

No. 19706

**UNITED STATES OF AMERICA
and
SAUDI ARABIA**

Project Agreement for technical co-operation in educational programs for meteorology, hydrology, arid land studies, and environmental protection (with annexes). Signed at Riyadh on 25 November 1979

Authentic text: English.

Registered by the United States of America on 27 March 1981.

**ÉTATS-UNIS D'AMÉRIQUE
et
ARABIE SAOUDITE**

Accord relatif à un projet concernant une coopération technique pour des programmes éducatifs sur la météorologie, l'hydrologie, l'étude des terres arides et la protection de l'environnement (avec annexes). Signé à Riyad le 25 novembre 1979

Texte authentique : anglais.

Enregistré par les États-Unis d'Amérique le 27 mars 1981.

PROJECT AGREEMENT¹ BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE KINGDOM OF SAUDI ARABIA FOR TECHNICAL COOPERATION IN EDUCATIONAL PROGRAMS FOR METEOROLOGY, HYDROLOGY, ARID LAND STUDIES, AND ENVIRONMENTAL PROTECTION

Article I. SCOPE

The Department of the Treasury of the United States of America (Treasury) hereby agrees with the Ministry of Higher Education, represented by King Abdulaziz University (KAU), and the Ministry of Finance and National Economy (MFNE) of the Kingdom of Saudi Arabia to undertake a technical cooperation project (the Project) to develop an educational program in the Kingdom of Saudi Arabia in the fields of meteorology, hydrology, arid land studies, and environmental protection.

Article II. AUTHORIZATION

The Project will be carried out under the auspices of the United States-Saudi Arabian Joint Commission on Economic Cooperation and in accordance with the provisions of the Technical Cooperation Agreement between the Governments of the United States and Saudi Arabia signed in Riyadh on February 13, 1975,² which is hereby incorporated by reference and becomes a part of this Agreement.

Article III. PURPOSE AND OBJECTIVES

The purpose of the Project is to provide the assistance of United States educators to the Institute of Meteorology and Arid Land Studies of KAU to train students for employment in various sectors of Saudi Arabian government organizations and society and undertake mutually beneficial research.

Article IV. SERVICES

The services to be performed under the Project will be performed by a consortium of American universities, the Consortium for International Development (CID), and will include developing an academic program leading to bachelor of science and post-graduate degrees in meteorology, hydrology, and arid land studies; designing and implementing technical and specialized programs for meteorological technicians; developing non-degree continuing education programs; developing applied research projects in meteorology and arid land studies; developing curricula in the environmental protection area; and other related programs following the general guidelines of the CID proposal entitled *Development of an Education Program for the Institute of Meteorology and Arid Land Studies of King Abdulaziz University* dated January 1978. The proposal, as summarized in Annex A, is hereby incorporated by reference and becomes a part of this Agreement. CID personnel shall be selected solely on the basis of professional capability, experience, and other like merit factors.

¹ Came into force on 23 January 1980, after deposit by the Government of Saudi Arabia of the sum described in article IX, in accordance with article X (A).

² United Nations, *Treaty Series*, vol. 998, p. 209.

Article V. COORDINATION

Overall coordination of the Project with other Joint Commission activities within the United States Government and provision of certain administrative facilities and support for this Project will be the responsibility of Treasury. The Office of the Joint Economic Commission in Riyadh will serve as the point of contact for all communications between KAU, MFNE, CID and Treasury concerning the Project, and will be primarily responsible for monitoring the implementation of this Agreement in Saudi Arabia.

Article VI. LOCAL SUPPORT

A. KAU and MFNE shall support the Project by:

- 1) Designating senior officials responsible for implementing the terms of this Agreement;
- 2) Identifying and providing appropriate personnel to work with Treasury and CID personnel;
- 3) Providing adequate university office space, office furnishings, utilities, telephone facilities, and maintenance and upkeep of such office space for CID personnel assigned to Saudi Arabia pursuant to this Agreement;
- 4) Providing such supplies, services and materials, as may be required for academic duties of CID personnel;
- 5) Providing services for CID, when necessary to obtain clearance in matters including, but not limited to, visas and customs that may involve other agencies of the Government of Saudi Arabia;
- 6) Providing other related support as may be appropriate to the conduct by the CID employees of their duties.

B. Treasury may use funds advanced for the Project by the Government of Saudi Arabia to provide supplies and services referred to in paragraph A above, to the extent they are not provided by the Government of Saudi Arabia.

Article VII. "FORCE MAJEURE"

If any party to this Agreement is rendered unable, by reason of *force majeure*, to perform its responsibilities under this Agreement, these responsibilities shall be suspended for as long as such inability continues. The term "*force majeure*" means acts of God, act of the public enemy, war, civil disturbances, and other similar events not caused by nor within the control of the parties. During the period of suspension of performance caused by *force majeure*, Treasury may continue to pay normal costs of maintaining project personnel from funds advanced to the United States by the Government of Saudi Arabia. In the event of suspension of a party's duties because of *force majeure*, the parties shall consult and endeavor jointly to resolve any attendant difficulties.

Article VIII. ESTIMATED COSTS

The cost for the first year is approximately \$1.2 million as set forth in annex B, "Cost Estimate". Cost estimates for the remaining two years of this Project will be prepared and submitted by CID and Treasury for approval by KAU and MFNE in accordance with agreed procedures. All cost estimates shall include funds for joint research projects as mentioned in section 1, paragraph E of

annex A and as agreed to by CID, Treasury, and the Government of Saudi Arabia.

Article IX. DOLLAR TRUST ACCOUNT

The Government of Saudi Arabia agrees to deposit in the Dollar Trust Account in the United States Treasury, established by the Technical Cooperation Agreement, the sum of \$1.2 million which shall constitute a portion of the program funding. Upon agreement on each succeeding budget, the Government of Saudi Arabia shall deposit in the Dollar Trust Account the agreed estimate for the services to be provided.

Article X. EFFECTIVE DATE, AMENDMENT, EXTENSION AND TERMINATION

A. This Agreement shall become effective after deposit by the Government of Saudi Arabia of the sum described in article IX above, and shall remain in effect for three (3) years.

B. This Agreement may be amended or extended by the mutual written consent of all parties participating herein, and will terminate automatically in the event of the termination of the Technical Cooperation Agreement of February 13, 1975.

C. This Agreement may be terminated at any time at the discretion of either Government upon sixty (60) days written notice. If, upon termination of this Agreement, there are funds remaining in the Trust Account for this Project, such funds shall be refunded to the Government of Saudi Arabia after all costs have been defrayed and all liabilities satisfied.

D. All questions related to this Agreement arising during its term shall be settled by the parties by mutual agreement.

SIGNED this 25th day of November 1979 in Riyadh, Saudi Arabia.

For the Government
of the United States of America:

[Signed — Signé]¹

Department of the Treasury

For the Government
of the Kingdom of Saudi Arabia:

[Signed — Signé]²

Ministry of Finance and
National Economy

PROPOSAL FOR THE DEVELOPMENT OF AN EDUCATIONAL PROGRAM
FOR THE INSTITUTE OF METEOROLOGY AND ARID LAND STUDIES

I. OBJECTIVES

The University of Arizona and cooperating universities in the Consortium for International Development (CID) propose to assist King Abdulaziz University develop its Institute of Meteorology and Arid Land Studies. The University of Arizona and cooperators will establish, in as short a time as possible, a program of Meteorology and Arid Land Studies which will train students for employment in various sectors of the Saudi Arabian Government, non-governmental organizations and agencies. The program will include a

¹ Signed by G. William Miller — Signé par G. William Miller.

² Signed by Muhammad 'Ali Aba al-Khayl — Signé par Mohamed'Ali Aba al-Khayl.

research component which is deemed highly desirable by both universities. The University of Arizona and cooperators will emphasize:

- A. Close cooperation with the King Abdulaziz University Administration and Faculty in designing instruction and research programs compatible with its emerging university structure, curriculum and other related programs.
- B. A program taking into account the previous training and capabilities of the students, the needs of Saudi Arabia for trained personnel in specified fields.
- C. The provision of at least three different kinds of programs; a technical program for technicians; four-year bachelor of science and postgraduate programs in meteorology, hydrology, and arid land studies; and formal and non-formal, non-degree continuing education programs.
- D. The preparation of courses whose syllabi and supporting materials are specifically designed for the Arabian Peninsula's problems.
- E. The development of applied research projects in meteorology and arid land studies that will complement the instruction program and will stress problems peculiar to arid regions.
- F. The importance of field training and practical experience for the students in off-campus projects will be emphasized. The projects will be designed to familiarize the Institute's students with current problems being worked on by their potential employers in governmental departments.
- G. The fostering of a multi-disciplinary perspective on the part of the students. Consistent with current state-of-the-art in arid land studies, the University of Arizona will establish environmental science programs to study the systems of air, land, water, energy, and life that surrounds man. These programs will draw on such disciplines as meteorology, geophysics, oceanography and ecology, and will use the knowledge and techniques developed in such fields as physics, chemistry, biology, mathematics, and engineering.
- H. The establishment of a publication series by the Institute so that work done on the Arabian Peninsula will be readily accessible to members of the Institute, other scholars, and interested parties in the non-university community.
- I. Students taking courses at the Institute will be given assistance in obtaining credit for such courses if they decide to continue their studies at the University of Arizona and cooperators.
- J. Assistance as needed in the recruitment of other faculty by the Institute of Meteorology and Arid Land Studies.

The University of Arizona and its cooperators and King Abdulaziz University envisage a long term, reciprocal agreement whose results will include the strengthening of faculty and administrative ties between both institutions of higher education.

This proposal encompasses only the first phase which will include the initial design and staffing of the Institute with faculty from the University of Arizona and cooperating CID institutions. The second phase is one of transition and will involve staffing the Institute with as many Saudi nationals as are available. They will work and teach side-by-side with the University of Arizona and cooperating institutions' faculty, bringing the Institute up to its full institutional capabilities. The third and final phase will be a gradual withdrawal of consortium faculty from King Abdulaziz University and their replacement by Saudi Arabians. The transitions between phases will be gradual, avoiding any abrupt changes in personnel or problems which might endanger the continued, orderly growth of the Institute and of its program.

The plan for the second and third phases cannot be formulated at this time but planning for those phases will take advantage of the close cooperation between King Abdulaziz

University and the University of Arizona and cooperating CID institutions developed during the first phase.

II. PROGRAMS AT KING ABDULAZIZ UNIVERSITY

The University of Arizona and cooperators will develop three programs within the Institute of Meteorology and Arid Land Studies of King Abdulaziz University; academic, technical, and continuing education programs.

A. The academic program will include three subprograms at the B.S. level: (1) special meteorological courses for students with adequate education in mathematics and physics; (2) specialized courses in watershed hydrology and water utilization and management, and (3) a variety of courses in arid land studies.

1. *Meteorology*

Students completing this program will be equivalent to what the World Meteorological Organization (WMO) calls "Class I Meteorologists". They will have had education in mathematics and physics as outlined in *Guidelines for the Education and Training of Meteorological Personnel*, WMO-No. 258, TP. 144. The program will provide students with a thorough grounding in dynamic meteorology, synoptic meteorology, physical meteorology, and meteorologic instruments.

2. *Hydrology*

Watershed hydrology is intimately related with meteorology. Courses will be designed in watershed hydrology and water utilization and management that reflect Saudi Arabian and Middle East conditions.

3. *Arid Land Studies*

The education of young meteorologists and arid land scientists requires the early development of a tolerance for the unique perspective, strengths, and knowledge of other disciplines. A strong effort will be made to foster the development of a multidisciplinary perspective in the arid lands part of this program. The arid lands program will provide a technical understanding [of] the complexities of relationships between man and nature. This will require training in the environmental sciences to provide students with the knowledge of the principles and techniques of monitoring and evaluating the impacts of a developing nation on its physical and human environment. It will also include training in the practical application of the social sciences (geography, anthropology, sociology, and economics) necessary to solve man-nature problems in arid environments. Multi-disciplinary courses in arid land studies will be developed to meet student needs, combining aspects of the biological, physical, and social sciences which are not offered in programs existing in other departments at King Abdulaziz University.

B. *Technical and Specialized Programs*

The second set of programs to be designed and implemented will be in the technical aspects of meteorology and the environmental sciences.

1. *Meteorological Technicians*

The technical program in meteorology will be developed for at least two levels using WMO-No. 258, TP. 144, as a guide. As an example, Meteorology Technician I students will have a minimum of 12 years schooling which should be supplemented by courses in mathematics, physics, and other prerequisites for two years of meteorological training. Upon completion, these personnel should be qualified to carry out a wide variety of tasks in connection with the processing of observational data or the handling of meteorological instruments. Meteorological Technician II students should have at least nine years of schooling with an additional four months training in meteorology. Training in meteorology at this level should be sufficient to enable technicians to observe meteorological phenomena accurately and objectively and to understand the underlying significance of their routine tasks.

2. *Environmental Technicians*

Various kinds of data necessary for evaluating potential sources of environmental pollution resulting from man's activities will be required. To accomplish this, technicians experienced in sampling physical, chemical, and biological parameters that reflect the status of the environment will have to be trained. Climatological data, water and air quality data, marine data, and others are needed to provide an understanding of the environment and a predictive capability for managing the environment.

C. *Continuing Education Programs*

1. *Training and Refresher Courses*

The project personnel in Saudi Arabia will develop and present short courses, seminars, and other non-formal, non-degree programs in meteorology, hydrology, and arid land studies as needed and as the occasion arises.

2. *Publication Series/Information Systems*

As time permits and occasion demands, various publication series (monographs, reports, annotated bibliographies, etc.) will be prepared by personnel in cooperation with King Abdulaziz Faculty. Technical assistance in the development of information storage, retrieval, and dissemination systems will be offered by University of Arizona and cooperating CID institutions familiar with the design of successful systems.

COST ESTIMATE

Staff stationed in Saudi Arabia (including logistic support)	\$ 490,313
Research	\$ 573,273
Administration and Support	\$ 128,665
	<u>\$1,192,251</u>