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AGENCY FOR INTERNATIONAL DEVELOPMENT  <b>PROJECT PAPER FACESHEET</b>		1. TRANSACTION CODE  <input type="checkbox"/> A ADD <input checked="" type="checkbox"/> C CHANGE <input type="checkbox"/> D DELETE	PP  2. DOCUMENT CODE  3
COUNTRY/ENTITY Tunisia		4. DOCUMENT REVISION NUMBER <input type="text" value="1"/>	
PROJECT NUMBER (7 digits) <input type="text" value="664-0300"/>	6. BUREAU/OFFICE A. SYMBOL <input type="text" value="ME"/>	7. PROJECT TITLE (Maximum 40 characters) <input type="text" value="SCIENCE AND TECHNOLOGY DEVELOPMENT"/>	
ESTIMATED FY OF PROJECT COMPLETION  FY <input type="text" value="81"/>		9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY <input type="text" value="77"/> B. QUARTER <input type="text" value="1"/> C. FINAL FY <input type="text" value="79"/> (Enter 1, 2, J or 4)	

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	D. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
D. APPROPRIATED TOTAL	1538		1538	2088		2088
(GRANT)	1538		1538	2088		2088
(LOAN)						
HER 1.						
I.S. 2.						
1ST COUNTRY		1015	1015		1315	1315
OTHER DONOR(S)						
TOTALS	1538	1015	2553	2088	1315	3403

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY		H. 2ND FY		K. 3RD FY	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
ST	750	870		1538		550			
TOTALS				1538		550			

A. APPROPRIATION	N. 4TH FY		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE
	D. GRANT	F. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
					2088		<input type="text" value="0530"/>
TOTALS					2088		

DATA CHANGE INDICATOR. WHERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 = NO  
 2 = YES

14. ORIGINATING OFFICE CLEARANCE  SIGNATURE  TITLE Robert Beckman Acting Director		DATE SIGNED <input type="text" value="052579"/>	15. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION  <input type="text" value="0530"/>
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REVISION NO. 1

To the Science and Technology Development Project (Phase I)

SUMMARY AND RECOMMENDATIONS:

A. Face Sheet Data (See PP Facesheet)

B. Recommendation

Approval is requested for the following authorization:

Increase Life of Project (LOP) funding for Phase I from the authorized level of \$1,538,000 to a new level of \$2,088,000.

C. Purpose of this Project Paper (PP) Revision

As described in the accompanying evaluation, the project has encountered implementation delays which have altered the original timing projection for some of its components. With the concurrence of AID/W, the Mission has decided that it would be premature to attempt to prepare a PP for Phase II before accumulating more experience and bringing in specialized expertise for such areas as desertification and standards. In addition, the renewable energy project which originally was to play an important role in Phase II has been separated out of the general S&T program, since separate funds are available, and an energy PP is in preparation. A total of \$550,000 was budgeted for the S&T program in FY79. None is budgeted for FY80 since it was anticipated that Phase I might carry over until FY81, when a large additional sum will become available. The agreed strategy, as described in the accompanying evaluation, is to request that the \$550,000 originally scheduled for Phase II be used to amend Phase I in order to:

- a) reinforce already established momentum and move the project ahead in significant ways;
- b) respond to GOT concerns for continuation add/or expansion of existing projects and;
- c) pave the way for clear and detailed design of Phase II.

The following is a breakdown by subproject of this request for an additional \$550,000 for Phase II, to be expended largely in FY80:

Subproject No. 1 - Systems Analysis/Operations Research - No additional funds requested

Subproject No. 2 - Computer Technology - An additional \$100,000 is requested for the following purposes:

- a) **Technical Assistance - \$45,000.** Because contract costs for this subproject were underestimated, the original plan for short-term advisors was cut from nine to three person-months. It has become increasingly evident that additional short-term advisors for the teleprocessing network will be necessary, if the project is to preserve its momentum. Thus, an additional \$45,000 is needed for this purpose.

**Training - \$35,000.** In addition to training plans for engineers who will travel to the United States Central National de l'Informatique (CNI), wishes to invite U.S. experts to Tunisia for in-country workshops and training sessions. It is estimated that an additional \$15,000 will be needed for U.S. training, plus \$20,000 for in-country training.

**Commodities - \$15,000.** In order to cover unanticipated costs in Phase I, the budget for commodities was reduced from \$40,000 to \$25,000. It is requested that \$15,000 be restored in this amendment.

**Invitational Travel - \$5,000.** Brief visits to U.S. teleprocessing networks by high officials of CNI, the Ministry of Transportation and Communications and other agencies concerned with the establishment of a teleprocessing network in Tunisia would not fall under the category of training, but would nevertheless be highly useful. Thus an additional \$5,000 is requested for invitational travel.

<b>BUDGET SUMMARY -</b>	<b>Technical Assistance</b>	<b>\$45,000</b>
	<b>Training</b>	<b>35,000</b>
	<b>Commodities</b>	<b>15,000</b>
	<b>Invitational Travel</b>	<b>5,000</b>
		<b>\$100,000</b>

- Subproject No. 3 - Remote Sensing - \$120,000 is requested as described below:

The technical assistance provided by the United States Geological Survey (USGS), to the Remote Sensing project will reach a critical state after the interagency seminar being held in Tunis in late May. In order to permit the rapid follow-through of recommendations made at that meeting, held with the participation of visiting USGS scientists, the following activities are deemed necessary during FY80:

Training - \$55,000.

With the development of the remote sensing laboratory in the Direction des Ressources en Eau et en Sol (DRES), of the Ministry of Agriculture, training of Tunisians will have continued great importance. So far, training in the U.S. has been valuable to the Tunisian engineers and such should be pursued in order to strengthen this program. The \$550,000 requested herein will permit the training of approximately 13 person-months in specialized short-term remote sensing technologies and their practical applications.

USGS PASA Activities

1. Technical Assistance - \$2,800

Interpretation and mapping in the areas of land use, soils, vegetation including crops and forests, geology, hydrology, studies of desertification and inland and coastal pollution, geomorphology and pedology. Six visits to Tunisia by U.S. consultants. Total cost of the above activities is \$40,800. However, remaining funds under present PASA total \$38,000; thus new funds required are \$2,800.

2. Lab Equipment - \$15,000

An additional \$15,000 is required for upgrading of King concept color film and paper processor to handle 36 inch or 40 inch maximum paper size and for purchase of additional tanks and accessories for chemical mixing and quality control of photo lab processing steps.

3. Lab Supplies - \$5,000

Large format color and black and white photographic paper and film for training and initial production runs. Additional supplies of color chemistry pending establishment of Tunisian supply lines.

4. Digital Image Processing - \$30,000

Digital enhancement of 7 full scenes plus sections of 9 additional scenes for full mosaic coverage of Tunisia and for use in studies within the various disciplines.

5. Photo lab processing and acquisition of Computer-compatible tapes - \$15,000

Digital image processing starts with magnetic tapes purchased from

EROS Data Center and/or Telespazio, Italy and ends with tape-to-film conversion and further photographic processing for production of imagery used by U.S. consultants in preparation of working materials. Reproduction for distribution to Tunisian agencies will be done at the photo lab established in the Direction of Water and Soil Resources, Tunis.

Note on items 2, 3, 4, and 5 above:

USGS assessment on equipment and supplies is 15% and on digital and photographic image processing 10%. The present PASA balance of \$10,000, if applied equally to above 4 items, can reduce new funds needed by \$2,500 in each case. Item 2 would then be \$12,500 in new funds, item 3 \$2,500, item 4 \$27,500 and item 5 \$12,500 plus assessment as follows:

ITEM 2	-	\$12,500	+ 15%	=	\$14,375
ITEM 3	-	2,500	+ 15%	=	2,875
ITEM 4	-	27,500	+ 10%	=	30,250
ITEM 5	-	12,500	+ 10%	=	13,750
					<u>\$61,250</u>

These totals plus item 1 add to \$64,050, rounded to \$65,000, and constitute new funding required for the AID/USGS PASA for continuation to October 1980 under Phase I.

Subproject No. 4 - Pollution Research - \$125,000 additional funds are requested as follows:

The pollution research program provides a number of opportunities to intensify follow-through actions which the return of four participants from U.S. training makes possible. Additional U.S. equipment is also highly desirable.

The host country counterpart organization, the Laboratoire Central (LC), is anxious to increase its contacts with U.S. organizations. With the international division of the National Bureau of Standards, it has traced a modest program of exchanges over the next three years, two of which will be covered by this amendment. The following is a breakdown of expenses for this program:

- |    |  |           |
|----|--|-----------|
| a. | Attendance at NBS workshops (4 engineers).   | \$ 12,000 |
| b. | Guest assignment to NBS for two technical specialists to transfer test methodologies (6 mos. to one year).                                       | 15,000    |
| c. | Short-term NBS consultants to Tunisia in selected fields to review LC research, test programs and delivery systems (6 - 8 for one to two weeks). | 20,000    |

d. Technical assistance (in U.S.) on specifications, transportation, maintenance spare parts, calibration, etc. (but not actual purchase) of instruments.	\$ 10,000
e. Technical literature, reference materials, as for instrument calibration.	8,000
f. Three U.S. experts for week-long workshop in Tunisia for engineers and technicians from <del>EE</del> and other institutions.	15,000
g. Purchase of additional pollution research equipment.	40,000
h. Invitational Travel	5,000
	<u>125,000</u>
TOTAL	

Subproject No. 5 - Petroleum Technology - \$120,000 is required as follows:

The AID training program has already convinced Tunisian Enterprise of Petroleum Activities (ETAP), that U.S. training is of great value to its engineers and managers. It has established an excellent English language training facility, which is preparing a number of new candidates for specialized training. With the help of American specialists it plans to hold training sessions in Tunisia for a wider spectrum of its petroleum and gas engineers. ETAP has the country's most sophisticated energy planning team which is attempting to maximize use of its fossil fuel reserve and plan for a future which will diversify its sources of energy. It has been charged with the design of a solar heating program which envisages local production of components.

While AID has envisaged that the program launched to date will eventually permit a reimbursable program which will last beyond an AID presence, it is important that the momentum and enthusiasm of this first phase not be halted at this time. The following extension of activities, therefore, are deemed necessary as a logical extension to this key transfer of technology.

Technical Assistance (1/2pm)	\$ 40,000
Participant Training (20pm)	60,000
Purchase of Training Materials	15,000
Invitational Travel	5,000
TOTAL	\$120,000

Subproject No. 6 - Management and Design of Phase II - \$85,000 additional funds are required

Given the need to sharpen and add to U.S. contracts in science and technology, in particular for such new areas as desertification and standards, design teams will be necessary during FY80 from universities, private firms, and other government agencies. An

example would be a team, possibly from the University of Utah, which could design a Phase II program for conversion of ongoing basic research on the ecological process of desertification into research on practical measures needed to check the destructive process. Such activity is highly valuable. It was out of Phase II explorations in renewable energy that the spin-off energy project for close to a million dollars evolved. An additional \$85,000 for technical assistance, invitational travel, special studies, etc. is requested.

**D. Recapitulation of funds requested under this Project Paper revision:**

Systems Analysis/Operations Research	-
Computer Technology	\$100,000
Remote Sensing	120,000
Pollution Research	125,000
Petroleum Technology	120,000
Design of Phase II	<u>85,000</u>
TOTAL	\$550,000

**E. GOT Contribution:**

The GOT contribution in support of the above mentioned activities is estimated at \$300,000 in Tunisian Dinar equivalent. This represents the Tunisian contribution to the Trust Fund Account and in kind support, i.e. salaries of Tunisian Counterparts, logistic support to the project, international travel of participants and other contributions to seminars and/or panels to be held under this project.