)</u>		<u>PRIVATE SECTOR</u>	
		<u>MEN</u>	<u>WOMEN</u>	<u>MEN</u>	<u>WOMEN</u>
1.	Health	3	-	-	-
2.	Agriculture and Forestry	6	1	1	-
3.	Recommendation of the Working Group on Agric. Inputs and Allied Technology				
4.	I.C.A.R.	5	-	-	-
5.	Energy	2	-	-	-
6.	Social Welfare	4	4	-	-
7.	Irrigation				
8.	Environment				
9.	Others	12	4	-	-
TOTAL:		<u>32</u>	<u>9</u>	<u>1</u>	<u>-</u>

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VI. THE SPECIAL CASE OF THE DMT PROJECTS' ROLE IN PRIVATE
SECTOR DEVELOPMENT*

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*Prepared by Dr. Arthur Byrnes

A. Scope of Work

Basically, the work to be performed was to focus specifically on the DMT project and the extent to which it was achieving its purpose of strengthening the managerial and technical capabilities of public and, where appropriate, private sector manpower of India.

This section of the final report primarily relates to the training under DMT which has occurred in the private sector.

Eight particular tasks were asked for:

1. Review existing background reports and documentation relating to the DMT project (covered in prior section).
2. Evaluate the extent the recommendations made by a previous evaluation of Development Associates, Inc. were implemented (covered in prior section).
3. Review the number and usefulness of courses that involved the private sector.
4. Assess the quality and results of U.S. private sector training.
5. Evaluate the DMT project activities in terms of G.O.I. requests for training, workshops, and scientific exchanges outside IIPA framework.
6. Based on discussions with G.O.I. officials provide recommendations as to the appropriateness of developing a follow-on training project, and the extent, to which private sector training should be expanded.
7. Recommend the specific training areas in which utilization of the private sector would be most appropriate.
8. Suggest mechanisms for establishing more effective linkages with the private sector in both the U.S. and India.

B. Number of Courses Conducted in The Private Sector

The number of "private sector" courses, programs and activities operated by various organizations and funded by the DMT project amounts to twenty nine (29), with most of them having been conducted in the last two years.

1. Analysis of Private Sector Courses

The courses were studied from two different aspects. The first, according to the categories and sectors of the economy they affected. The second, those courses provided to the private sector and then those program designed by the private sector.

The 29 courses held since the project began in 1982 were staged under four different GOI/USAID categories: Social Welfare, Women and Children, Environment, and a sector called "Other". This latter category is unspecified in the IIPA Training Plan Report and has become the vehicle for approvals and for conducting private sector courses, workshops and exchanges.

Most of the courses designated of as private sector were in the Woman and Child category. Twenty three (23) of the total twenty nine (29) courses fell into this group.

The participants in these courses were virtually all women. Subject matter in these programs ranged widely. A sampling of titles includes, Industrial Management Training, Training of Trainers For the Resettlement of The Urban Poor, Training Workshop on Social Forestry, Training of Women Entrepreneurs, Workshop on Voluntary Workers, Workshop on Project Management and others (see end of this section for complete listing).

In the other categories four (4) workshops were held on environmental concerns called, Joint Indo-U.S. Workshops.

Through the Ministry of Telecommunications in collaboration with U.S. Bell Laboratories a workshop in the private sector, Network Planning was conducted.

The Ministry of Social Welfare with a history of working with the private sector in the U.S. invited five (5) resource experts from the U.S. to come to India for a series of workshops with administrators of programs for the handicapped throughout India. The

Ministry is currently sending fourteen (14) senior technical people in the field of the physically disadvantaged to the United States for observational training at U.S. private sector institutions.

2. Courses Provided to the Private Sector

Most of these courses were aimed at assisting the small entrepreneur. The goal is to produce more new businesses. This course of action provides new jobs, is labor intensive, produces income, assists national economic and social growth and develops a middle class, consumer oriented sector in India.

Geared to this policy of developing small industries and services the GOI has made other resources available to assist and accelerate the process. Funding is available and relatively easy to qualify for, particularly in small amounts. Technical assistance is offered to beginning business people to assist the process.

DMT has helped in this process by providing funds for participant training in the U.S. A continuing problem in this area is the difficulty that deserving people from the private sector have in being considered under present qualifying conditions for nomination for participant training under DMT funding.

A large majority of the total number of courses offered under the private sector rubric, were in this category of training provided to the private sector, a total of twenty two of the twenty nine.

3. Courses Provided by the Private Sector

There were far fewer programs conducted in the private sector area by private companies either Indian or U.S. The best example was the project noted above, centering on network planning. It was designed and delivered in India by the Department of Telecommunications in collaboration with the U.S. Bell Laboratories. It was an excellent example of what can be achieved in this area and the mission and GOI might promote more of these kinds of programs.

There are also private sector agencies who sponsor courses designed to expand the private sector.

These should also be fostered and encouraged.

A major issue, probably beyond the Mission's scope, is the general attitude the GOI has toward large foreign, multi-national, international or consortia type corporations. From the GOI perspective, encouraging such large corporations is not the way to develop socially and economically. Small business is in; large corporations are out. In great measure this is the reason the program growth in the private sector under DMT assistance has not gone forward as rapidly as it has in the public sector.

For future development in the private area perhaps working within the confines of the existing situation is the best way to move ahead. Encouraging joint ventures with small private organizations and foreign companies could prove successful. Promoting and supporting more courses, programs and projects by Indian private sector firms would assist growth in this field.

C. Usefulness of the Courses Conducted For The Private Sector

Discussions with G.O.I. officials responsible for these courses revealed unbridled enthusiasm. They liked the idea of holding the course, of the course meeting their objectives, of success flowing from the course and the general cooperation with the Mission and the G.O.I. for both approving and funding the course.

Reading participants written course evaluations as well as discussing the course usefulness directly with participants made clear that they felt the courses generally were both needed and appropriate for their professional development.

D. Quality and Results of U.S. Private Sector Training

The training of Indian participants within the country in the private sector has produced successful results. This effort encourages additional activity in order to increase the amount of training in this field and the numbers of Indian participants trained.

The quality of the relatively small number of programs has proven quite good. Participant reports were glowing, expectations were fully met, new information was received, ideas were exchanged and the students/officials expressed virtually complete satisfaction with their programs.

The agencies responsible for conducting the courses stressed preparation and quality as concerns. The instructors were drawn from: their own agencies; outside but related institutions; and sometimes foreign experts. The consensus was that the courses were managed in high-level, professional fashion. From the instructor point-of-view, the activities were state-of-the-art in India, productive and met their objectives.

Methods used varied from straight lectures up thru the use of the quite modern techniques including case studies, use of visual and audio materials, prepared handout materials, site visits, use of guest experts, hands-on experience and the use of evaluations to improve quality. On balance, the communication methods used in the courses were both functional and above average.

E. Project Activities Outside IIPA Framework

There have been several DMT funded projects conducted outside the framework designed by the Indian Institute of Public Administration.

Two are notable. The first was a workshop program conducted by the Ministry of Communications. A small team of scientists and

engineers from Bell Laboratories in the U.S. was requested to visit India and exchange ideas on current technology in the area of telecommunications with some 100 Indian technicians.

The program was well received, successful in that it imparted state-of-the-art technology to the Indian participants and was an excellent example of what could be accomplished using this mode of exchange.

The second project, using a similar formula was conducted by and for the Department of Biotechnology of the Ministry of Sciences and Technology. The subject was bioinformatics under Biotechnology. Three U.S. experts were invited to visit India in conjunction with the DMT project. They discussed the current technology with some 40 Indian scientists knowledgeable in the field of bioinformatics. Again, by all standards of measurement, this was a most successful exchange of information.

Both these projects can serve as role models and be duplicated in any number of similar private sector activities funded by the DMT.

The GOI looks favorably upon, and generally supports the concept of outstanding foreign consultants coming to India and exchanging technical information, conducting seminars and workshops, visiting sites, lecturing on current technical data and demonstrating the latest instruments and equipment.

This training method provides a unique opportunity to further Indian development training using the DMT project in the private sector.

F. Follow-On DMT Project - Private Sector Role

1. Appropriateness

The current DMT bilateral training project has much to be said for it as an instrument to upgrade the skills, knowledge and

experience of Indian professionals. Aimed primarily at mid-level technicians in seven major sectors, the project is contributing toward its stated goal.

Indian officials in both private and public sectors have been trained in the fields of environmental control, water management, telecommunications, agriculture, energy, health and family welfare, irrigation, agricultural research and education, and social welfare. Additionally, the original DMT project design contemplated, and people have been trained, thru the involvement of both the private sector and women in development.

While the project has encountered some difficulties, the basic reasons for its being remain sound. Its potential to make significant contributions to both expand and upgrade the manpower of India is considerable.

For this reason a follow-on, somewhat modified, project should be considered by the mission.

2. Experience Gained

The current DMT project has been a useful one in that it is meeting its goals and is imparting skills and knowledge to Indian officials. There is, however, mutual support for the idea that project management might be altered on both the G.O.I. and USAID sides for even greater project effectiveness. These desired changes designed to improve project efficiency should be addressed and agreed upon before any follow-on DMT-type project is launched.

3. Expanding the Role of the Private Sector

From the U.S. perspective it would be desirable to increase the participation of the private sector in India's drive for economic and social betterment for its people.

While the private sector has played a role in the DMT project, and it has been successful, it should be expanded to make even more significant contributions.

4. Private Sector Training in a Follow-On DMT Project

Private Sector training should be a recognized and major part of any DMT extension or new umbrella type training project. There are several ways to achieve this status.

- a. Specifically list private sector training in the project format as a separate category of training.
- b. Assign a particular budget allotment to it for carrying out its activities.
- c. Form a working committee of interested parties from Indian private sector organizations, the Mission, U.S. Embassy Commercial Attache, Ministry of Finance, and IIAD. They would help to frame policies on such items as training needs, selection of participants, U.S. and other country private sector linkages, and budget allocations on various activities conducted within private sector training.
- d. Design a training program specifically for private sector officials for overseas and in-country training opportunities. The Indian Institute of Public Administration can help here.

5. New Sectors of Concentration in Private Sector Training

If an expanded DMT project were to come into being some thought should be given to the key elements which should be stressed in private sector training.

In industry, for example, some of the priority needs of India are in electronics, instrumentation, communications, computer applications, software, and flexible manufacturing. Training in these new area needs should receive DMT attention.

In non-industry private sector institutions some of the new priority training needs are in the areas of team building, motivation training, computer literacy, leadership, innovative reward systems, creating excellence, improving presentations, and finding and using external consultants.

Some of these areas may be closer to being than others. All listed above plus some others are the next forward needs of a developing India.

The Mission should be innovative and forward looking in their planning to help India achieve progress in these areas.

6. Mechanisms Establishing Linkages With Private Sector

Making the private sector more viable, expanded, efficient, and more productive is not the G.O.I.'s highest priority in terms of effort or funding.

Techniques have to be devised using available organizational, human, and financial resources to do the job.

One of the vehicles the Mission could use would be to publicize the availability of a DMT-like project to the potential users of the program. It currently is not being promoted as effectively as it could be. Using seminars, articles in journals, newspapers, and other publications about the projects availability, workshops, lectures, advertisements in trade and professional journals, consultants and other verbal and written means would help spread the work that the program exists and could possibly be used by private companies, joint ventures, and the not-for-profit organizations.

Another technique to involve the private sector to a greater degree is to make information about U.S. and other country institutions more readily available.

Several ways to help with this problem are:

- a. Have Mission experts in particular areas prepare lists of data on private institutions who have expertise relative to the needs of Indian organizations as they might link with Mission projects. (This is often not easily accomplished due to lack of sufficient Mission personnel, the busy workloads of Mission experts and often not having knowledgeable people on the staff in a particular specialization).
- b. On a contract basis, have an expert in the U.S., or a team at a university, foundation consultant firm or trade association compile lists of U.S. and other country organizations who have special advanced skills and information in specialized areas. These lists would benefit all Missions throughout the world.
- c. Invitations to knowledge professionals in particular high interest fields could be tendered to visit India for short-term workshops to exchange information with Indian private sector officials. Part of the exchange could focus on U.S. organizations and the relevant work being accomplished. Some of that is already taking place successfully and could be expanded.

Still a third vehicle to promote the private sector is for the project to be more proactive than reactive.

This would involve greater overtness on the Mission's part. Increasing contacts with the officials from the private sector organizations--business, industry, universities, colleges,

foundations, and non-profits. The commercial office of the U.S. Embassy can help in this effort. Putting the program out front and not waiting for private industry to come to the Mission with requests for training help (they may never come) should be a more effective technique.

A fourth, and creative mechanism the Mission might use would foster linkages between Indian and U.S. organizations and simultaneously strengthen the private sector.

The training offered under a new DMT-like program could be used by a U.S. or joint venture firm in its bidding for an Indian contract. Frequently, U.S. companies competing against foreign firms in a request for proposal situation are at a disadvantage. Foreign firms often have their governments help in a variety of ways which can give them a competitive edge. Using training under the DMT could make the playing field more level for the U.S. firm.

To avoid criticism from another U.S. bidder, the same opportunity--using training as a component of their bid under DMT--would be available to other U.S. bidders.

Of course this would invoke some discussion to gain acceptance but it could be made part of a new agreement and it would benefit the U.S., the private sector, and Indian growth generally.

G. Recommendations for Private Sector Training

1. Although the DMT project has experienced a variety of implementation problems, the concept of training unfettered from project ties and having flexibility to meet particular private sector training needs, makes it an innovative, useful, and potentially highly productive project.

Recommendation: The DMT project be continued and a new, follow-on project be planned incorporating suggestions from evaluations and experience.

2. It would be prudent to avoid some of the difficulties encountered in the present DMT project in pursuit of development training in the private sector field.
Recommendation: In any follow-on DMT project a particular new category for private sector training be established.

3. Some very successful programs in training in the private sector were experienced during the life of the current DMT project. The use of short-term technical U.S. and other country experts has the support of the G.O.I. and vigorous enthusiasm from organizations using the project resources. It has had a robust effect on seminars, workshops, and information exchanges in India. Recommendation: That the use of U.S. and foreign consultants be encouraged and expanded in private sector training programs throughout India.

4. Many of the Indian organizations involved in the DMT project were enthusiastic about having their officers attend specials programs, courses, workshops, and training in the U.S. and other countries. The Mission training office does an excellent job of preparing, managing, following-up, and evaluating training programs in the U.S. The complaint expressed by G.O.I. leaders is that they do not know of existing opportunities and often have to settle for some program less appropriate. Further, if and when they do learn of the opportunity, it is usually too late to make all the necessary arrangements.

The Mission training office does send a multi-sector list of conferences and the like to the DEA, but apparently the potential user organizational leaders never see it.

Recommendation: The Mission develop mechanisms thru AID/W or on a contractual basis with consulting firms, or universities to compile specific area lists of activities,

courses, programs, workshops, seminars, and the like, on an annual basis so organizations in India would have sufficient advance time to plan their programs using consultants and experts.

5. To encourage expanded training in the private sector, there are many different and innovative ways to use the flexibility of a DMT-type training program. Some possibilities are:
 - a. Using DMT funds to train participants in India, the U.S. or third countries or in combination of both, as a component element of a tender or bid of a U.S. firm in seeking a contract in India.
 - b. Using DMT funds to build institution capacity by exchanging experts from a U.S. institution (or a consortium of institutions) with an Indian institute, organization, or university. One is currently being discussed involving the Management Development Institute in India and Harvard University's Graduate School of Business Administration.
 - c. Using DMT funds to develop an incubator program for aspiring small business entrepreneurs.

One way to proceed in the establishing of an incubator program in India would be to identify an interested organization, university, private company, firm or institution to sponsor the operation. A particular theme would be selected, usually as a priority need, i.e., high tech. service, food, export, manufacturing, computer applications and the like.

The sponsoring institution would be funded in part by DMT and other organizations as appropriate. They would make standards for selecting qualifying, fledging small companies. Interviews, backgrounds and a small number of selections would be made.

The sponsoring organization would offer physical facilities, office space, office equipment as telephone, telex, tax machines, computer access, typewriters, desks, files and the like. Technical assistance, small amount of financial support, business expertise, problem solving, management techniques, planning, budgeting, evaluation and marketing techniques would be supplied.

The program of assistance could last for up to a year or whenever the new company was competent to operate on its own.

Several incubators could be established using the strengths and experiences gained from the first one. Different areas of concentration would be feasible for each new incubator.

Recommendation: That the Mission plan to use innovative, new, and creative techniques to develop greater training activities in the private sector.

PRIVATE SECTOR TRAINING PROGRAM
UNDER THE DMT
1983-87

OTHERS

<u>Course Name</u>	<u>Organization</u>
1. Network Planning	Dept. of Telecommunication in collaboration with the Bell Labs, U.S.

WOMEN AND CHILD

<u>Course Name</u>	<u>Organization</u>
1. Industrial Management Training	Indian Council of Women Entrepreneurs, New Delhi
2. Training of Trainers - Area Resettlement of Urban Poor	Society for the Promotion of Resource Centre (SPARC)
3. Bihar Women's Dairy Cooperative Training	Bihar State Cooperative Milk Procedures Federation, Bihar
4. Training Workshop on Social Forestry	Center for Women's Development Studies
5. Development & Managers Training Workshop for Tribal Women	Bethany Convent, Ranchi, Bihar
6. 6 Courses	Avinashilingam Education Trust Institutions, Coimbatore
1) Management Services for Representatives of Voluntary Organizations	
ii) Development of Women and Children through Social Forestry	
iii) Management Development of Women and Children through Farm Activities	

- iv) Management of Social Welfare Services for Women
 - v) Development of Women and Children Through Home Science Education
 - vi) Development of Women and Children through Social Forestry
-
- 7. Training of Women Entrepreneurs SNTD Womens University, Bombay
 - 8. Workshop for Voluntary Workers Womens Indian Association, Madras
 - 9. Entrepreneurship Training Program International Center for Entrepreneurship and Career Development
 - 10. Primary Village Level Women's Weaver Cooperative Peoples Institute for Development and Training
 - 11. Orientation Course People's Institute for Development and Training
 - 12. Management of Social Welfare Services for Children Tata Institute of Social Sciences Bombay
 - 13. Management of Voluntary Organizations Participatory Research in Asia New Delhi
 - 14. Training Workshop for Secretaries for Rural Development Center for Womens Development New Delhi
 - 15. Training of Trainers Participatory Research in Asia New Delhi
 - 16. Workshop on Project Management All India Womens Conference
 - 17. Management Development for Women Administrators SNTD Womens University, Bombay
 - 18. Management Development for Women Entrepreneurs SNTD Womens University, Bombay

ENVIRONMENT

Joint Indo US Workshop

In collaboration with the EPA, USA
Ganga Project Directorate (GPD)
(Ministry of Environment & Forests)

1. Land Treatment and Application
of Domestic Sewage
2. Industrial Waste Water Recycling GPD
& Reuse
3. Biological Conservation and GPD
Biomonitoring of receiving waters
4. Riverfront Conservation and GPD
Instream uses

VII. SPECIFIC RESPONSES TO TASKS ASSIGNED BY THE CONTRACT'S SCOPE OF WORK STATEMENT

The Statement of Work forming an integral part of the Contract under which this report is being written calls for the consultants to deal with a number of specific issues that are germane to the two key questions that this evaluation is about:

1. To what extent is the project now meeting its objectives? and
2. Will a follow-on project be advisable, and if so, what main characteristics should it have?

Although most of these Scope of Work issues have been covered in other sections of this report, there follows in this section the consultants' direct and specific responses to each of the specific issues raised in the contract's Statement of Work, in the order in which they appear; with one exception. That exception is the eighth and final issue raised: "What kind of Follow-On Project, if any, is recommended." The response to this question is covered in section VIII of this report.

Each of the issues noted has been stated in terms of a "task" laid on the consultants by the Mission. Each of these "tasks" is herein quoted verbatim, followed by the consultants' response.

TASK I: "This evaluation will address both the qualitative and the quantitative record of DMT financed In-Country and Participant Training. Particular attention will be given to the number and usefulness of courses that involved (a) private sector training; (b) women's training, and (c) courses initiated under DMT that have been institutionalized by the GOI without additional DMT funding."

Response:

The over-all quantitative and qualitative record of DMT Training has been covered under "Principle Findings" and "Progress Since the Development Associates 1984 Evaluation." In summary, the

record, as of today, is good. The increased activity occurring in the past two years is measured in the charts and tables found in section V. The high quality level of the in-country training element is attested to in Section III, Principle Findings. The quality of the U.S. participant training element has been more difficult to measure. By the participants own evaluations, quality can be rated high since they were typically pleased with their experience. But whether or not this training furthered Indian development objectives is hard to say. Each case was no doubt useful to the participant, but such evaluations are by their nature--participant specific. It has been said elsewhere that the U.S. participant training element could be improved by a more structured approach.

Particular attention has been paid in section VI to the private sector and women's training. The reality is that except for the use of a Bell Labs training team from the U.S. private sector brought into India to train government employees and Ganga Project staff, there has been no training under DMT for representatives of Indian private industry, outside the women's program. All the training of Indian "private sector" persons, under DMT, has been of women seeking a larger role in development. This is perhaps DMT's greatest single contribution to "growth with equity" in India. Over 20 workshops for private women in development, with more to come, are stirring a new consciousness in States and Districts throughout India. The listing of these courses on pp 56-58 speaks for itself. This highly successful program was made possible by the teamwork of 3 women: Dr. C.P. Sujaya, Joint Secretary for Women and Child in the Ministry of Human Resources Development; Dr. Zarina Bhatti, USAID's expert on women's affairs; and Elisabeth Millard, DMT's project manager. Among other things it illustrates what can be done when the USAID expert(s), the DMT Project manager and the relevant Ministry Official get together. In these circumstances, the vaunted bureaucracy and red-tape seem to have a way of falling into line.

Courses Institutionalized Without Further USAID Financing

As mentioned elsewhere, each case of DMT support for a training course given by an existing Indian training institute or center has a long and beneficial after effect. Preparing the course has had its costs, intellectually as well as financially. Once prepared, however, the Indian institution is capable of doing it again. Operational costs, of course, have to be met each time, which can be done in various ways. Fees are a possibility; financing by a Union or State Ministry is another. The costs for repeating will be lower. The use of Indian experts in lieu of U.S. experts keeps costs low. In other words, the DMT, by making possible the first course, comes close to setting in motion a self-sustainable program. This could be further enhanced if the recommendations made elsewhere were followed: while paying for the first course, DMT would also provide some infrastructure support to the training institution making it better able, both to give succeeding courses and to carry on its basic general program as well, to the benefit of an ever widening circle of participants.

No, the consultants did not find any instances where a training activity, once funded by DMT, later became a continuing, sustained program without DMT assistance. They would not be surprised, however, if such developments were to be found to have happened or may be soon to happen. Conditions to make this more likely can be built into the follow-on project.

TASK II: "(The consultants will) Examine, Categorize, and Evaluate the DMT Project activities in terms of their quality and responsiveness to the requirements of GOI requests for training, workshops, and/or scientific exchanges outside the IIPA framework, but within over-all project objectives."

Response:

The key words here are those underlined. Women and the private sector are the only DMT financed activities that are "outside the IIPA framework".*

All that can be said here that would be supplemental to the Task I discussion above is that the women's program has illustrated well how responsive the USAID can be to a Government Official who makes her needs clear and convincingly.

TASK III: "Provide a cost-benefit or cost-effectiveness comparison of Participant (U.S.) training and In-country training financed by the Profile to date."

Response:

In absolute terms, Participant (U.S.) training is much more costly than In-country training. U.S. training costs are at present running at approximately \$3,800 per month per trainee, or, say, \$127 per participant day. This is the average for Indians studying or observing in the U.S.--an all inclusive unit cost figure.

The comparable figure for In-country training in India is \$41 participant day, or less than one-third the U.S. Participant training costs. This is based on the Mission's calculation that the cost per trainee, per course of an average duration of 18 days, is \$734. Again, these are all inclusive unit cost figures.

*and some participants whose specializations are outside the IIPA framework.

A direct conclusion, however, from these direct comparisons, that because In-country training costs a third as much as U.S. training, it is 3 times as cost-effective would be a questionable judgment so summarily to make. Nor can the calculation of cost benefits ratios in either case be very helpful, simply because their calculation is made all but impossible by the nature of the training involved. Value added is not signalled by the granting of degrees or any equivalent thereof in either case. The benefits to participants are largely intangible in both types of training. The typical (average) participant in U.S. training spends a total elapsed time, as a participant, of 4 weeks, in seminars, study observation tours and the like. Some remain as long as nine months in non-degree study programs, but that is the maximum, and the exception. In-country courses, on the other hand normally range from 2 to 4 weeks in duration and average 18 days, as noted above. Although certificates of "course completion" are normally given the participants "accomplishment" is not sufficiently tangible or predictive of increased income to warrant the kind of quantification required for cost-benefits analysis. Someone, someday may do a research study or a doctoral dissertation on the relationship between the intensity of an employee's in-service training and the rapidity and monetary value of his promotions, and this might well be worth doing, particularly since, in organizational budgets, in-service training is always among the first items to be cut. Short of such an analysis, however, the benefits of in-service training will have to continue to be calculated more in qualitative than quantitative terms.

What has been said above is equally applicable to USAID programs in most developing countries having projects similar to the DMT Project. And a common general conclusion also is that, despite the lesser costs of In-country training, U.S. training is often to be preferred because it is better, and thus, in effect, more cost effective.

This general conclusion is probably less applicable in the case of India.

In the case of India, an important difference is that the country is capable of doing at home, much more of the development training that is needed than almost any other developing country. Whereas there often is no adequate local alternative to training abroad, in India there usually is an adequate in-country training alternative to U.S. participant training. Cheaper but equal in-country training can be compared with similar more costly training abroad and the conclusion justifiably reached that the in-country training is the more cost effective--on the average for India--up to 3 times as cost effective.

What this suggests, then, for the DMT Project is that U.S. Participant training should normally be limited: (a) to cases where there clearly are no in-country alternatives; and (b) to cases where there are compelling substantive reasons why travel to the U.S. in connection with the desired study is important. These limitations are suggested as additional to the other limitations on U.S. Participant training recommended elsewhere in this report.

A qualitative aspect of the effectiveness of DMT training programs is the relative certainty that In-country courses are most likely to be quite naturally relevant to the Indian milieu to which they are addressed. Both trainers and trainees are keenly aware of the need to find application in practice, on the job, of the lessons being learned in the training courses. The consultants' brief experiences with courses in session provided clear evidence that, in fact, little time is wasted in these courses on extraneous matters not related to the participants' life after the course. One of the main problems with U.S. participant training is, precisely, this matter of the relevance of the training offered to the participants' role on the job in India. Of course, U.S. training institutions cannot be expected to be so totally dedicated to the Indian scene as might be desirable from the Indian participants' viewpoint. This is

an inherent negative factor in all U.S. Participant training programs that must in each case be compensated for by building compensating positive factors into the participants' U.S. programs.

There remains to be examined the question of the use of U.S. experts in In-country training courses. How cost effective is, or could be their use? Wide use of U.S. experts was contemplated when the project began. In fact, substantially less use than anticipated has been made, for a variety of reasons discussed elsewhere in this report. Thus, while the costs of such U.S. experts as have come to India to take part in In-country courses are included in the In-country costs figures, they actually constitute only a small fraction of such costs. The In-country figures cited above thus reflect mainly the costs of Indian professionals, and facilities. Any substantial new involvement of more U.S. experts would increase In-country training costs in direct proportion to the following cost data.

Foreign consultant costs in India are now running at approximately \$15,000 per consultant month, or \$3,800 for the average consultancy of 5 days, or at approximately \$760 per consultant-day. This includes travel, per diem and honorarium. The latter can be saved if the trainer is a U.S. Government employee and thus not entitled to double pay.

At \$760 per consultant-day, one U.S. expert's costs for one day would exceed the costs of one trainee per 18-day course. Thus, as a rule of thumb, where In-country training budgets have fixed ceilings, each U.S. expert brought in for the average five day stint would require dropping at least 5 participants from the course concerned. Of course, the sub-project budget could, alternatively, be increased to accommodate the U.S. expert. It can be seen, however, that, in the aggregate, any substantial increase in U.S. experts would require either a 5 for 1 reduction in participants or an equivalent budget increase. When may such increased costs be worth it? The consultants' Indian respondents replied to this

question in a uniformly straightforward manner. In essence, their view is that U.S. experts are needed and desired where the Indian agency sponsoring the In-country training recognizes that new technologies are involved in which Indian expertise is not yet current or is not yet in sufficient supply to meet course demands. This applies to emerging "cutting edge" technologies where R&D leadership still remains in U.S., European, or other developed country hands and there simply has not yet been time (or it is premature), to effect the technology transfer to India's replete research, education, and training institutions. It applies, for example, to cases such as India's plans to develop for the first time a hydroelectric power program involving dams more than twice as high as the country has built and operated before. There had been no need for such Indian expertise up to now. Now, however, while India is developing such national expertise, it needs to borrow internationally in order not to delay program development. In such cases, as in those involving emerging technologies, the importation of U.S. experts for relevant seminars and courses is clearly highly desirable and well worth the cost. On the other hand, care needs to be exercised to avoid inviting U.S. experts who in fact do not have a unique, unavailable locally contribution to make that is worth the extra cost. It is the consultants' observation that the best judges of the need for importing U.S. experts are the Indian sponsors of the training program concerned. It may be the view of some that these Indian sponsors' judgments are conservative but there is an at least equally valid observation to be made that some foreign technicians in India underestimate the adequacy of Indian expertise and uncritically over-estimate the usefulness of imported experts. It is suggested to the management of the DMT project that the best course to follow in these regards is to encourage Indian and U.S. resident experts to agree on U.S. expert needs, if any, based on guidelines that are essentially conservative. Where full agreement does not readily emerge from joint deliberations, it is suggested that the judgment, opinions and desires of the Mission's Indian hosts be respected.

TASK IV: "Assess how well the experience and data of the DMT has been used for project analysis and revisions, and develop a set of lessons learned from the DMT experience that can be used for a possible follow-on activity."

Response:

The management of the DMT over the years has been very adept at crisis and trouble management. The experience and data of the early years, reflecting little activity because of inadequate planning, gave rise to the IIPA study and master plan. That plan, in turn, made it possible to pin-point resistant subject areas. In the more recent period, the Mission has seen the relative inefficiencies of an unstructured U.S. training activity as compared to one which focuses numbers of participants on a single goal. It has also seen, in general, the efficacy, where possible, of supporting a smaller number of larger projects as against a larger number of small projects. Although the in-country training program is being a very impressive current success, it is on the borderline of suffering from lack of adequate structure. Allocation by priority subject is alright as far as it goes, but when such rough allocations themselves exceed one million dollars without further breakdown there would seem to be room for some further structuring. Presumably, it has been in this light that the Mission has determined that it wants DMT's future to include several large yet carefully focused sub-projects, each of which would utilize relatively massive amounts of DMT funds for a single or for a limited number of related purposes. An example is the National Management Program in which 60 young Indian managers of high promise would study management for 15 months. The 60 would come, one-third each, from government, the private industrial sector, and the public industrial sector. In this case, the GOI has determined that U.S. experts are needed. Thus, what is being set up is an in-country training course of some magnitude to be carried out at the Management Development Institute with the participation of U.S. trainer-experts from Harvard University.

The Scientists Exchange sub-project now being negotiated is an example of a structured use of U.S. participants. Involved is the use of training funds for sending Indians to the U.S. on short study tours, combined with study tours of limited duration in India for U.S. scientists.

Other examples of the Mission's having learned from experience and adapted practice to the lessons learned include its ready willingness not to press for U.S. experts in the case of in-country courses where they are not needed.

Still other examples of lessons learned are both implicit and explicit in the discussion of the follow-on project recommended in the last section of this report.

TASK V: "Examine and comment on the extent to which dissemination of information on DMT is available at the levels of the GOI which will use the training facilities of the DMT project."

Response:

Apparently, in the early years, such information was not available. It could have been made available by DEA but was not. It could have been signalled by the technical offices of USAID, but normally was not. This is no doubt the principle reason for practically no activity from 1982 to 1985. What changed was that the IIPA framework, made available in 1985, provided for moving from an all things to all and hence nothing for no one situation, to specific priority areas and hence to Ministries of government and units therein that were targeted for action. DEA and USAID both accepted the IIPA plan as a whole, and its specific targets. This provided, at last, a basis for follow up. Some USAID technical offices did so, more than others. DMT project management gained a handle to pursue sub-projects consistent with DMT objectives and DEA itself was stirred to recognize and make available within the GOI the information that such a DEA resource exists. A hang-up that

appears to have deterred full DEA involvement in promoting use of the DMT project was its concern about being unduly pressured to approve candidates for trips to the States under the U.S. participant training element. This remains a concern to this day and is one reason why the DEA likes structured sub-projects for U.S. training. As the in-country program grew, however, and its incontrovertibly intrinsic worth was increasingly appreciated, DEA and the concerned GOI agencies in general both moved to make fuller use of DMT resources to finance conferences, workshops, seminars, and courses aimed at the middle level of managers and technicians in the GOI's development ministries and agencies. A secondary aim has been at the lower technical levels. In respect of both levels, the Indian officials concerned believe they know what they are doing and their conviction is convincing. Their aim is to engage in "training" those employees who "do the work", who are responsible for day by day performance and results. Not planners, not policy formulators, but technicians who have to utilize their technical (and first line supervision) skills every hour of every day. While this may not be the sum total of all DMT in-country training--it obviously is not--, it is a major part of it and it is this element that, because it is "a natural" in the Indian scene, has given the DMT its impetus in 1986-87.

TASK VI: "Assess the quality and results of U.S. private sector training financed under the DMT Bell Labs project, and recommend if and how such efforts should be expanded."

Response:

This has been covered in section VI, The Special Case of the Role of DMT in Private Sector Development. Three further points, however, may be made here. One is to repeat the reality that thus far, more than 90% of the private sector effort has been with respect to the role of women in development. To date it has been a women in development program and that has been its great strength.

The second is that the GOI has been resistant to DMT's involvement with the private sector. There is a clear preference there for staying away from assisting private industrial commercial organizations. This negative preference has not, to the consultants knowledge, been fully probed by the USAID. The new "National Management Programme" may constitute a chink in the shield, in that one-third of those to be "trained" are to come from the private sector. But they are to be trained at a public sector institution by trainers chosen by the GOI.

The 3rd point relates to the All-India Management Association. In mid-1987, the All-India Management Association (AIMA), the principle association in the country of private industrial and commercial organizations and officials, requested DMT assistance from the DEA. The assistance requested was to help finance a workshop--the precursor of many to follow--on the "Management of Innovation and Technology", in private industry. The USAID Mission had already indicated a general interest in the possibility and its Director had in fact taken part in a preliminary one-day seminar on the subject that linked AIMA by satellite with the American Management Association and with John Diebold as its representative. The requested assistance, however, was rejected by DEA. Perhaps the request was poorly framed. It did feature research and the development of monographs on the subject rather than training per se. However, the end purpose was to prepare training materials for workshops to be conducted throughout India as a growing part of AIMA's on-going training program. This program now encompasses, in addition to numerous "how to" courses, a year-long, late afternoon and evening "extension" program leading to a diploma in business administration. It also regularly conducts an "Advanced Management Programme", patterned after Harvard's own program of the same name--its most important bread and butter "Extension" type activity. In addition, the AIMA is instituting this coming year a 3-year M.B.A. program.

The consultants recommend that if the USAID Mission and the GOI are to become serious about employing DMT resources in support of the role of the private industrial sector in development, they give further study to the opportunity that the AIMA represents.

TASK VII: "Assess the cost-effectiveness and quality of DMT Ad Hoc Workshops, i.e. Bioinformatics; EPA Ganges Project Directorate Workshops; etc. and recommend if and how such efforts should be extended."

Response:

The Bioinformatics Project is discussed in section VI, The Special Case of the Private Sector. The "EPA Ganges Project" is also noted there but not discussed. The latter project is that of the Ganga (Ganges) Project Directorate of the Ministry of Environment. EPA helps by supplying U.S. experts as trainers for the workshops. It is thus a project sponsored by a public sector agency which, however, includes representatives of the private sector among its participants, notably personnel from the industries that are most responsible for river and other water sources pollution. This activity is an excellent example of DMT funds used well. It does not entirely reflect what has been said about the DMT being best aimed at the middle and lower levels. It does that, in the end too, but it starts at relatively high levels and has been an instrument for forging Ganga Project policies. The idea is that, through six well designed workshops (4 down, and 2 to go), involving both high and middle level personnel, including representatives from private industry, the whole range of problem areas with which the project is concerned will be explored. Problems will be identified and concomitantly a program of action to solve them will be devised. Thus, each workshop results in a plan of action, for the Ganga Project Directorate and the industries they hold hostage, or vice-versa. The plan of action will, among other things, call for additional workshops at middle and lower levels so as ultimately to

encompass all technical and managerial personnel in the training program. The Ganga Project Directorate sees the six initial workshops as having completed the serving of a purpose. They have made possible the setting in motion of an action plan for the program. At some point modifications will be required, so back to the workshop drawing board. Meanwhile, the first set of workshops will have also spawned a widening series of lower level workshops needed both to spread knowledge and competence and to identify the implementation problems that tend not to reveal themselves until late in the policy--cum action plan--cum implementation continuum.

One point that the Ganga Project has illustrated is that it may be possible to supply more U.S. expert help than is needed or desirable. In the consultants' review of one particular workshop on industrial waste water recycling and reuse, the opinion of participants in that workshop was that of five U.S. experts supplied as trainers, 2 were useful and made unique contributions. The balance did not. That judgement may or may not have been fair and unbiased, but it was offered by a senior scientist of the GOI, himself a participant in the workshop, with a Ph.D. from M.I.T. and a number of years of experience in India in waste water disposal and management. The basic point here is that an external aid mission like USAID/India needs to avoid finding itself in the position of having to defend border line cases.

VIII. FOLLOW-ON PROJECT RECOMMENDATIONS

The final task called for by the Scope of Work statement warrants its own Section. The Task: "Provide recommendations as to the appropriateness of developing an expanded or follow-on bilateral training project."

First, it is the consultants' opinion that a follow-on project is not only appropriate, but desirable. While extending DMT I to 1990 would seem to take the urgency out of designing DMT II, it is not too early to start. And it is important now to identify clearly and to record the lessons being learned that will be important in the design of DMT II. Moreover, as long as lessons are being consciously learned and applied to the design of a follow-on project, why not consider also the possibility of an earlier application of lessons learned to the balance of DMT I? There would be no justification for waiting two years to change course or add or subtract elements once the Mission has concluded that it should so change or add or subtract.

In this connection, the consultants are concerned that Amendment #4 to the DMT I Project Agreement may inadvertently make irrelevant any and all resolves of the Mission to modify its DMT Project in the light of lessons learned. If the data available are to be taken at face value, the plan is to provide DMT funding for four new sub-projects to be financed in the next two years. The costs of these projects total \$4.1 million. However, the projected new funding appears to be only \$1.776 million. The difference is \$2.324 million that would come from the unexpended balance, on June 30, 1988, in the DMT account. This would mean, then, that there would be no DMT program after June 30, 1988, just nine months hence, other than the four newly proposed macro projects. The worst aspect of this is that it would eliminate the DMT in-country training program whose success is real and is just now burgeoning. All the lessons to be learned from DMT experience to date indicate that the Project's principle success, and a substantial one, has been its

support of in-country training. Its U.S. training element can be rated only as important as, but no more important than, any small quantitatively insignificant participant training effort that has little focus other than to meet the needs of a random sample of individuals with individual training plans not necessarily related to national development objectives.

The consultants have not studied DMT Project Amendment #4 other than to see that it could eliminate funding for the in-country training program. They have not been asked for and do not have opinions as to the desirability of the four sub-projects concerned. They are of the opinion, however, that if these sub-projects are regarded by the Mission as of high priority, they should be funded direct rather than by re-allocating the June 30, 1988 balance in DMT I. That balance, if the lessons of the past are to be given any credence should be reserved for continuation of the successful In-Country Training element of DMT. In other words, either the Amendment should carry a \$4.1 million, not a \$1.776 million funding figure, or DMT II should be funded separately.

Follow-on Project Recommendations

From their review the consultants have come to the following basic conclusions:

1. That the in-country training effort should be strengthened and extended, involving the strengthening of the country's mid and low level technical training infrastructure--its remarkable network of established institutional training resources that don't need much help to flower but for whom the financial help they do need is crucial;
2. That in this endeavor the private sector should be included in the program substantially more fully than at present;

3. That the U.S. training element should be used primarily in support of the in-country training effort--persons from that program would be provided resources to study abroad. And the U.S. training element should also be used in support of extending the role of the private sector in development. Uses of U.S. training should be limited to these two support efforts with one exception: the Mission and DEA should reserve a small proportion of U.S. training funds for joint discretionary use in situations of emergent need or opportunity. Some flexibility in meeting the needs of the right person at the right time in high priority ad hoc situations is recognized; and

4. That the Project's success to date in supporting a greater role for women in development should continue to be vigorously pursued, first, in the private sector, and second, with renewed emphasis appropriately in the public sector.

In short, the consultants have seen as desirable a follow-on DMT Program focused upon support of the country's in-service network of in-service training institutions of great importance to the country's ability to implement development, and in that effort giving a special boost to the private sector and to women. DMT II can be as simple as that.

The Consultants' recommendations for a follow-on DMT may be expressed in terms of a series of focuses--emphases chosen in order to concentrate on the project's stated purposes. These purposes are: to train middle and junior level government officials and technicians and a limited number of executives and technicians from the private sector....to the end of strengthening the managerial and technical capabilities of public and private sector manpower in "the most important development areas." Here, "the most important

development areas" means those areas jointly selected by the GOI and the USAID/India Mission as most important.

The focuses the consultants have in mind have been identified and discussed variously in earlier sections of this report. They may be summarized as follows, each reflecting a recommended dimension and at the same time a limitation of the suggested new DMT. Together they constitute the principal structural elements proposed for a DMT follow-on project.

1. A focus on in-country, in-service training.
2. A focus on middle to low level technical and managerial training.
3. A focus on using existing Indian training institutions already having successfully completed the institutionalization process.
4. A focus on using these institutions not only individually, but to the extent possible, also as part of a cohesive infrastructure for training. In the aggregate, that is what they are--a network of institutions, reflective of the Indian ethos--of the national genius for teaching and being taught.
5. A focus on training the trainers.
6. A focus on management training. As between technical and managerial training options, the managerial should have the edge in the DMT program because that is where DMT's uniqueness lies. Pure technical training, by no means to be precluded in DMT, is being done by many and is easier for more to do without collaboration. Most training institutes and centres are technically

oriented and skilled. DMT has a special contribution to make in the area of management training, and therefore its efforts should lean more heavily in this direction, both in respect of in-country courses and of U.S. participant training of trainers in support of the in-country element. This bias should apply to both the public and the private sectors.

In connection with the focus on management training, the Mission should take into account the Ford Foundation project: Management in the Public Service. The Foundation has designed this in-service training program of ambitious size well beyond its capacity to finance alone. It desires AID as well as World Bank and other cooperation and will be actively seeking this. The U.S. anchor for the project is the Nelson Rockefeller Center at the State University of New York, Albany, N.Y.

These, then, are the appropriate focuses on which to build a DMT follow-on that have been commended to the consultants as a result of their evaluation of DMT to date. This evaluation has strongly suggested the importance of stressing, in any future program, what has worked and what has been found needed and desired in the experience to date. The resulting recommended program may seem narrow to some. It is more narrow than J. Swallow's Omnibus Training Project proposal and is still narrower than the configuration that Development Associates, Inc. had in mind in preparing its 1984 Evaluation. The latter featured numbers of U.S. teams of experts in India and myriad strong linkages of Indian with U.S. training institutions. Both of these factors have proven to be important, but not, in the consultants' view to the quantitative extent anticipated. The J. Swallow proposal is an excellent, comprehensive conception, but possibly more expansive than the market could as yet bear. It cannot be faulted for desirability but the data available to the consultants does not support its feasibility for India or for USAID/India at this time.

Even the limited, focused program envisioned in this Report will pose some tough administrative management problems for the Mission, if it is to be implemented properly. Though reduced in size, there remains the problem of securing liaison relationships with U.S. institutions adequate to the need for having the right U.S. expert(s) in India at the right time to help with the in-country courses. Also needed is better, more constantly reliable intelligence, available to the Mission, the GOI, and the private sector as to training, observation, consultation, seminar, etc. opportunities for U.S.- bound participants. Most important, the Mission's Project Manager, the technical divisions, and DEA need more data in depth on the network of Indian training institutions potentially to be participating in the program. Needed is an inventory of the relevant training institutions with data as to their strong points and their needs. In other words, precisely what and who compose the network? The IIPA Report provides an excellent start listing some 187 training institutes and "centres" of direct relevance. This scratches the surface.

And there needs to be more frequent and effective liaison among DMT project management, the technical offices, the line ministries, the private sector, and DEA.

It is the judgment of the consultants that USAID's present project management staff, as effective as it has proven to be, would not be able adequately to manage the DMT follow-on project as envisioned above without help not now available. Project management calls for being in too many different places in both India and the U.S. at the same time. To alleviate this situation the following possible remedial steps are suggested:

- (a) Designate an officer in each USAID technical office as DMT liaison officer. Some technical offices believe that communications between them and DMT management need improving and DMT Management agrees. Some technical offices feel that there have been some DMT

sub-projects in their fields that should not have been approved. They recognize on the other hand that they could have "spoken up" in time and could have also placed more "desirable" projects through DMT. They did not for lack of an adequate sense of belonging to, or "owning", DMT. This cannot be resolved simply by jawboning each other. While each technical office director is in theory the person responsible for the stewardship, within his office, of "all-Mission" or "cross-cutting" Mission programs, he or she cannot do it alone. A designated senior DMT liaison officer in each technical office it is believed, would be useful.

- (b) Get an I.D.I. Assign an IDI full-time to the project for the full two years of his or her internship. The need for the intern's rotating can be dealt with. Such an assignment would be of substantial assistance in project management and it would be very good for the IDI.
- (c) Appoint Ministry DMT Liaison Officers. Designate in each Ministry, and other cooperating line entities a DMT liaison officer. Some entities, it is understood, already have them.
- (d) Strengthen DEA. Consider with DEA management how best to make more dynamic DEA's leadership in the administration of DMT. This could include both personnel strengthening and other assistance looking to the establishment of more streamlined procedures.
- (e) Devise a USAID "Country Training Plan". The IIPA training sector assessment has resulted in Ministry training plans for those ministries included in the Priority Subject Categories. These training plans should now be up-dated and improved. At the same time the USAID needs a better handle on its over-all

training objectives, both per se, and to help guide DMT. Numbers of USAID's have devised such plans, in consultation with the relevant host country entities. This would lay a base, among other things, for the Training Institutional Resources Inventory suggested above. It should be understood that AID/W can assist the Mission in the laying on of such a Country Training Plan.

- (f) Consider the Permanent Institutionalization of the DMT Program, Starting Now. There are two principle aspects of this interesting possibility. The first involves the creation of a fund, not unlike that already created by the DMT Project Agreement, but of a permanent revolving reimbursable nature. Such a fund could begin with a corpus not much different from DMT's to start: say, \$8-10 million subscribed to jointly by the GOUS and the GOI. It would be replenishable, however, whenever the balance on hand drops below, say \$2 million. The first replenishment would call for the same replenishment rates for GOUS and GOI as the initial inputs. Second replenishment would be on a, say, 50-50 basis, the third on a 40 US - 60 INDIA basis and so on; the objective, of course, being the increasing of the corpus, progressively more fully funded by the GOI until it became both fully funded and fully operational under 100% GOI power.

From the start, such a fund would play a leadership and pioneering role in in-service training for development in India as, indeed, DMT is already doing. It would continue, indefinitely, playing this role, ultimately financed entirely by India. That this is feasible is attested to by many examples in both AID's and other donor's such as the Ford Foundation's experience in India of helping to start programs that were nurtured into a vigorous life of their own without further external subvention, not the least of such examples being the IIPA itself.

The Mission should seriously consider this possibility. It will soon in any event be having to begin planning for the day when U.S. bi-lateral assistance will have completed its mission and withdraw. Planning, starting soon, is particularly desirable because it takes time to decide what and then how to preserve the positive contributions and to implement the steps necessary for doing so. It is not thought that Indian-American collaboration would cease, but that it would take a different form after bi-lateral aid has come to its natural end. DMT involves a process that is worthy of consideration for institutionalization. This process, and the concept, incidentally, probably warrant a more appropriate institutionalized name or title than DMT II. Consider: The Indo-American Development Training Fund; the Fund for Development; the Endowment for the Advancement of Technical and Managerial Training; Fund for the Advancement of Technology and Management; the Foundation for the Management of Technological Innovation; the Fund for the Management of Innovation and Technology (MIT).

The second aspect of institutionalization is also applicable to any other approach the Mission may wish to take in implementing DMT II. It is the need for technical support to project management beyond the measures suggested in (a) through (e) above. The 1984 Development Associates Evaluation wrestled with this problem but to no clear end. The Mission has considered various approaches, again, to no clear end. The inventory of training institutions; the guidance to courses in prospect and progress; the recruitment of U.S. experts; the nurturing of linkages; the identification of U.S. training opportunities; the communicating and liaison of DMT with USAID technical offices, GOI ministries, and DEA; the managing of the operational data about dozens of courses going on at any given time and scores and hundreds over the months and years--all these functions require assistance to DMT and the Mission which has been described not adequately, but no better than as "a contract with somebody". It has been suggested that the Winrock Foundation

experience has been a good one and a possible model. The Development Associates Evaluation suggested a contract with IIPA for continued servicing of the project.

The consultants' recommendations on this point are:

It seems beyond question that some kind of a support mechanism will be needed to multiply the arms, hands, and minds of the minimal Mission direct hire staff. At the DA Inc. evaluation pointed out almost 3 years ago, this was discernible if not openly recognized from the start and by December 1984 was clear. The Mission was urged then to "begin immediately to identify a proper contracting mode or modes for implementing the relationships envisaged in DMT," a solution that "should minimize labor-intensive management by Mission staff."

What such a "proper mode or modes" should be is indeed a difficult question. More study by better qualified persons having more time is needed to help the Mission find feasible and appropriate solutions. The thoughts, comments, and suggestions proffered here are intended only to stimulate the Mission's thinking on the subject.

Probably, the contracting mode chosen should be representative of both India and the U.S. with the India element the more important. Resource identification and day to day management, follow-up, and liasing among the players can best be done by Indian professionals. This suggests an Indian contractor. Competence in utilizing U.S. Resources, however, is also important and can probably be managed best by American professionals, based in the U.S., while staying in constant effective communication with DMT colleagues in India. What is being suggested then, is that the Mission explore the possibilities of a joint venture with an appropriate Indian entity the senior partner.

The appropriate Indian entity could be a public or private sector institute, consulting organization or college or university; --the U.S. organization the same. The U.S. organization would be chosen by the Indian entity, thus serving as a sub-contractor. The selection of such sub-contractor, however, would be approved by both the GOI and the USAID as would the initial selection of the Indian contractor.

While it would take time, it would in the long run be worth it to submit the selection of both the Indian and the U.S. contractors to competitive bidding.

The contractors would report jointly to the DEA and the USAID Project Manager. They would be housed in space provided by the GOI, financed out of project funds.

PRINCIPAL INTERVIEWS

R. Culbertson/A. Byrnes

DEA	Mr. K. A. Krishna Moorthy, Under Secretary Mr. S. Sudhakar Rao, Joint Secretary
Ministry of Human Resource Development Department of Women & Child	Mrs. C.P. Şujaya, Joint Secretary
Department of Welfare	Mr. R. S. Pandey, Director
Ministry of Agriculture (Directorate of Extension)	Mr. Som, Joint Secretary Mr. Alok Bhatnagar, Under Secretary
Ministry of Environment & Forests (Ganga Project Directorate)	Mr. Chakrabarti, Deputy Secretary Mr. K. R. Khan, Joint Director, Projects
IASRI	Dr. Prem Narain, Director Dr. O. P. Kathuria, Course Coordinator
MDI	Lt.Gen.(Retd) Chibber, Executive Director, Dr.L.C. Gupta, Dean
FICCI	Secretary General, D. H. Pai Panandikar & As Ummat, Asst. Secretary
FORD FOUNDATION	Dr. Tom Kessinger, Representative in India
CSIR	Mr. K. N. Johri, Jt. Advisor, International Scientific Collaboration

Directorate of Agricultural Dr. Amar Singh, Director
Extension, R. K. Furam

IIPA Mr. Ramanathan, Director

WAPCOS A. S. Kapoor, Managing Director
L. V. Kumar, Chief Engineer
Mrs. Sudha Bhave (Dy. Secretary)
Ministry of Water Resources

Medical Council of Mrs. Manorama Vaid, President
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Telecommunications Mr. I.P.S. Paul

Agriculture Office Charles Antholt, Asst. Director, AG+RM
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Dr. Rolf Lynton

Office of Child Survival Mr. Spencer Silberstein, Office Director
Dr. S. T. Mathai, Program Specialist

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International Executive Service Corps, Bombay	Dr. W. Correa, Director
SNDT Women's University Bombay	Mrs. K. H. Bhansali, Vice Chancellor Mrs. D'Souza, Registrar
Ali Yuvar Jung National Institute for the Hearing Handicapped	Dr. N. Rathna, Director
The Vaikunth Mehta National Institute of Cooperative Management	Dr. S. L. Tripathi, Professor (Rural Development)
USAID Program Office	Mrs. Zarina Bhatta Mr. T. R. Sabharwal
All Indian Management Association	Dr. Uptal K. Banerjee, Chief Executive M. Y. Ramaswamy

APPENDIX

THE SRI AVINASHILINGAM EDUCATION TRUST
COLLEGE OF HOME SCIENCES
A CASE STUDY

(Available separately at USAID/India
(New Delhi, India)