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A.I.D. Project No. 391-0467
Dollar Appropriation No. 72-1131037
Budget Plan Code: HESA-83-27391-KG13
Project Agreement No. 83-10

PROJECT GRANT AGREEMENT

BETWEEN

THE PRESIDENT OF THE ISLAMIC REPUBLIC OF PAKISTAN

AND THE

UNITED STATES OF AMERICA

FOR

IRRIGATION SYSTEMS MANAGEMENT

DATED: June 05, 1983

(CONFORMED COPY)

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A.I.D. Project No. 391-0467
Dollar Appropriation No. 72-1131037
Budget Plan Code: HESA-82-27391-K013
Project Agreement No. 83-10

PROJECT GRANT AGREEMENT FOR IRRIGATION SYSTEMS MANAGEMENT

Dated: June 05, 1983

Between

The President of the Islamic Republic of Pakistan (hereinafter referred to as the "Grantee")

and

The United States of America, acting through the Agency for International Development ("A.I.D.").

Article 1: The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described below, and with respect to the financing of the Project by the Parties.

Article 2: The Project

SECTION 2.1. Definition of Project. The Project, which is further described in Annex 1, is designed to assist the Government.

of Pakistan to increase the capabilities of institutions involved in irrigation system planning, design, research, operation and maintenance, and to bring about policy changes needed for proper irrigation water management. This Project will include, among other things, the provision of technical assistance, training, reimbursement for construction, commodity support and operating expenses for the following components: (1) rehabilitation and maintenance of canals and drains; (2) institutional improvement through development of management and technical skills to operate and maintain system; (3) planning, policy implementation and research for the water sector in Pakistan and (4) study the feasibility of integration of management of irrigation water at all levels through Command Water Management (CWM). Annex 1, attached, amplifies the above definition of the Project. Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 9.2, without formal amendment of this Agreement.

SECTION 2.2. Incremental Nature of Project.

(a) A.I.D.'s contribution to the Project will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. Subsequent increments will be subject to availability of funds to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of each subsequent increment, to proceed.

(b) Within the overall Project Assistance Completion Date ("PACD") stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under each individual increment of assistance.

Article 3: Financing

SECTION 3.1. The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement not to exceed Twenty Three Million United States ("U.S.") Dollars (\$ 23,000,000) ("Grant").

The Grant may be used to finance foreign exchange costs, as defined in Section 7.1 of this Agreement and local currency costs, as defined in Section 7.2 of this Agreement, of goods and services required for the Project.

SECTION 3.2. Grantee Resources for the Project. The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

SECTION 3.3. Project Assistance Completion Date (PACD).

(a) The PACD, which is April 30, 1990, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed, and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.

(b) Except as A.I.D. may otherwise agree in

writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in Section 8.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Conditions Precedent

SECTION 4.1. Conditions Precedent to First Disbursement.

Except as A.I.D. may otherwise agree in writing, prior to any disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish or have furnished to A.I.D., in form and substance satisfactory to A.I.D., within sixty (60) days after the signing of the Project Agreement:

(a) a written opinion of Counsel acceptable to A.I.D. that this Agreement has been duly authorized and/or ratified by, and executed on behalf of the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms;

(b) a written statement setting forth the names and titles of persons holding or acting in the Office of the Grantee and representing that the named person or persons have the authority to act as the representative or representatives of the Grantee, together with a specimen signature of each such person certified as to its authenticity; and,

(c) a written statement authorizing A.I.D.

to proceed with the procurement of technical consultants and project commodities, and with training and other project activities.

SECTION 4.2. Condition Precedent to First Disbursement in a Specific Province.

Except as A.I.D. may otherwise agree in writing, prior to any disbursement under this Project for project activities in a specific province, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, the Grantee shall furnish or have furnished to A.I.D., in form and substance satisfactory to A.I.D., a written statement from the responsible Provincial Official(s) of that Province indicating provincial approval of the Project.

SECTION 4.3. Conditions Precedent to the Commencement of Civil Works Rehabilitation Activities.

Except as A.I.D. may otherwise agree in writing, prior to the commencement of civil works rehabilitation activities for which reimbursement will be requested from A.I.D., the Grantee shall furnish the following to A.I.D., in form and substance

satisfactory to A.I.D.:

(a) documentary evidence that suitable arrangements have been made by the Grantee for a Supervisory Consultant to assist in project implementation and that said Consultant is mobilized and ready to review rehabilitation work design and work plans, inspect rehabilitation work, and monitor construction progress; and,

(b) a written description of a detailed inspection system establishing procedures to be followed to insure that rehabilitation work conforms to specifications.

SECTION 4.4. Condition Precedent to Disbursement for Civil Works Rehabilitation Activities Commenced After the First Twelve Months from the Signing of the Project Agreement.

Except as A.I.D. may otherwise agree in writing, prior to the reimbursement by A.I.D. for rehabilitation works commenced after the first twelve months from the date of the signing of this Project Agreement, or to the issuance by A.I.D. of documentation pursuant to which such reimbursement will

be made, the Grantee shall furnish or have furnished to A.I.D., in form and substance satisfactory to A.I.D., documentation indicating that the Grantee has established within the Federal Coordinating Cell, or other appropriate administrative structure, a Central Procurement Office to coordinate and administer the commodity procurement process, including consolidating provincial requests for spare parts during the life of the Project.

SECTION 4.5. Condition Precedent to Disbursement for Civil Works Rehabilitation Activities in a Specific Province Commenced After the First Twelve Months from the Signing of the Project Agreement.

Except as A.I.D. may otherwise agree in writing, prior to reimbursement by A.I.D. for rehabilitation works in a specific Province commenced after the first twelve months from the date of the signing of this Project Agreement, or to the issuance by A.I.D. of documentation pursuant to which such reimbursement will be made, the Grantee shall have furnished to A.I.D., in form and substance satisfactory to A.I.D., documentation establishing that the Provincial Government for the

Province for which reimbursement is sought has completed all irrigation equipment maintenance workshop remodelling in a manner acceptable to A.I.D. This condition will be applied on a provincial basis, i.e. reimbursement for civil work rehabilitation activities will be made after the first project year for work completed in any Province that has fulfilled this condition precedent.

SECTION 4.6. Notification. When A.I.D. has determined that the conditions precedent specified in each of Sections 4.1, 4.2, 4.3, 4.4 and 4.5 have been met, A.I.D. will promptly so notify the Grantee.

SECTION 4.7. Terminal Dates for Conditions Precedent.

(a) If all of the conditions specified in Section 4.1 have not been met within 60 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to the Grantee.

(b) If the conditions specified in Section 4.3 have not been met within 4 months from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may cancel the then undisbursed balance of the Grant to the extent not irrevocably committed to third parties, and may terminate this Agreement by written notice to the Grantee.

Article 5: Covenants

SECTION 5.1. Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(a) evaluation of progress towards attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(c) assessment of how such information may be used to help overcome such problems; and,

(d) evaluation, to the degree feasible, of the overall development impact of the Project.

SECTION 5.2. Water Charges. The Grantee shall cause to be carried out by each Province periodic increases in water charges, or other appropriate financial arrangements, to cover an increasing percentage of the cost of operation and maintenance of irrigation facilities located in that Province, in order that the full cost of such operation and maintenance will be recovered by the following dates:

| | |
|-------------|--------------|
| Sind | July 1, 1988 |
| Punjab | July 1, 1990 |
| NWFP | July 1, 1991 |
| Baluchistan | July 1, 1992 |

SECTION 5.3. SCARP Transition Study. The Grantee shall cause the SCARP Transition Study already initiated to be completed by July 1, 1983.

SECTION 5.4. Provincial Operation and Maintenance Funding. The Grantee shall cause each Province participating in this Project to annually increase funds available for operation and maintenance for canal, surface drainage, and flood protection bunds. The levels of funding proposed by each Provincial Irrigation Department for said operation and maintenance shall be reviewed annually by the provincial authority and shall be furnished to A.I.D. by March 1 of each year for review and comment.

SECTION 5.5. Canal Freeboard.

In carrying out the civil works rehabilitation activities for which reimbursement will be requested from A.I.D., the Grantee shall maintain, or cause to be maintained, the integrity of the minimum designed freeboard in rehabilitated channels.

SECTION 5.6. Project Review Committee.

The Grantee shall assure that a Project Review Committee, to include the Provincial Irrigation Department Secretaries, the Chief Engineering Advisor of the

Ministry of Water and Power, and the General Manager of the WAPDA Planning Division, meets regularly and serves as a review and decision-making body for overall implementation of the Project.

Article 6: Special Conditions - Cultivation of Opium Poppy and Processing of Opium into Heroin

The Government of Pakistan (GOP) agrees to undertake appropriate measures to prohibit the cultivation of opium poppy and/or the processing of opium into heroin or morphine base within any area benefiting from the Project. In the event that a determination is made that the cultivation of opium poppy and/or processing of opium into heroin is occurring in an area programmed to benefit or benefiting from this Project, no assistance under this Project directly benefiting that area shall commence and, if commenced, such assistance shall be suspended until the prohibited activity is eliminated. If the prohibited activity found to exist is not fully eliminated within a specified period of time to be agreed upon by the United States Government and the GOP, all assistance under this Project directly benefiting that area may be terminated. If, prior

to the Project Assistance Completion Date (PACD) established by A.I.D. for this Project as it may be from time to time amended, it is determined that the prohibited activity is occurring in an area which has benefited from the Project, and the prohibited activity is not eliminated within a period of time to be agreed upon by the United States Government and the GOP, the GOP shall reimburse A.I.D. for all assistance that the GOP has received from A.I.D. under this Project, which has resulted in direct benefits to that village or area in which the prohibited activity is occurring.

Without limitation of other provisions applicable to termination and/or refund as set forth in this Project Agreement and annexes thereof if A.I.D. determines that A.I.D. is entitled to reimbursement under the provisions of this Article of the Agreement, A.I.D. may require the Grantee to refund the amount of any disbursements from the Grant for which there is an entitlement to reimbursement to A.I.D. in U.S. Dollars within 120 days after receipt of request therefor. Such refunds paid by the Grantee to A.I.D. shall be considered as a reduction in the amount of A.I.D.'s obligation under the Grant but may be made

available for reuse under the Grant if so authorized by A.I.D. in writing.

Article 7: Procurement Source

SECTION 7.1. Foreign Exchange Costs. Except as A.I.D. may otherwise agree in writing, disbursements pursuant to Section 8.1 will be used exclusively as follows:

(a) to finance the costs of goods and services required for the Project having with respect to goods, their source and origin, and with respect to services, their nationality in the United States (Code 000 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods and services), except as provided in the Project Grant Standard Provisions Annex, Section C.1(b) with respect to marine insurance. ("Foreign Exchange Costs");

(b) to finance ocean transportation costs under the Grant only on vessels under flag registry of the United States or Pakistan.

SECTION 7.2. Local Currency Costs. Disbursements pursuant to Section 8.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in Pakistan ("Local Currency Costs"). To the extent provided for under this Agreement, "Local Currency Costs" may also include the provision of local currency resources required for the Project.

Article 8: Disbursement

SECTION 8.1. Disbursement for Foreign Exchange Costs.

(a) In accord with requirements of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary

supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or, (B) requests for A.I.D. to procure commodities or services in Grantee's behalf for the Project; or,

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods and services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 8.2. Disbursement for Local Currency Costs.

(a) In accord with requirements of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

(b) The local currency needed for such disbursements may be obtained:

(1) by acquisition by A.I.D. with U.S. dollars by purchase or from local currency already owned by the U.S. Government; or,

(2) by A.I.D., (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter making available to the Grantee, through the opening or amendment by A.I.D. of Special Letters of Credit in favor of the Grantee or its designee, an amount of U.S. dollars equivalent to the amount of local currency made available by the

Grantee, which dollars will be utilized for procurement from the United States under appropriate procedures described in Project Implementation Letters.

The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (b) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency, and in the case of subsection (b) (2) above, an amount calculated at the rate of exchange specified in the applicable Special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable Special Letter of Credit.

SECTION 8.3. Other Forms of Disbursements. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 8.4. Rate of Exchange. Except as may be more specifically provided under Section 8.2, if funds provided under the Grant are introduced into Pakistan by A.I.D. or any

public of private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of Pakistan at the highest rate of exchange which, at the time the conversion is made, is not unlawful in Pakistan.

Article 9: Miscellaneous

SECTION 9.1. Communications. Any notice, request, document, or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Mail Address: Economic Affairs Division
Ministry of Finance & Economic Affairs
Government of Pakistan
Islamabad (Pakistan)

Alternative address for cables: ECONOMIC ISLAMABAD

To A.I.D.:

Mail Address: USAID Mission to Pakistan
P.O. Box 1028
Ramna 5
Islamabad (Pakistan)

Alternative address for cables: USAIDPAK ISLAMABAD.

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice. The Grantee, in addition, will provide the USAID Mission/Pakistan with a copy of each communication sent to A.I.D.

SECTION 9.2. Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the Office of the Secretary, Joint Secretary and the Deputy Secretary for Economic Affairs Division and A.I.D. will be represented by the individual holding or acting in the Office of the Director, USAID Mission to Pakistan, each of whom, by written notice, may designate additional representatives for all purposes other than exercising

the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 9.3. Standard Provisions Annex. A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Grantee and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and

GOVERNMENT OF PAKISTAN

By: Sd/-

Name: Ejaz A. Naik

Title: Secretary,

Economic Affairs Division

UNITED STATES OF AMERICA

By: Sd/-

Name: Ronald I. Spiers

Title: Ambassador of the

United States of America

By: Sd/-

Name: Donor M. Lion

Title: Director,

USAID/Pakistan

PROJECT DESCRIPTION

A. Project Goal and Purpose

The overall sector goal to which this project contributes is to increase agricultural production and farmer income by improving the management of irrigation water resources. The purpose of the project is to increase the capabilities of institutions involved in irrigation planning, design, research, operation, and maintenance, and to bring about policy changes needed for proper irrigation water management.

B. Project Components

This seven-year project, which will be co-financed by the World Bank (IBRD) through its International Development Association (IDA) affiliate under the Irrigation Systems Rehabilitation (ISR) Project, is designed to assist the Government of Pakistan (GOP) and the four Provincial Irrigation Departments (PIDs) to rehabilitate currently deteriorated surface canals and drains, and to improve federal and provincial capability to plan, design, research, operate and maintain the country's irrigation systems so that reliable and equitable water supplies are available to the irrigated agriculture sector.

This project is intimately linked to the IBRD's \$40 million ISR project. While the IBRD project focuses almost exclusively on rehabilitation works, the A.I.D. project addresses, in addition, water and institutional policies and practices through reform, directed planning and research programs, and action programs to implement policy reforms. The A.I.D. project also takes the first steps toward the long-term goal of integrating water, land, and farmer resources, known as the Command Water Management (CWM) concept.

Both A.I.D. and IBRD financing will be administered in a parallel manner for rehabilitation of civil works in a ratio of about one-third to two-thirds. IBRD will also fully fund the services of a local Supervisory Consultant firm for all rehabilitation activities and partially finance the services of a local evaluation/research organization. A.I.D. will partially finance the services of the local evaluation/research organization and will fully fund all the expatriate technical assistance, training, earthmoving and workshop equipment and spare parts as well as hydraulic measurement and research equipment. Most of the equipment to be financed by A.I.D. will be provided under the A.I.D.-supported Agricultural Commodities and Equipment Program

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(391-0468). In addition, both Project Agreements contain the same covenants which are aimed at ensuring that adequate financing for operation and maintenance (OEM) costs are available to prevent the deterioration of rehabilitation canals and drains.

The A.I.D. project consists of four distinct but complementary and interrelated components. The fourth component, Command Water Management, will be described in detail in a Project Paper Amendment which the USAID/Pakistan Mission plans to submit to AID/Washington for approval in FY 1984. Funds will be provided for technical assistance, training, commodities, reimbursement for civil works, and research operating expenses and field research demonstrations to support the following activities :

1. Rehabilitation Works

The objectives of this component are to assist the GOP, in cooperation with the IBRD/IDA under its ISR project, to: (a) rehabilitate and maintain about 14,000 km of surface canals and about 3,500 km of surface drains; and, (b) strengthen its human and physical resources and management operations to plan and design civil works activities and effectively operate and maintain the entire system.

2. Institutional Improvement: Management and Technical Skill Development

Institutional improvement will take place at both the provincial (PID) and federal levels. In order to increase the capability of PIDs to operate and maintain the entire system, the following activities will occur: (a) new earthmoving and workshop equipment and spare parts will be provided to increase existing machinery stocks; (b) PID maintenance workshops will be upgraded; (c) improved control systems will be developed and institutionalized to enable the PIDs to efficiently manage and operate machinery for preventive maintenance of civil works; (d) design capacity will be improved to reduce continuing maintenance demands; (e) substantial management training will be provided for PID personnel; and, (f) a Management Information System will be developed and institutionalized to generate information needed for management decision-making. In order to increase the capability of federal level bodies, namely, the Ministry of Water and Power and the Water and Power Development Authority (WAPDA), to coordinate both water policies and storage supplies, the following activities will occur: (a) the establishment of a Federal Coordinating Cell (FCC) to ensure effective implementation, coordination, and supervision of the project;

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(b) the establishment of a Central Procurement Office (CPO) to routinely order spare parts and to serve as an expeditious channel for emergency orders; and, (c) the expansion and application of a water management computer modelling system in WAPDA to monitor total water supplies and scheduled distribution.

3. Planning, Policy Implementation, and Research

The objectives of this component are to:

(a) strengthen the capacity of the PIDs to engage in the planning process for future projects in the water sector and to continue, with WAPDA, the transformation of policy guidelines into action programs; and, (b) strengthen existing critical research programs in areas of water management both within and outside the Indus System.

4. Command Water Management

This component is intended to integrate the management of irrigation water at all levels within canal commands. The objectives of this pilot effort are to:

(a) substantially increase agricultural production in selected pilot areas through improved water management; (b) develop water management techniques and programs which can be replicated throughout the country; (c) reduce inequities in actual water deliveries at all levels; and, (d) build within the provincial agencies (i.e., Irrigation and Agriculture) and WAPDA a continuing capability for planning, implementing, and operating integrated programs for irrigated agriculture. Funds will be provided under the project to assist the GOP to undertake a CWM feasibility study, which is already in progress. On the basis of the outcome of the feasibility study, a Project Paper Amendment will be prepared by USAID/Pakistan to provide additional funding toward the total cost of implementing a CWM pilot program in all four provinces between FY 1984 and FY 1990.

C. Implementation Plan

1. Illustrative Implementation Schedule

All ISM project activities, except those under the Rehabilitation Works and the Command Water Management (CWM) components, are scheduled to take place over a period of five years from the date of signing of the Project Agreement. Rehabilitation works activities will take place over a period of three years in accordance with the implementation schedule of the ISR project. Implementation of the CWM pilot program is expected to begin in the summer of 1984 and continue until the A.I.D. Project Assistance Completion Date (PACD), which is April 30, 1990.

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Implementation of the ISR project is scheduled to take place over a period of three years. The ISR Project Agreement was signed in June 1982. However, since the date of effectiveness of the ISR project will be about March 1983, the ISR's revised completion date will be March 1986.

a. Institutional Arrangements and Procurement of Technical Assistance

Prior to the signing of the ISM Project Agreement, funds from the A.I.D.-financed Project Design Fund (391-0470) will be used to hire a short-term consultant to assist the Mission prepare a detailed plan for implementation of the Fixed Amount Reimbursement (FAR) system for civil works. Within the first three months after the signing of the A.I.D. Project Agreement, the Federal Coordinating Cell (FCC), the Provincial Coordinating Cells (PCCs), and the Federal Project Review Board (FPRB) should be fully staffed and operational. In addition, the IBRD-funded contract between the GOP (FCC) and NESPAK will have been signed, and Project Implementation Orders for Technical Services (PIO/Ts) will have been prepared by A.I.D. for: (a) the short-term Research Definition Team; (b) the long-term Project Management Advisor; (c) the long-term Equipment Management Team; (d) the long-term Engineering Team; (e) the long-term Research Team; and, (f) the long-term Planning/Management Team. It is expected that all the long-term advisors will be in-country within nine months after the signing of the Project Agreement. During this nine-month period, short-term expatriate and local consultants will be hired under Indefinite Quantity Contracts (IQCs) or other arrangements to provide equipment management, engineering, and planning/management services until the arrival of the long-term consultants. The Research Definition Team is scheduled to arrive within the first three months after the Agreement is signed.

In addition, within the first month of the project, the Alluvial Channel Observation Project (ACOP), under the direction of the FCC and with IBRD funding, will have begun collecting baseline hydraulic data with existing staff and equipment on flows and sediment for canals to be rehabilitated in the first year of the project. Similarly, the Watercourse Monitoring and Evaluation Cell (WMEC), under the direction of the FCC with IBRD funding, will have begun collecting baseline production impact data. Local consultants will also be hired within the first three months under the ISM project to assist the PIDs finalize designs for the remodeling of workshops. Preliminary designs have already been prepared during the design stage of the ISM project.

Finally, it is expected that the Central Procurement Office (CPO) in the FCC will be fully staffed and operational by the end of the first year of the project.

b. Procurement of Equipment

The procurement of the majority of earthmoving and workshop equipment and spare parts is already underway by two Procurement Services Agents (PSAs) with funds under the FY 1982 tranche of the AC&E Program (391-0468). This equipment should arrive in-country between August and December of 1983. It is anticipated that all workshop remodeling activities will be completed by January 1984 such that the PIDs will have adequate facilities to house and maintain this equipment. The additional earthmoving and workshop equipment and spare parts which will be procured by these PSAs with funds under the FY 1983 tranche of the AC&E Program should arrive in-country between March and August of 1984.

Upon the signing of the ISM Project Agreement, A.I.D. will issue Project Implementation Orders for Commodities (PIO/Cs) to procure all project vehicles and household and office furnishings for all long-term expatriate technical consultants. Arrangements will also be made, as soon as the FY 83 AC&E PAAD Amendment has been authorized and funds obligated, to obtain the services of a PSA to procure the hydraulic measurement equipment for ACOP and the PIDs with funds from the FY 1983 tranche of the AC&E Program. Procurement of the planning and management equipment and systems analysis equipment under the ISM project by the long-term Planning/Management Team will begin after the team arrives and will be undertaken in tranches over a period of several years. A needs assessment will be undertaken prior to the procurement of any systems analysis equipment. Similarly, procurement of the required research equipment, which will be procured with funds under the FY 1984 tranche of the AC&E Program, is not expected to begin until the summer of 1984, by which time the Research Definition Team will have undertaken a needs assessment and the long-term research technical assistance team will have arrived in-country and assisted the GOP and PIDs to finalize equipment lists and specifications. It is anticipated that the CPO will begin procuring spare parts for the PIDs' equipment fleets with funds under the ISM project beginning in the fall of 1984 and continuing throughout the life of the project.

c. Rehabilitation Works Activities

Once the A.I.D. Project Agreement is signed and the initial conditions precedent met, IBRD funds will be released and the contract with the Supervisory Consultant

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will be executed. IBRD-financed rehabilitation activities will begin immediately after these events have occurred and the PCCs and FCC are in place. A.I.D.-financed rehabilitation activities will begin after a mutually acceptable system of reimbursement and inspection has been worked out in detail and agreed to by all relevant parties, which is expected to occur by the third month after the A.I.D. agreement is signed. Rehabilitation activities are expected to be implemented over a period of three years.

Rehabilitation activities during the first year of the project will focus on those canals requiring limited design work. Initially, the work will be undertaken with the equipment currently on hand with the PIDs. By the end of the first year of the project, it is anticipated that the majority of new earthmoving equipment and workshop equipment and spare parts (the latter for existing inoperable equipment as well as the new equipment) will be in place in the provinces such that the pace with which rehabilitation activities occur will be accelerated. In addition, ACOP will begin collecting data on flows and sediment early on in the project with existing staff and equipment. With the arrival of hydraulic measurement equipment during the first year of the project and the training of additional staff (including some from the PIDs), ACOP will be in a position to provide the necessary hydraulic data required for the design of the more complex rehabilitation works which will be undertaken beginning in year 2 of the project. The Design Engineers on the long-term Engineering Team, who are expected to arrive within nine months after the Project begins, will assist the PIDs to incorporate the ACOP data as well as current technologies in alluvial channel design into the design of schemes to be rehabilitated in years 2 and 3. Prior to the arrival of the long-term Equipment Management Team, short-term local and/or expatriate consultants will be hired to train workshop technicians and equipment operators in the use of the new machinery.

d. Command Water Management (CWM) Project Component

The CWM feasibility study, which is being undertaken by the GOP with technical assistance from A.I.D. (under the Project Design Fund (391-0470)) and UNDP (with the IBRD as executing agency) began on July 1, 1982 and is expected to be completed by October/November 1983. ISM project funds will be used to provide additional short-term technical assistance for this effort. Based on the findings of the feasibility study, A.I.D. will prepare and submit to AID/Washington for approval in March 1984, an amendment to this Project Paper to provide additional funds for a CWM pilot program in all four provinces. Implementation of the CWM pilot program, which will also be a co-financed activity, will take place over a period of six years.

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e. Training and Evaluation Activities

Most of the training activities under this project will take place over a five year period beginning in FY 1983. Long-term degree candidates are expected to begin their programs of study in FY 1984 and FY 1985. A detailed training plan (especially for the in-country training portion of the program) will be developed with the assistance of the long-term technical assistance teams and the Project Management Advisor early in the second year of the project.

Formal evaluations are scheduled to take place in March of 1984, 1986, 1988, and 1990. In addition, it is anticipated that the Management Information System (MIS), which will be installed initially in the FCC, will be operational within six months after the arrival of the long-term Planning/Management Team, i.e., within 15 months after the project begins.

2. A.I.D. Responsibilities

A.I.D. will be responsible for: (a) contracting with all technical consultants; (b) purchasing directly all vehicles and all household and office equipment and supplies for long-term consultants and arranging for the procurement of the systems analysis, planning and management equipment, hydraulic measurement and research equipment, earthmoving and workshop equipment, and spare parts for new earthmoving equipment and for existing inoperable earthmoving equipment; (c) arranging for long-term and short-term training outside of Pakistan; (d) advance approval of the design and cost estimates for all work orders under the Rehabilitation Works component, periodic inspection of works, and certification for payment of all such works financed by A.I.D. under this project; and, (e) providing sufficient staff to participate in the scheduled project evaluations and to liaise with GOP, Provincial Government, and WAPDA staff in the implementation of this project.

3. GOP/PID/WAPDA Responsibilities

The major implementing organizations under this project will be the Federal Ministry of Water and Power, the four Provincial Irrigation Departments (PIDs), and WAPDA. To facilitate the implementation of the ISR and ISM project, the Ministry of Water and Power has established a Federal Coordinating Cell (FCC) in the Office of the Chief Engineering Advisor. The FCC will be headed by a senior engineer, designated as the Federal Project Coordinator, who will be supported by accounting and clerical staff. Budgetary arrangements for all these positions have already been made by the Ministry. The FCC will have the following responsibilities:

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- a. supervise and monitor all ISR/ISM project activities on a day-to-day basis;
- b. review annual work plans of the PIDs to ensure consistency with the project targets and project implementation schedules, and prepare consolidated work plans;
- c. review quarterly and annual progress reports of the PIDs and prepare consolidated reports for submission to A.I.D. and the IBRD;
- d. review financial reports of the PIDs, maintain project financial records, and prepare appropriate consolidated financial reports for submission to A.I.D. and the IBRD;
- e. make arrangements with the Federal Ministry of Finance, through the Ministry of Water and Power, to provide adequate funds required by the PIDs for the execution of civil works;
- f. serve as the authorized representative of the GOP in the procurement of project-financed commodities;
- g. review reimbursement applications submitted by the PIDs and certified by the Supervisory Consultant;
- h. monitor and supervise the work of the Supervisory Consultant;
- i. monitor and supervise the work of the independent local research and evaluation units (ACOP and WMEC);
- j. coordinate and monitor the work of all project-financed expatriate and local consultants;
- k. coordinate and oversee the implementation of all training activities under the projects including in particular, the development and administration of the overseas training program;
- l. administer the operations of the Central Procurement Office for the procurement of spare parts;
- m. coordinate and participate in all project evaluations;

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n. ensure that all required PC-1's and other GOP documentation related to this program are prepared and approved in a timely manner;

o. serve as the main channel of communications between the PIDs on the one hand and the IBRD and A.I.D. on the other hand; and,

p. serve as the Secretariat of the Federal Project Review Board (see below).

At the provincial level, a Provincial Coordinating Cell (PCC), which will report directly to the PID Secretary and will be headed by a Provincial Project Coordinator, will be established in all four provinces. The PCC in each province will have the following responsibilities:

a. supervise and monitor all ISR/ISM project activities in the province on a day-to-day basis;

b. select the schemes to be rehabilitated;

c. prepare the plans and detailed designs of schemes to be rehabilitated in accordance with PID and ISR/ISM project procedures;

d. prepare lists of required equipment, spare parts, and machine tools with specifications;

e. provide required information to the Supervisory Consultant for the preparation of reimbursement applications;

f. prepare quarterly and annual progress reports for submission to the FCC;

g. prepare annual provincial work plans for submission to the FCC;

h. maintain separate project financial accounts and prepare financial reports as required for submission to the FCC;

i. ensure that adequate funds are available for workshop remodeling and oversee the construction activities to ensure their timely completion;

j. coordinate and implement all training programs in the province and ensure that qualified participants are selected for all training activities;

k. participate in all project evaluations;

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l. ensure that equipment procured under the project is properly utilized and maintained;

m. ensure that adequate counterparts are in place to work with project-financed consultants;

n. participate as resource personnel as required at meetings of the Federal Project Review Board; and,

o. serve as the main focal point for communications and liaison functions between the province and the FCC.

The other key implementing organization under the project will be WAPDA. The General Manager for Planning will be the coordinator of all ISR/ISM project activities involving WAPDA. He will have the following responsibilities:

a. supervise and monitor all ISR/ISM project activities undertaken by WAPDA on a day-to-day basis;

b. prepare consolidated quarterly and annual progress reports of all project activities undertaken by WAPDA organizations;

c. prepare lists of required equipment and spare parts with specifications;

d. maintain separate project financial accounts and prepare financial reports as required for submission to the FCC;

e. coordinate and implement all training programs involving WAPDA staff and ensure that qualified participants are selected for all training programs;

f. ensure that research results are widely disseminated to appropriate decision-making bodies;

g. participate in all project evaluations;

h. ensure that equipment procured under the project is properly utilized and maintained;

i. ensure that adequate counterparts are in place to work with project-financed consultants;

j. review project work plans of the following WAPDA organizations to ensure consistency with project targets and project implementation schedules:

- i. Planning Division;
- ii. Planning and Investigation Organization;
- iii. Mona Reclamation Experimental Project;
- iv. Lower Indus Water Management and Reclamation Project;
- v. Command Water Management Project;
- vi. Hydrology and Systems Analysis Organization;
- vii. Monitoring and Evaluation Organization; and,
- viii. Central Monitoring Organization; and,
- k. serve as the main focal point for communications and liaison functions between WAPDA and A.I.D. and the IBRD.

To provide effective overall leadership, establish policy and program guidelines, review and solve major project implementation problems, and serve as a continuing forum for the PIDs, the Federal Government, and WAPDA to monitor progress of the projects, the GOP has established a Federal Project Review Board (FPRB), which will meet at least quarterly throughout the life of the projects. The Board consists of the Chief Engineering Advisor of the Ministry of Water and Power, as Chairman, the four PID Secretaries, and the General Manager for Planning in WAPDA. Representatives of A.I.D., the IBRD, and the Supervisory Consultant (NESPAK) will attend Board meetings as ex officio members. In addition, the Federal Project Coordinator and the Provincial Project Coordinators will attend Board meetings from time to time as resource personnel.

4. Supervisory Consultant

Because the FCC is a newly established office which will play a major role in the implementation of both the ISR and ISM projects, provision has been made under the ISR project to hire a local Supervisory Consultant (NESPAK) to assist the FCC to effectively coordinate and monitor all program activities. In addition, the Supervisory Consultant, given its major role in the implementation of the rehabilitation works program, will serve as a unifying force in rationalizing the administrative and financial procedures for inspection and reimbursement under both the A.I.D. and IBRD-financed projects. The Supervisory Consultant team will report directly to the Federal Project

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Coordinator in the FCC and will be under his direct supervision. The Consultant team will perform the following services:

- a. review plans and designs for all civil works;
- b. review PIDs' annual project work plans to determine, among other things, compliance with GOP/IBRD and GOP/A.I.D. Project Agreements on eligibility of schemes to be rehabilitated, schedules, targets, and proposed levels of funding for rehabilitating schemes; and schedules, targets and levels of funding for O&M program work;
- c. inspect all rehabilitation works during construction and all schemes upon completion to determine compliance with standards required for reimbursement by A.I.D. and the IBRD;
- d. evaluate, for inclusion in a project completion report, the quality of completed civil works and the efficiency of the PIDs' equipment utilization and maintenance, including comparison of labor intensive and heavy equipment methods;
- e. assist the FCC to monitor project progress and to prepare consolidated quarterly and annual progress reports and project completion reports; and,
- f. assist the PIDs to integrate project-financed equipment, spare parts, and machine tools into existing fleets and operations to ensure efficient utilization.

The Supervisory Consultant team will consist of approximately 30 full-time members and two part-time members. One coordinator will be located in Islamabad in close proximity to the FCC and others will be located in the four provinces, as mutually agreed to by the FCC, Provinces, and NESPAK.

5. Independent Research and Evaluation Units

Two units within WAPDA, the Alluvial Channel Observation Project (ACOP) and the Watercourse Monitoring and Evaluation Cell (WMEC), will be responsible for collecting and analyzing data for design and evaluation purposes under the ISR/ISM projects. While organizationally, ACOP falls under WAPDA's Water Resources Management Organization within the Planning Division and WMEC falls under WAPDA's Monitoring and Evaluation Organization within the Planning Division, under the ISR/ISM projects, both will serve as "consultants"

to the PIDs and the FCC in data collection, analysis, and evaluation. Both will report directly to the Federal Project Coordinator in the FCC. ACOP's services under the program will be fully funded under the IBRD project. The IBRD project will also provide funding to WMEC for project activities in FY 1983 and FY 1984. The A.I.D. project will provide financial support to this cell for project activities beginning in FY 1985 and continue funding until the end of the project.

6. Project Management Advisor

In order to ensure that the diverse components of the ISR/ISM projects are successfully integrated and to provide a direct linkage between the A.I.D. Mission and field operations, ISM project funds will be used to hire, under a direct A.I.D. Personal Services Contract, an experienced and senior individual to serve as the A.I.D. Project Management Advisor. This Advisor will report directly to the A.I.D. Project Officer.

ILLUSTRATIVE

SUMMARY OF PROJECT COSTS BY EXPENSE
CATEGORY AND SOURCE OF FUNDING

(in 000s)

| Expense Category | FY 1983 | | | Life of Project ^{a/} | | |
|----------------------|--|---------------------------|------------------|--|---------------------------|------------------|
| | A.I.D. Dollar Grant (in \$) | IBRD/ IDA (in \$) | GOP (in Rs) | A.I.D. Dollar Grant ^{b/} (in \$) | IBRD/ IDA (in \$) | GOP (in Rs) |
| Technical Assistance | 14,000 | 500 | - | 29,004 | 1,600 | - |
| Training | 1,875 | - | 641 | 11,722 | - | 23,076 |
| Commodities | 1,255 | - | 6,410 | 4,329 | - | 6,410 |
| Other Costs | 5,000 | 8,000 | 38,460 | 15,758 | 28,700 | 304,514 |
| TOTAL | 22,130 | 8,500 | 45,511 | 60,813 | 30,300 | 334,000 |
| Contingency | 870 | 2,720 | 4,489 | 4,187 | 9,700 | 23,000 |
| GRAND TOTAL | 23,000 | 11,220 | 50,000 | 65,000^{c/} | 40,000 | 357,000 |

^{a/} Does not include \$38.0 million earmarked under the A.I.D.-financed Agricultural Commodities and Equipment Program (391-0468) consisting of \$26.0 million in FY 1982, \$6.0 million in FY 1983, and \$6.0 million in FY 1984 to import earthmoving and workshop equipment and spare parts and hydraulic measurement and research equipment for use in this project, subject to the availability of funds to A.I.D. for this purpose.

Subject to the availability of funds to A.I.D. for this purpose and to the mutual agreement of the parties to proceed at the time of each subsequent increment.

Does not include funding for the proposed Command Water Management Pilot Program (Component 4 of the A.I.D. project).

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