AID INSTRUCTION

REPORT U-100

PO 8004-658

PAGE 1

# PROJECT APPRAISAL REPORT (PAR)

| 1. PROJECT NO. | 2. PAR FOR PERIOD | 3. COUNTRY | 4. PAR SERIAL NO. |
|---|---|---|---|
| 277-11-120-426 | March 1971 to June 1974 | TURKEY | 73-2 |

5. PROJECT TITLE

## ON-FARM WATER DEVELOPMENT

(Terminal PAR)

| 6. PROJECT DURATION: Begin FY 1968 End FY 1972 | 7. DATE LAST PAR | 8. DATE LAST HIP | 9. DATE HIGH NEW |
|---|---|---|---|
| | Feb. 20, 1973 | - | April 1971 |

| 10. U.S. FUNDING | a. Cumulative Obligation Thru Prior FY: $ 1,100,000 | b. Current FY Estimated $ 100,000 | c. Estimated Budget to completion After Current FY: $ - |
|---|---|---|---|

11. KEY ACTION AGENTS (Contractor, Participating Agency or Voluntary Agency)

| a. NAME | b. CONTRACT, PASA OR VOL. AG. NO. |
|---|---|
| 1. Mission Direct-Hire Personnel | |
| 2. USDA/ARS Hydrologist | PASA |
| 3. Personal Services Contractor: Busha, Hunke, Weidenstein, Hubbard | Contract |

12. NEW ACTIONS PROPOSED AND REQUESTED AS A RESULT OF THIS EVALUATION

| A. ACTION BY USAID | AID/W | HOST | B. LIST OF ACTIONS | C. PROPOSED ACTION COMPLETION DATE |
|---|---|---|---|---|
| X | X | | Terminate Project | Sept. 1974 |
| X | | X | Make arrangements to follow up on participant training programs in progress at time of project termination. | Sept. 1974 |

13. REPLANNING REQUIRED

REVISED OR NEW: ☐ PROP ☐ PIP ☐ PRO-AG ☐ PIO/T ☐ PIO/C ☐ PIO/P

14. DATE OF NEXT REVIEW: July 1974

PROJECT MANAGER TYPED NAME, SIGNED INITIALS AND DATE: Warren J. Leathem

MISSION DIRECTOR TYPED NAME, SIGNED INITIALS AND DATE: Joseph S. Toner

| AID INSPECTION FOR | PROJECT NO | PER FOR TERIOD | COUNTRY | PER SERIAL NO |
|---|---|---|---|---|
| PAGE 2 PER | 277-11-130-436 | to March 71 - June74 | TURKEY | 75-2 |

II. PERFORMANCE OF KEY INPUTS & ACTION AGENTS

| A. INPUT OR ACTION AGENT | B. PERFORMANCE AGAINST PLAN | | | | | | | C. ASSISTANCE FOR ACHIEVING PROJECT PURPOSE (X) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONTRACTOR, PARTICIPATING AGENCY OR VOLUNTARY AGENCY | UNSATISFACTORY | | UNSATISFACTORY | | OUT STANDING | | | LOW | | MEDIUM | | HIGH |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 | 3 | 4 | 5 |
| 1. Hydrology Research Expert | | | | | | | X | | | X | | |
| 2. Land Improvement Specialist | | | | | X | | | | | | X | |
| 3. Fluid Power Equipment Specialist | | | | | X | | | | | X | | |
| 4. Farm Management Specialist | | | | | | X | | | | X | | |
| 5. Machinery Maintenance & Training | | | X | | | | | | X | | | |

Comment on key factors determining rating

PARAT: As a result of this consultant's work under this project in two previous TDY's, a direct line of communication now provides for technical assistance on a mutually arranged periodic basis without AID sponsorship.

Land Improvement Specialist: Assistance with programs to encourage private sector contractors resulted in formation of an Izmir based confederation with a present membership of 19 contractors commanding 35 tractor/scraper units carrying out activities over most areas of Turkey. The confederation is growing; other groups are being formed and this activity appears well established.

(Continued)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6. PARTICIPANT TRAINING | | | | | X | | | | | X | | |

Comment on key factors determining rating: Of 39 participants for the years 1971-73, and 1974, 20 are now holding supervisory positions in TOPRAKSU. The enthusiasm and understanding of purpose of former participants are illustrated by their record of continued service to TOPRAKSU after training and their advancement to responsible positions. A large percentage of the work described in this report was largely accomplished by Turkish counterparts who are former participants.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7. COMMODITIES * | | | | | | | | | | | | |

Comment on key factors determining rating: * A decision was made early in the project to rely on locally made equipment - although not made or available in Turkey at that time - so that farmers and small contractor organizations could readily obtain and service them. Therefore, a major U.S. input was technical assistance to TOPRAKSU and private sector manufacturers for design and production of suitable land development equipment to do the work. The four basic

(Continued)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8. COOPERATING COUNTRY — a. PERSONNEL — TOPRAKSU | | | | | | X | | | | | | X |
| 8. COOPERATING COUNTRY — a. PERSONNEL — GOT | | | | X | | | | | | | X | |
| 8. COOPERATING COUNTRY — b. OTHER — TOPRAKSU | | | | | | X | | | | | | X |
| 8. COOPERATING COUNTRY — b. OTHER — GOT | | | X | | | | | | | | X | |

Comment on key factors determining rating: The GOT's low rating stems from failure to follow through on its commitment to project proposals for providing credit resources. Enhanced credit availability has not materialized even though positive indications from the GOT were in evidence as early as June 15, 1973. This was to be TL loans to the Agriculture Bank for relending to farmers, contractors, and manufacturers. The source was to be Counterpart II Funds which were supposedly held in reserve for use in jointly agreed agricultural development projects. The reason(s) for these funds not being realized have not been clearly identified by the GOT.

On the other hand, TOPRAKSU rates high due to its high allocation of priority to project initiatives.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9. OTHER DONORS — A. IBRD | | | | X | | | | | X | | | |
| 9. OTHER DONORS — B. RCD | | | X | | | | | | X | | | |

(See Next Page for Comments on Other Donors)

| AID TRANSMITTAL FOR | PROJECT NO. | PAR FOR PERIOD | COUNTRY | PAR SERIAL NO. |
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II. A Summary of Currency on hand determining value of Other Funds

Two basic approaches are being used to provide irrigation to heretofor undeveloped land: a) the approach used by the KIB project at Gediz and the IARD project at Seyhan, and b) the Izmir approach used under this project. Although the IARD and the KIB approaches are basically the same, there are some differences, including (1) a land consolidation requirement by KIB in their areas of smaller farms; (2) IARD requires expatriate technical assistance for its operations, while KIB does not; and (3) IARD includes a project-tested irrigation foreman farmer training program. Chiefly for the last (third) reason, the IARD approach was rated higher. The force account approach does not induce the best local

(Continued)

## III. KEY OUTPUT INDICATORS AND TARGETS

| A. QUANTITATIVE INDICATORS FOR MAJOR OUTPUTS | | TARGETS (Percentage Rate Amount) | | | | | |
|---|---|---|---|---|---|---|---|
| | | CUMU. ACTUAL PRIOR FY | CURRENT FY TO DATE | CURRENT FY TO END | 75 FY | - FY | END OF PROJECT |
| 1. Private Contractors (contractor/tractor units) * See Continuation Sheet | PLANNED | 5/33 | 19/35 | 20/100 | 50/350 | - | 50/350 |
| | ACTUAL PROGRAM AREA | 5/33 | 19/35 | | | | |
| | REPLANNED | | | None | - | - | - |
| 2. Production of Earth Moving Equipment | PLANNED | 1000 | 1500 | 1500 | 2500 | - | 2500 |
| | ACTUAL PROGRAM AREA | 1900 | 1498 | | | | |
| | REPLANNED | | | - | - | - | - |
| 3. Loans Approved and Operational Land Development *(See Continuation Sheet) | PLANNED | None | None | 400 | 1000 | - | 1000 |
| | ACTUAL PROGRAM AREA | None | None | | | | |
| | REPLANNED | | | 0 | 400 | - | 400 |
| 4. Loans Approved and Operational Manufacturers & Contractors | PLANNED | None | 100 | 100 | 395 | - | 395 |
| | ACTUAL PROGRAM AREA | None | None | | | | |
| | REPLANNED | | | 0 | 100 | - | 100 |

| B. QUALITATIVE INDICATORS FOR MAJOR OUTPUTS | COMMENT |
|---|---|
| 1. Private Sector Certified Engineering Services for Land Development | 8 Ex-TURKPAKSU engineers have been certified by the GOT to perform all survey and design works for farmers' land improvement works. |
| 2. Establishment of Land Improvement Contractors' Confederation | An Izmir based confederation - "AR-GEF" - with present membership of 19 contractors commanding 95 tractor/scraper units is carrying out activities over most of Western Turkey. |
| 3. Improved Agriculture Machinery Manufacturing Technology | The principal manufacturers (Sumo and Topatan) are now manufacturing, selling and advertising (television and national trade journals) improved fluid power lift equipment, previously not being produced in Turkey. |

| AID 1020-25 (10-70) PAGE 4 PAR | PROJECT NO. 277-11-130-436 | PAR FOR PERIOD: March 71 - June 74 | COUNTRY TURKEY | PAR SERIAL NO. 75-2 |
|---|---|---|---|---|

## IV. PROJECT PURPOSE

A. 1. Statement of purpose as currently envisaged. 2. Same as in PROP? ☐ YES ☐ NO

To promote organizational arrangements under which farmers will be able to call upon locally available private entrepreneurs for technical and skilled services.

In view of the GOT's failure to establish a credit fund as envisioned in the 1971 PROP, emphasis has been shifted to providing services through the private sector, although relations continue with TOPRAKSU.

| B. 1. Conditions which will exist when above purpose is achieved. | 2. Evidence to date of progress toward these conditions. |
|---|---|
| 1. Private contractors available on a fee basis to accommodate farmers' needs for land improvement works. | 1. Beginning in 1971, a private entrepreneur engaged in land development construction work with TOPRAKSU supplying engineering services to farmer-customers. In 1973, an engineering bureau was organized (Cont'd) |
| 2. Cost effective land development and crop culturing equipment locally available. | 2. More than 12 manufacturers in the Aegean Region are producing 9 different primary implements used in irrigated agriculture and six ancillary implements. |
| 3. Private sector engineering services available on demand basis for planning and designing farmers' land improvement and farm maintenance program. | 3. Sufficient private engineering services are now available to plan and design land improvement for up to 4000 hectares per year or approximately 1000 farmers. |
| 4. Management entities supplying improved production and marketing planning for maximizing farm income. | 4. Although this element is in the initial stage of implementation, a USAID Agronomist has introduced HYV cereals on farmers' fields. Also, a USAID Marketing Advisor helped to develop procedures for extending marketing assistance to farmers in (Cont'd) |

## V. PROGRAMMING GOAL

A. Statement of Programming Goal

More efficient management and utilization of agricultural resources to achieve Turkish socio-economic goals.

B. Will the achievement of the project purpose make a significant contribution to the programming goal, given the magnitude of the national problem? Yes. TOPRAKSU 436 Project records show that during the last 6 years over 1300 farmers in the Izmir Region, having an average farm operation of 4.047 ha., have realized a net increase in annual income averaging $890 which can be accredited to land development works.

An informal study by TOPRAKSU in February 1973 with farmers in the Izmir area revealed an average annual increase in crop production of 108% due to land development improvement works plus a mix of approved practices. Studies in Cukurova and Denizli revealed similar benefits. It was further shown that, **potentially, total investments in land** development could be more than recovered during the first year.

The benefits of land improvement have spread far beyond the producers themselves. For example:

1. More job opportunities are available in the agricultural equipment (Continued)

II. A. Comment on key factors determining rating (Continued)

Equipment Specialist: Three manufacturers of fluid power components are improving their products as a result of this assistance; two of them advertise their equipment nationally by radio, TV and newspapers.

The consultant continues to supply new information to these firms at his own expense, thus establishing a continuing relationship which could lead to more extensive privately sponsored assistance.

Farm Management Specialist: Contractor was immediately accepted by his counterparts as an authority. His discussions and recommendations, based on his intensive survey in the field, effectively introduced the new idea of a private farm management service with farmer-clients paying for the service. TOPRAKSU expressed deep interest in a return visit later and an Izmir land development contractor association contemplates adding farm management services to their activities.

Machinery Maintenance Specialist: His chief contributions were to the training program. Much needed and effective training materials, teaching aids and plans for shop-constructed auxiliary maintenance equipment and repair shop aids are now being prepared by the consultant on his own time for transmittal to counterparts in TOPRAKSU.

II. 5. Commodities (Cont'd)

implements - scrapers, levelers, subsoilers and chiselplows - were effective, economical and instantly popular. Their early introduction was crucial to the success of the project. These, along with 12 additional new implements, including effective implements for dry-land farming, have become standard production items. Manufacturers report sales in all irrigated areas of Turkey and we understand that these locally designed implements are being reproduced in Afghanistan, Pakistan and India.

II. 7. Continued: Comment on key factors determining rating of Other Donors.

employment effects nor make high impact on income distribution even though the capacity to prepare land for efficient irrigation and project implementation under that approach are excellent. Work is concentrated on the country's largest and most highly mechanized labor saving farms in preference to developing areas of medium and small size farms where operations tend to be more labor intensive. The IBRD and EIB approaches were both rated comparatively low because of the impact on local employment and income distribution.

The Izmir approach, with its locally made small equipment, has generated a flourishing implement industry and has increased demand for locally produced tractors. Not only has this increased manufacturing employment, but it has enlarged entrepreneurial activity, promoted industrial capital formation and has had secondary multiplier and linkage effects. The force account-imported equipment approach has captured none of these effects.

III.A.1.

250 persons are already employed and the number is increasing. Since this review was begun, two additional certified engineering service bureaus have been organized, each of which has its own association of tractor-owner contractor members.

III.A.3 - Quantitative Indicators for Major Outputs - (Land Development Loans)

Through project contacts with the ABT (Agricultural Bank of Turkey) a protocol was agreed to and signed by TOPRAKSU and ABT which substantially modified and improved upon traditional credit processes so that farmers and small scale supporting agri-business entities could have access to sufficient financial resources for meeting their planned needs.

IV.B.2.1.

In Izmir which offered complete services to farmers. Later, 4 similar bureaus were organized, 2 of them quite recently. Today, more than 19 contractors, primarily in the Aegean Region, are meeting 20% of annual needs for land leveling and drainage works over the entire western half of Turkey.

IV.B.2.4

TOPRAKSU coops.

Recently, a Project Consultant surveyed the scope for introducing farm management services to farmers of irrigated land.

V.B.

industry. Twelve firms are producing land development equipment and other implements for irrigated agriculture totaling 16 new additions to their product lines and amassing annual multimillion lira increases in their businesses. Over 300 skilled and semi-skilled craftsmen are directly employed in these establishments. (See II.5. above).

2. New employment opportunities have been created by the emergence of a thriving private sector land development federation. Over 95 tractor operators are profitably employed in contracting work.

3. Increased rural employment has resulted from the shift to higher yielding crops, labor intensive and multiple cropping systems after land development.

4. The general economic level of the community is improved because a substantial part of the cost of land improvement, labor, and new project designed equipment is paid to persons of modest income who spend much of this money in their own communities where it circulates to generate further employment in the services occupations.