

**PROJECT EVALUATION SUMMARY (PES) - PART I**

**1. PROJECT TITLE**

Appropriate Rural Technology Development

660-0104

PD-AAS-760  
43573

**2. PROJECT NUMBER**  
660-0104

**3. MISSION/AID/W OFFICE**  
Kinshasa

**4. EVALUATION NUMBER** (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY)  
NK-7

**5. KEY PROJECT IMPLEMENTATION DATES**

<b>A. First PRO-AG or Equivalent</b> FY <u>84</u>	<b>B. Final Obligation Expended</b> FY <u>84</u>	<b>C. Final Input Delivery</b> FY <u>87</u>
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**6. ESTIMATED PROJECT FUNDING**

<b>A. Total</b>	\$ <u>185,000</u>
<b>B. U.S.</b>	\$ <u>134,000</u>

**7. PERIOD COVERED BY EVALUATION**

From (month/yr.) June 1984  
To (month/yr.) October 1985

**REGULAR EVALUATION**     **SPECIAL EVALUATION**

**8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR**

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., diagram, SPAR, PIO, which will present detailed request.)

<b>B. NAME OF OFFICER RESPONSIBLE FOR ACTION</b>	<b>C. DATE ACTION TO BE COMPLETED</b>
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- CEPAS's role in the technology transfer process should be explicitly stated; project objectives need to be reformulated accordingly.
- Scopes of work for the CEPAS-AT staff, stating explicitly their responsibilities to the project, should be prepared.
- USAID and CEPAS should reconsider the costs and benefits of the videotaping activity. Unless some new information can be provided to justify this activity, it should be eliminated from the project. The disposition of the planned audio-visual equipment, which will arrive in Kinshasa at the end of November, should be mutually decided upon by USAID and CEPAS.
- The tie-dye activity, as well as other project management type activities, should be phased-out of the project. Funds used to purchase dye for the tie-dye activity should be recovered and designated for other project activities as soon as possible.
- The CEPAS-AT library documents should be made more accessible to visitors.

USAID/CEPAS	Feb. 1986
USAID/CEPAS	Feb. 1986
USAID/CEPAS	Feb. 1986
CEPAS	June 1986
CEPAS	June 1986

**9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Project Paper     | <input type="checkbox"/> Implementation Plan e.g., CPI Network | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Financial Plan    | <input type="checkbox"/> PIO/T                                 | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Logical Framework | <input type="checkbox"/> PIO/C                                 | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PIO/P                                 | <input type="checkbox"/> Other (Specify) _____ |

**10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT**

- A.  Continue Project Without Change
- B.  Change Project Design and/or  Change Implementation Plan
- C.  Discontinue Project

**11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)**

Debra A. Rectenwald, Evaluation Officer  
Carol Felkel, Project Manager

**12. Mission/AID/W Office Director Approval**

Signature: *Mr. Richard L. Podol*

Typed Name: Mr. Richard L. Podol

Date: 17 Oct 85

**PROJECT TITLE**

Appropriate Rural Technology Development.

(page 2)

660-0104

**PROJECT NUMBER**

**MISSION OFFICE**

**EVALUATION NUMBER** (Enter the number maintained by OIG reporting unit e.g., Country or AID/W Administrative Office, Fiscal Year, Serial No. beginning with No. 1 each FY)

REGULAR EVALUATION  SPECIAL EVALUATION

**KEY PROJECT IMPLEMENTATION DATES**

<b>A. First PRO-AG or Equivalent</b>	<b>B. Final Obligation Expected</b>	<b>C. Final Input Delivery</b>
FY _____	FY _____	FY _____

**ESTIMATED PROJECT FUNDING**

<b>A. Total</b>	\$ _____
<b>B. U.S.</b>	\$ _____

**PERIOD COVERED BY EVALUATION**

From (month/yr.) \_\_\_\_\_  
 To (month/yr.) \_\_\_\_\_  
 Type of Evaluation Review \_\_\_\_\_

**ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR**

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PID, which will present detailed request.)

**NAME OF OFFICER RESPONSIBLE FOR ACTION**

**DATE ACTION TO BE COMPLETED**

6. Financing of international travel and of any new proposed appropriate technology activities should be cleared by the USAID Project Officer case by case.

USAID

Ongoing

**INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Project Paper     | <input type="checkbox"/> Implementation Plan e.g., CPI Network | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Financial Plan    | <input type="checkbox"/> PID/T                                 | _____  |
| <input type="checkbox"/> Logical Framework | <input type="checkbox"/> PID/C                                 | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PID/P                                 | _____  |

**ALTERNATIVE DECISIONS ON FUTURE OF PROJECT**

- A.  Continue Project Without Change  
 B.  Change Project Design and/or  Change Implementation Plan  
 C.  Discontinue Project

**PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Name and Title)**

**Mission/AID/W Office Director Approval**

Signature \_\_\_\_\_

Typed Name \_\_\_\_\_

Date \_\_\_\_\_

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## **FES EXECUTIVE SUMMARY**

### **1. PROJECT TITLE AND NUMBER**

Appropriate Rural Technology Development Project, (660-0104)

### **2. - PROJECT DESCRIPTION AND DEVELOPMENT PROBLEM**

In June 1984, USAID signed an Operational Program Grant (OPG) with the Centre d'Etude pour l'Action Sociale (CEPAS). This OPG, a continuation of an earlier Improved Rural Technology (IRT) grant, is a three-year activity whose purpose is to develop the long-term institutional capacity of the Appropriate Technology Division at CEPAS to promote appropriate technologies among rural agents in Zaire, and to provide them with technical assistance for developing projects.

### **3. PURPOSE OF THE EVALUATION**

This first mid-term evaluation examines the project's progress and determines if objectives identified in the project agreement can be feasibly met by the project's PACD in September 1987.

### **4. EVALUATION METHODOLOGY**

CEPAS's role in the technology transfer process was identified as the collection and dissemination of appropriate technology information. Project components were examined in terms of this role.

### **5. FINDINGS**

The Appropriate Technology Library that has been set up at CEPAS is the best in the country. Project staff personnel have effectively used this library to build a favorable reputation for CEPAS-AT in Kinshasa. CEPAS-AT has also successfully published the "Répertoire de Développement", a comprehensive compendium describing the organizations in Zaire working in appropriate technology.

The project's OPG foresees CEPAS disseminating appropriate technology information to the public through workshops, video-tapes, slide presentations, site visits, consultations, and financing of small sub-projects. The project's design fails to specifically define project staff's responsibilities in regard to these activities; because of personnel constraints some activities have been neglected in favor of others. It is now clear that the project as planned is too ambitious and more complex in execution than organizational capacities can accommodate. This has caused the project's direction to appear unfocused.

## 6. LESSONS LEARNED

This evaluation reinforces USAID's earlier findings and conclusions that such small projects must be kept as simple as practicable, avoiding overambitious implementation demands and technological sophistication, in order for small organizations to have a chance of achieving desired objectives.

## 7. RECOMMENDATIONS

USAID recommends that the OPG be amended, concentrating the project's focus on its original, more narrow, but more realistic goal of gathering and disseminating appropriate technology information. (This was the project's goal under the IRT.) Sub-project management activities should be limited; project staff should engage in such activities only when payoffs appear great. CEPAS should present all proposals for sub-project involvement or financing to USAID for approval.

Please refer to the PES facesheet for specific recommendations.

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## I. INTRODUCTION

In June 1984, USAID signed an Operational Program Grant (OPG) with the Centre d'Etude pour l'Action Social (CEPAS) to develop the institutional capacity within the Appropriate Technology Division of CEPAS (CEPAS-AT) to assist the low-income population in Zaire to apply appropriate technology solutions to development. CEPAS, founded by the Jesuits in 1962, is a non-profit private voluntary organization focusing on education and training. In 1969, CEPAS added to its activities, participation in the outreach work of INADES-FORMATION, a Jesuit educational organization based in Abidjan. The organization provides adult education essentially through correspondence courses. CEPAS-AT is one of four divisions under the INADES program at CEPAS.

This mid-term evaluation examines the project's progress to determine if objectives identified in the project paper can be feasibly met by the project's PACD in August 1987. The evaluation was conducted by the USAID Evaluation Officer during the last week in October and the first two weeks in November, 1985.

## II. EVALUATION METHODOLOGY

Appropriate technology, in regard to CEPAS, concerns primarily food processing (e.g. manioc mills, rice hullers), water supply (shadoof, hydraulic rams), transportation (carts, wheelbarrows), use and conservation of energy (solar equipment, charcoal burners), and handicrafts (tie-dye). Some of these technologies are new ideas being introduced by CEPAS; others are ideas which have been successfully applied in different parts of the country. The technology transfer process will be defined by examining the steps CEPAS undertook to introduce tie-dye techniques to a group of Kinshasa women.

First, the problem was studied and potential solutions researched (the women had requested income-generating ideas). Second, primary materials were procured (cloth from UTEXCO and dye from abroad were purchased). Third, training of trainers and beneficiaries took place (a short-term consultant taught the women tie-dyeing techniques and two women were sent to Mali for training). Next, the technology's intended output was produced and marketed (the women dyed the cloth and looked for customers). Finally, review of whether the technology was indeed appropriate was carried out, and necessary changes (adaptation) were implemented (the women found that a certain quality of material was preferred, and are now trying to procure more of that same material).

Thus the process can be defined as research, procurement, training, production, marketing, review, and adaptation. CEPAS-AT's primary role in this process, as extrapolated from the OPG, is to collect and disseminate information on all these phases. It is to act as an informational backstop to technology transfer by collecting and supplying information during the process. Limited personnel, facilities, and funding preclude the organization from undertaking project management activities while effectively fulfilling this role. These definitions of the technology transfer process and CEPAS-AT's role were used to conduct the evaluation.

### III. PROJECT STATUS

The project's key activity, cited in the OPG, is the organization of ten workshops to be held throughout the country. An important preparational step for these workshops was to have been a tour of the training area before the workshop to film ongoing appropriate technology experiments or uses. Audio-visual technicians on the CEPAS staff were to do the filming. Two or three weeks later the Appropriate Technology Advisor was to arrive at the site to conduct the workshop with pre-selected participants. Slide presentations and audio-visual equipment would be used to demonstrate various appropriate technologies.

CEPAS-AT has held many "workshops;" however, these workshops were not prepared as described in the OPG. The workshops were conducted as simple training sessions, sometimes involving only one participant. No field surveys of the workshop area were completed beforehand, and no slide presentations took place. Approximately one-third of the project's dollar budget was spent, as planned, on audio-visual equipment. The audio-visual technicians, however, left the project and have not been replaced: No one on the present project staff has audio-visual experience or a clear understanding of the project's objective for this equipment.

The feasibility of implementing these workshops as described in the OPG should be reassessed. Questions which need to be addressed include the following. Who would participate in the workshops? How would primary materials be made available? How would training areas be selected? Where in Zaire are there enough ongoing appropriate technology uses to warrant a film crew for three weeks? What sorts of appropriate technologies have been identified for filming? To whom would the films be shown? How would they be shown?

The project's apparent desultoriness is primarily a result of the vague description of the project staff's responsibilities in the OPG. (Project outputs are listed in Annex A.) For example, while defining workshops as the major activity, the paper also calls for "three models of appropriate equipment to be built, tested, and adopted by specific communities each year." It does not attempt to thoroughly analyze project staff capabilities nor to estimate the extent to which project personnel might have to become involved in these activities. CEPAS-AT's staff has become perhaps too involved in project management type activities (e.g., procuring primary materials, locating project managers, training trainers, and addressing day-to-day operational problems), alighty neglecting important information-disseminating responsibilities.

The OPG also foresees that project staff will each year produce twelve video films, prepare three publications on appropriate technology, and make 30 site visits, as well as continue to provide consulting services. It is unrealistic to expect the two-member CEPAS-AT staff to achieve all of these objectives; preparing twelve films alone would be a full-time job for a qualified five-member staff.

The project needs to be refocused; project objectives need to be redefined. CEPAS has over twenty years of experience in Zaire; this is not the first time that the organization has had to reorient itself. A world-wide evaluation of the INADES program, recently conducted, has stirred INADES-Zaire to redefine its own program objectives. Hence, the evaluation of the CEPAS-AI project is timely; CEPAS's director intends to incorporate evaluation recommendations in revision plans for the division.

#### IV. PROJECT COMPONENTS

##### A. Staff

Father Didier de Failly, who conceived and directed both this project and the predecessor Improved Rural Technology (IRT) project, recently left for a new post in eastern Zaire (Kivu). The present project staff comprises two Zairian civil engineers and a Zairian secretary who is responsible for the library. (The project also employs a driver). Engineer Lungela, the current project manager, worked three years under Father De Failly. He is also responsible for appropriate technology questions on small tools and food processing. Engineer Kiamfu, recently reassigned from another CEPAS division, assists the project manager. In addition he is responsible for gathering information on technologies related to water and energy. The engineers are capable but lack experience and a clear understanding of the project's purpose. Scopes of work should be prepared for them explicitly stating their responsibilities to the project.

The scopes of work should specifically relate to CEPAS-AT's role of collecting and disseminating appropriate technology information. The engineers should be included in project planning and budget preparations. They should be encouraged to spend much more time travelling in-country, educating themselves on extant appropriate technology uses in Zaire. As they visit project sites, they should identify and colligate for reference those variables which facilitate and those which impede the technology transfer process.

Much of Engineer Lungela's time has been consumed by sub-project management responsibilities. The size of the CEPAS-AT staff, among other constraints, precludes its members from becoming managers of other appropriate technology projects; these sorts of responsibilities should be limited in the new scopes of work. The staff should spend less time procuring primary materials and solving day-to-day operational problems, and more time educating themselves and others on appropriate technologies.

##### B. Library

The CEPAS-AT library contains over 4,000 appropriate technology documents and subscribes to 82 periodicals ranging in topic from solar energy to reforestation to food processing. These books and pamphlets, collected world-wide, are arranged by subject according to a catalogue system devised by the Socially Appropriate Technology International Information Service (SATIS). Approximately 250 library documents were purchased over the past year with project funds.

The library is the most comprehensive collection on appropriate technology in Zaire. Unfortunately, the collection is housed in the Appropriate Technology Division, which location is not conducive to study. The room is cramped with few places to sit. Although this arrangement facilitates the Appropriate Technology Advisor's tasks, it discourages information seekers from browsing through and studying the volumes. Visitors are apt to feel that they are distracting the engineer from his work. This arrangement may explain why the number of library visitors has diminished from approximately 100 in 1983 (when the library opened), to about 50 in 1985.

The library should be set up to accommodate visitors. One solution would be to move the CEPAS-AT library to the general library which services over 2000 visitors a year. This library has many tables and chairs, and is open all day, allowing visitors to browse or study at their convenience.

The library would also provide better service if it had a general catalogue system.\* At present, the librarian assistant is sedulously recording document titles in a large, bound book. She should record not only the title, but also the address where the document may be purchased, and the price. This information would be valuable to clients who do not have time to read the entire document at CEPAS and who would like a copy for their own use. (A document may be photocopied in the general library for \$3.00 per page.) Another suggestion is to record this information on index cards so that documents may be added in their proper subject areas and be easily located by visitors. (Perhaps the USAID Librarian could visit the CEPAS library to make further suggestions on how the library could be become more "user-friendly".)

### C. Finances

Father Segers, CEPAS's director, has personally managed the project's accounts so far. He has agreed to start including the engineers in budgetary preparations; they are presently preparing the 1986 local currency budget. Listed and discussed below is a general description of dollar and local currency expenditures for the project.

1. Dollars. Under this OPG, USAID granted CEPAS \$134,000; approximately \$50,000 has been spent to date. This money has financed audio-visual equipment (\$30,000), international travel (\$9,000), a Renault (\$5,800), and appropriate technology documents (\$3,800). Remaining dollars are designated for a Toyota Land Cruiser (\$13,000), international travel for CEPAS-AT staff, short-term consultants, and appropriate technology documents.

(a) Audio-visual Equipment. Father de Faily purchased professional video equipment from Europe to film appropriate technologies in Zaire. The films were intended to facilitate technology transfer by enabling people to grasp appropriate technology concepts through viewing the process step by step on film. This activity, although appealing, has turned out to be impractical. Now that Father de Faily has left, no one on the CEPAS staff has any experience with professional filming equipment. Miss Mwya, the audio-visual department head, is experienced with some audio-visual equipment but not with video-tape equipment. She and/or any other staff members would have to be trained from the beginning. Even if the project decided to provide this extensive training, other major problems remain which would probably impede this activity from ever being effectively implemented.

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\*A cross-reference catalogue system, as recommended in the 1983 IRT CEPAS evaluation, is unnecessary. When visitors request information on appropriate technology, they generally pose questions on certain topics, not specific titles or authors.

First, the specific subject matter to be filmed has not been identified. To date no projects have been chosen for filming; no schedule for the equipment's use has been prepared. Second, the market for these films has been insufficiently researched. Who will be able to buy, borrow, or otherwise use the films? To whom would they be shown? CEPAS-AT staff members were unable to specifically answer these questions during the evaluation.

At this stage it seems ill-conceived to spend up to half the project's total budget on an activity that is not likely to achieve its objective and that, were the attempt made nonetheless, would probably crowd out other project objectives. And if this activity were implemented, would using the equipment two, or three times a year justify this expense? Another concern is that CEPAS might feel obliged to lend this equipment to other organizations if it remains unused at CEPAS; without proper supervision the equipment could be easily damaged.

This evaluation recommends that USAID and CEPAS reconsider implementing this component activity. Preliminary discussions with CEPAS's director indicate that he also has reservations about the activity. If the activity is eliminated from the project, USAID and CEPAS should mutually decide upon the disposition of the video equipment, which has already been ordered.

(b) Renault-4. The Renault-4 replaced a Fiat station wagon that the Appropriate Technology Division had borrowed from another CEPAS division during the IRT project. The Fiat is now attached to the Appropriate Technology Division; unfortunately, it is broken down and spare parts to repair it are unavailable locally. This evaluation recommends that the sale proceeds from the Fiat be used to purchase a new Renault for CEPAS-AT, supplementing these funds with counterpart funds (approximately Z350,000).

(c) International Travel. Engineer Lungela travelled to West Africa in March and recently left for India to attend an international SAIMS conference. Miss Mweya, head of the audio-visual department, attended the International Conference on Women in Nairobi where technologies useful to rural women were exhibited and discussed. CEPAS-AT staff should be encouraged to do more in-country and less international travel. The staff has not been sufficiently exposed to appropriate technologies in this country to usefully represent Zaire at international conferences. Remaining dollars designated for this expense category should be reallocated.

(d) Toyoto Land Cruiser. The Toyoto Land Cruiser should arrive in Kinshasa in January. It will be extremely useful to the project. The vehicle will enable CEPAS-AT staff to visit rural projects.

2. Local Currency. To date the project has been granted Z2,300,000 in counterpart funds. Approximately Z1,700,000 was spent on compensation of the Appropriate Technology staff (two engineers, one secretary, and one driver), per diem, in-country travel, locally procured office supplies, and appropriate technology documents.

Last month CEPAS submitted a proposal to spend remaining counterpart funds. The proposal requested permission to use local currency for an appropriate technology publication, travel for 20 candidates to the Bukavu conference on appropriate technology in January, and small appropriate technology projects. USAID intends to approve the proposal, but will retain the right to authorize candidates for the Bukavu conference, and to approve funding for individual appropriate technology projects. USAID will allow CEPAS to play a limited role in supporting (financially and technically) experimental appropriate technology sub-projects. Support will only be offered to those projects whose payoffs are deemed to be great.

#### D. Activities

1. Tie-dye. The tie-dye activity at CEPAS is briefly described in the first section: To give them an income-generating activity, CEPAS is training urban women to tie-dye. Under this activity, project staff members have been involved in day-to-day problem-solving, procurement of supplies, and project funding. CEPAS-AT does not have the staff, facilities, or funding to manage the entire technology transfer process; management of this activity should be phased-out of the project. Father Didier started this phase-out process before his departure by designating a University woman as project manager. CEPAS recently purchased Z350,000 worth of dye; it should be sold as soon as possible so that the funds may be reallocated to other project purposes. At present a large stock of dye and cloth is stored at a participant's house in Matete. This stock should be donated to the women for future project work.

2. Charcoal Burners. CEPAS-AT has been promoting a fuel-efficient charcoal burner. An elderly Zairian metal-worker, who fabricated the original burner with CEPAS's guidance, is being paid to teach others how to construct the burner from scrap-metal. Three one-week workshops were held in Lubumbashi (each training one person) and two one-week workshops were held in Kinshasa (training a total of six people at the handicap center in Kakesi). The Centre d'Adaptation des Techniques Energies Bois (CATEB) partly financed the workshops. CEPAS should phase itself out of the funding and management of this activity, perhaps convincing CATEB or other interested organizations to continue the work.

3. Shadoof. CEPAS-AT is constructing a "shadoof" (a primitive device for raising water with a bucket and pulley) as a pilot project with the "Commercialisation des Produits Maraichers et Fruitières" (CECOMAF), financed by the French. CEPAS-AT supplies the materials while CECOMAF provides the labor. CEPAS-AT has been having difficulties procuring a strong pole to pull the bucket up from the well. CEPAS should allow CECOMAF to locate this pole and should terminate its management of this activity.

4. Publications. This year CEPAS published the "Répertoire de Développement", the "yellow pages" of development in Zaire. The book contains an extensive listing of research institutions, development projects, and communication and training organizations in Zaire. CEPAS, in collaboration with local artists, has also published an illustrated storybook on the proper construction of potable water sources. And it has produced a book on cattle-raising and associated technologies (building dipping tanks, constructing fencing) in collaboration with a Bandundu Catholic mission. CEPAS hopes to publish several appropriate technology documents with CEBEX in Bas-Zaire.

5. Other Activities. In early 1985, CEPAS held a three-month training session with the "Condition Feminine". A member of the organization participated weekly in CEPAS-AT activities. Last July, CEPAS held a workshop in Lubumbashi on the preparation of various derivatives from soya.

CEPAS-AT plans to finance soap and jam-making projects with the "Association pour la Promotion du Développement Endogène des Communautés de Bas-Zaire" (PRODECK) in Bas-Zaire. The staff also would like to support a cement/fiber tile project proposed by the Salvation Army in Bas-Zaire. CEPAS-AT staff personnel should be encouraged, to exclude project management activities from their scope of work and consider only those projects with potentially great payoffs for funding.

## V. CONCLUSIONS

The technology transfer process commonly is a vague concept; not readily defined, perhaps difficult to implement. Clearly nonetheless, one difficulty impeding the transfer process is the lack of information. Millions of villagers remain unaware of ideas and tools that could change their lives for the better, sometimes dramatically. CEPAS-AT is making progress towards breaking down this barrier by building its institutional capacity to collect and disseminate information on appropriate technology ideas. More than 4000 appropriate technology documents have been gathered for its library, consultative services have been expanded, CEPAS-AT staff members regularly visit project sites, and pamphlets on appropriate technologies have been made available to the public.

The technology transfer process can be complicated and time-consuming. CEPAS-AT's role in this process should be explicitly defined lest CEPAS overextend itself. For the year and half remaining in this project, CEPAS-AT should concentrate on: (1) collecting and disseminating appropriate technology information in Zaire, (2) exposing appropriate technology ideas to more of the population, and (3) reinforcing and spreading technologies that have already been introduced and accepted by the Zairian population.

#### IV. RECOMMENDATIONS

- A. CEPAS's role in the technology transfer process should be explicitly stated; project objectives need to be reformulated accordingly.
- B. Scopes of work for the CEPAS-AT staff, stating explicitly their responsibilities to the project, should be prepared.
- C. USAID and CEPAS should reconsider the costs and benefits of the videotaping activity. Unless some new information can be provided to justify this activity, it should be eliminated from the project. The disposition of the planned audio-visual equipment, which will arrive in Kinshasa at the end of November, should be mutually decided upon by USAID and CEPAS.
- D. The tie-dye activity, as well as other project management type activities, should be phased-out of the project. Funds used to purchase dye for the tie-dye activity should be recovered and designated for other project activities as soon as possible.
- E. The CEPAS-AT library documents should be made more accessible to visitors.
- F. Financing of international travel and of any new proposed appropriate technology activities should be cleared by the USAID Project Officer case by case.

-1-  
ANNEX A  
PROJECT OUTPUTS

Below is a list of the project outputs identified in the OPG to be completed by the project's PACD, September 1987. A brief comment is included describing the progress that the project has made towards fulfilling the objective.

1. CEPAS should hold four workshops on appropriate technology per year.

Eight workshops have been held on tie-dye techniques, the preparation of soya derivatives, and the charcoal burner.

2. CEPAS should add at least 500 documents to its appropriate technology library per year.

The OPG does not specify what a "document" is. To date, \$3,800 has been spent on approximately 250 documents. These documents vary from 300-page books to single page articles.

3. At least 100 questions should be received and responded to by the appropriate technology documentation service per year.

Because of the poor postal system, CEPAS has been unable to correspond as effectively as it would like with clients in the interior; however, CEPAS has received and responded to approximately 35 letters in the past year.

4. At least 100 visits per year to the CEPAS library should be made by visitors.

The number of visits to the CEPAS-AT library is as follows: 1983-100, 1984-45, and 1985-50. Perhaps one reason that this objective has not been met is because the library has not been set up to best accommodate visitors.

5. CEPAS should produce 12 video films a year.

The CEPAS-AT member with relevant audio-visual experience has left CEPAS. If this objective is to be met, new staff must be trained from the beginning in photography and editing skills.

6. At least three publications on specific appropriate technology tools or equipment should be published per year.

In collaboration with local artists, CEPAS has produced a "bande-dessinée" (illustrated guide) on water source construction; in collaboration with a Catholic mission in Bandundu, CEPAS has published a book on cattle-raising. Finally, the "Répertoire de Développement", a comprehensive compendium describing the organizations in Zaire working in appropriate technology, was published this year.

7. At least three models of appropriate equipment should be built, tested, and adopted by specific communities per year.

CEPAS has been working on the fuel-efficient charcoal burner, tie-dying, and a labor saving water drawing device (shadoof).

8. At least 30 visits to AT project sites should be undertaken each year.

Although no specific records are kept on such visits, CEPAS project personnel have visited Bas-Zaire, Shaba (Lubumbashi), and Bandundu (Kikwit) several times throughout the year, totaling at least 30 visits.

9. CEPAS should respond substantively to at least 10 requests per year for help in securing financial and technical assistance.

CEPAS has responded to more than ten requests. It has promoted the following technologies in response to requests: (a) tie-dying, (b) charcoal burners, (c) shadoof, (d) soya derivatives, (e) cattle-raising, and (f) proper construction of potable water sources. CEPAS had technical and financial requests from many other organizations, but has had to turn down these requests because of time constraints.

10. At least three project sponsors should be assisted every year in planning, implementing, and advertising appropriate technology.

CEPAS has worked collaboratively with the Protestants (CEDECO), the French (CECOMOF), the Salvation Army, UNHCR, UNICEF, the Canadians (CATEB), and "La Condition Feminine."