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USAID IN PAKISTAN: BALOCHISTAN



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*Cover Photograph:
Baloch students from Makran prior to
their departure to the United States for
training.*

CONTENTS

Introduction	5
Agriculture	6
Area Development	12
Energy	16
Social Sectors.....	19
Future Directions.....	23

INTRODUCTION

This booklet is one of a four part series highlighting United States Government support for economic development in Pakistan. Since 1951 the United States, through its Agency for International Development (USAID), has channeled nearly \$7 billion in support of Pakistan's development efforts. U.S. economic assistance during the 1982-1987 period totalled \$1.6 billion.

Balochistan, with 44% of the country's land area and 5% of its population, is Pakistan's largest yet least populated province. Providing services to the sparsely populated desert and mountainous regions is extremely difficult without an infrastructure to support the delivery of services and sustain development.

Scarce water resources and a low literacy rate are also major constraints. The low level of literacy limits the number of skilled personnel available to manage and implement development projects. Balochistan's literacy rate is estimated at 10 percent compared to a national average of 24 percent.

Within this social and economic environment, USAID is working with the national and provincial governments to stimulate dynamic, self-sustaining growth. USAID funding of development programs reflects overall support for Pakistan's long-term development priorities and emphasizes activities in energy, agriculture, health and training.

The pages which follow mainly describe USAID supported development activities in Balochistan during the 1982-88 period. These activities show how USAID projects, while national in scope, advance development at the provincial level.

AGRICULTURE

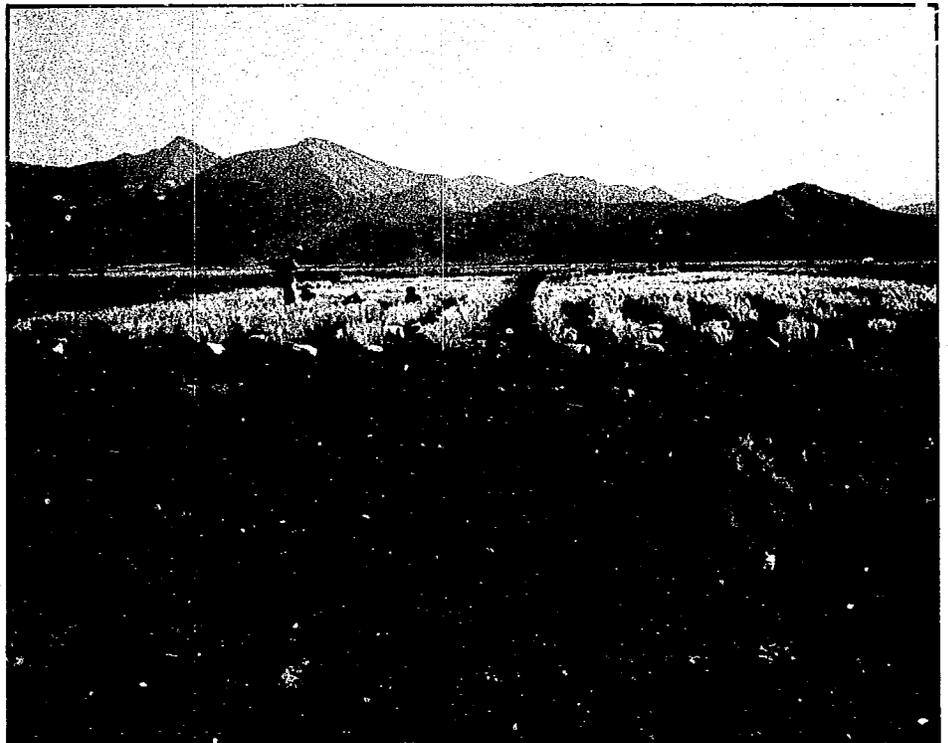


Lining of water courses under the On-Farm Water Management project greatly contributed to the success of the program.

Despite a 720 kilometer coastline and reports of mineral wealth, Balochistan's economy remains very much based on agriculture. The sector employs 65 percent of the province's labour force and contributes more than one-half of its Gross Domestic Product.

For Balochistan's rural population, improved incomes depend on increased agricultural yields. USAID is supporting efforts by the national and provincial governments to increase agricultural productivity in Balochistan through:

- Assistance to national and provincial agricultural research institutes; and
- Improvements in the efficiency of the irrigation system and the management of water resources.



New forage legumes are being tested for their ability to withstand the harsh environment conditions in Balochistan. This is part of USAID supported research activities at Arid Zone Research Institute, Quetta under the MART Project.



Research and Education

Sustained agricultural growth requires relevant research, appropriate technology, and effective extension services. USAID is strengthening Balochistan's research capabilities by providing assistance to national and provincial institutes in the form of training, technical assistance, and scientific and field research equipment.

One recipient of this assistance in Balochistan is the Agricultural Research Institute, a provincial institute at Sariab. USAID assistance supports the Institute's study of wheat, fruit and forage crop varieties suitable for Balochistan's climatic conditions.

Similarly, the On-Farm Water Management Training Institute in Quetta receives USAID support. USAID provided modern training equipment and technical assistance in curriculum development and classroom instruction. The Institute teaches irrigation and water management techniques to agricultural and engineering professionals, extension workers and farmers. Demonstration farms near the Training Institute allow researchers and farmers to observe how crops respond to various types of irrigation.

Blue Silver wheat growing with the addition of phosphate fertilizer in the farmer-managed trials in Kovak valley.



A farmer busy at a private nursery. USAID is supporting farm forestry to help encourage tree plantation on marginal farm land and increase farmer incomes.

Irrigation

Water-deprived Balochistan must harness and protect its limited irrigation water resources if agricultural yields are to be increased. This entails canal rehabilitation, timely maintenance, detailed planning, farmer support, and institutional development. USAID has contributed to the rehabilitation and improvement of Balochistan's irrigation system through technical assistance and the provision of irrigation and earthmoving equipment.

Institutional support and development is another important component of USAID-assisted irrigation activities. For example, the Provincial Irrigation Department's equipment maintenance workshop in Quetta has been renovated and re-equipped. USAID is also providing the Department with computers and management and technical training. The computers will aid in the designing and monitoring of water resource delivery and maintenance.

Water management is a major research concern. Researchers are studying ways in which low cost structures can be used to retain mountain run-off and recharge underground reserves. They are also seeking ways to improve the yield and effectiveness of karezes, the long sub-terranean tunnels that collect and transport underground water.

Over the next few years a significant USAID irrigation activity in Balochistan will be in the Lasbela District. Lasbela is one of seven pilot areas in the country to receive USAID and World Bank assistance for Command Water Management activities.

These activities aim at ensuring more reliable and equitable water distribution and use through community participation and improved water management. USAID is financing the rehabilitation of watercourses and providing scientific equipment and technical assistance to the Lasbela Management Office.

ARID ZONE RESEARCH INSTITUTE, QUETTA



AZRI headquarters in Quetta supported under the U.S.-financed MART project.



Program at AZRI includes research in rangeland and livestock management. Picture shows a sheep research station at AZRI.

Most of Balochistan's cultivated lands are in rainfed areas. Increasing agricultural production in these areas is the objective of PARC's Arid Zone Research Institute (AZRI) in Quetta. Although a federal institute, AZRI conducts most of its research in Balochistan.

USAID is financing the technical assistance and training provided to AZRI by the International Center for Agricultural Research in Dry Areas, headquartered in Aleppo, Syria. In addition, USAID is supporting AZRI's research program by supplying nearly \$1 million in field and laboratory equipment, computers, and vehicles. This equipment is being used at AZRI's research stations in Tomagh and Zarchi and on farmers' fields at eight sites in northeastern Balochistan.

The aim of AZRI's extension outreach trials is to make agricultural research and education relevant to farmers. An example of farmer-directed research is AZRI's livestock nutrition studies to benefit farmers who earn their livelihood by raising goats and sheep in Balochistan's dryland areas.

USAID-SUPPORTED AGRICULTURAL ACTIVITIES IN BALOCHISTAN - HIGHLIGHTS

Institutional Development (includes training, technical assistance, commodities, equipment)

- Agriculture Research Institute
- Arid Zone Research Institute
- Balochistan Forest Department
- Livestock and Animal Husbandry Department
- Office of Provincial Chief Conservator of Forests
- On-Farm Water Management Directorate and Training Institute
- Provincial Irrigation Department

Research, Education and Training

- Crop studies, tree species research, water and rangeland management research
- Farm trials and irrigation demonstration plots
- Long and short term training at overseas institutions
- In-country training in statistics, computers, management, planning, and technical fields

Equipment and Commodities

- Earthmoving, construction, irrigation, and workshop equipment
- Computer hardware and software
- Research and hydraulic measurement equipment
- Vehicles
- Fertilizer

Water Resources

- Canal and drain rehabilitation
- Tools and machinery for the Provincial Irrigation Department's maintenance workshop
- Weirs across Saliaza, Anabar, and Deewana Rivers
- Engineering design work for 32 watercourses in Lasbela
- Office for Lasbela Command Area

Forestry

- Tree planting on 100 family farms in Nasirabad District
- Establishment of 10 seedling nurseries in Nasirabad

PROMOTING FARM FORESTRY IN BALOCHISTAN



A farmer nursery in Nasirabad.

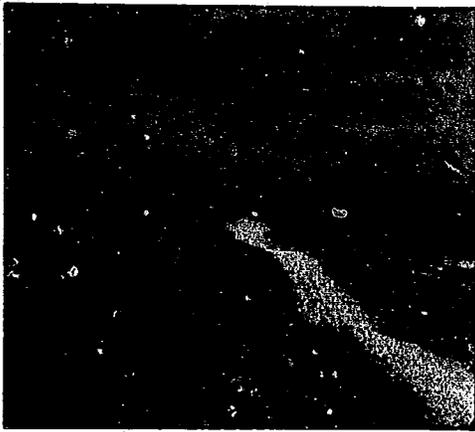


Planting of acacia trees.

One of the benefits of irrigation is that it often enables farmers to diversify their operations. Under a USAID forestry project, seedlings are being provided to farm families for tree planting on private irrigated farmlands in Nasirabad District in eastern Balochistan. Farmers are encouraged to take advantage of excess irrigation water and become self-sufficient in fuelwood production.

During the first year of the project, ten private seedling nurseries were established in Nasirabad District. Around 100 farm families planted trees on 180 acres. The target for the second year is tree planting on an additional 200 acres.

AREA DEVELOPMENT



Grading work in progress under the BALAD Project.

The \$45 million Balochistan Area Development (BALAD) project focuses mainly on Makran Division, a remote and isolated region in southwest Balochistan where agricultural yields, per capita income, and literacy rates are among the lowest in the country. An extremely inadequate road system limits access to markets and basic social services. In all of Makran, there are less than 80 kilometers of paved roads.

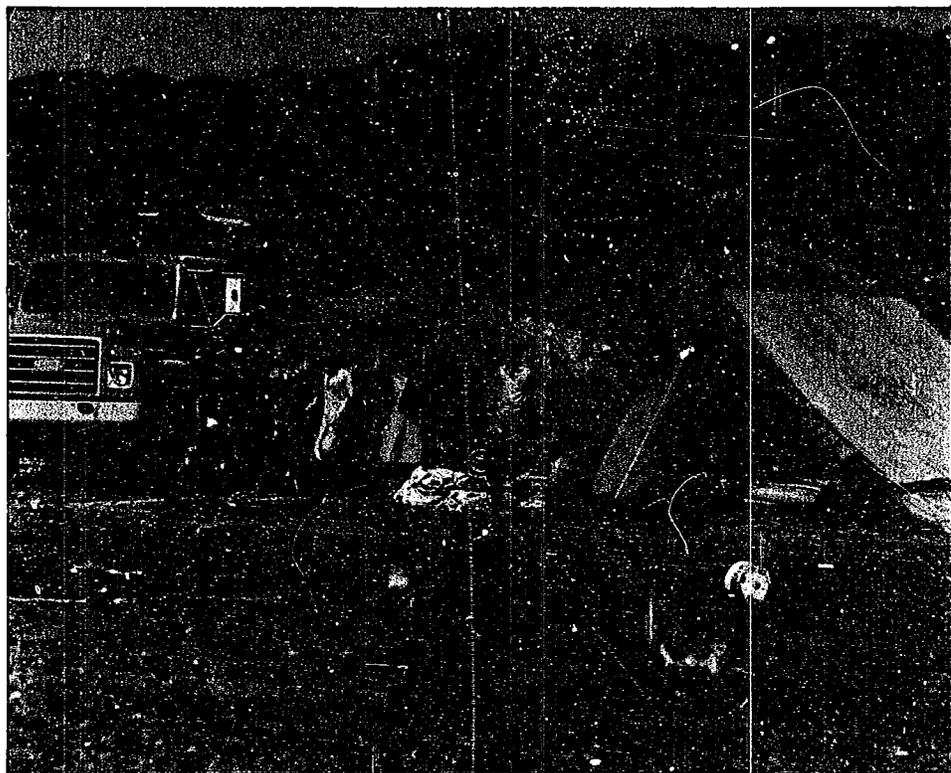
USAID assistance under BALAD is being provided in response to a direct request from the Government of Pakistan. The project's objectives are to increase agricultural productivity in Makran, improve the area's transportation network, and expand training opportunities.

Work during the first two years of implementation included completion of engineering surveys, preparation of engineering designs for road and bridge construction, and procurement of equipment for the Government of Balochistan's Department of Communications and Works. A project office was established and constructed in Turbat.

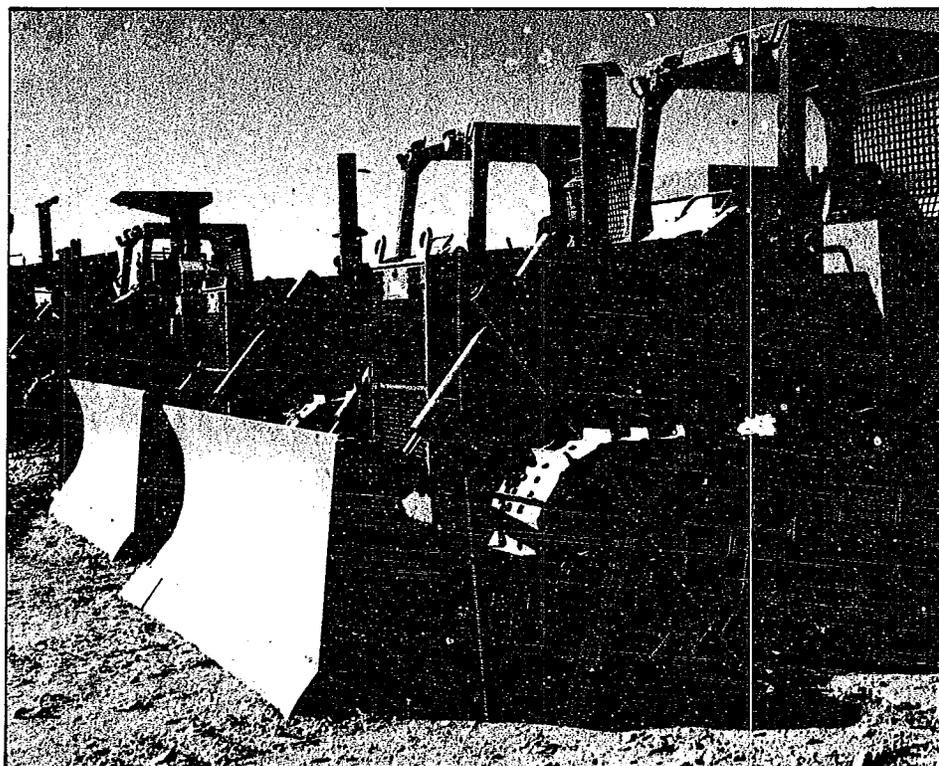


BALAD project headquarters at Turbat.

Having laid this foundation, the project is ready to move ahead with major activities including construction of a paved, 101 kilometer road from Bela to Awaran and a bridge over the Ketch River near Turbat. Design work is also beginning on the paving of the 255 kilometer Awaran-Turbat road. When constructed, the road should cut travel time from Karachi to Turbat by as much as half.

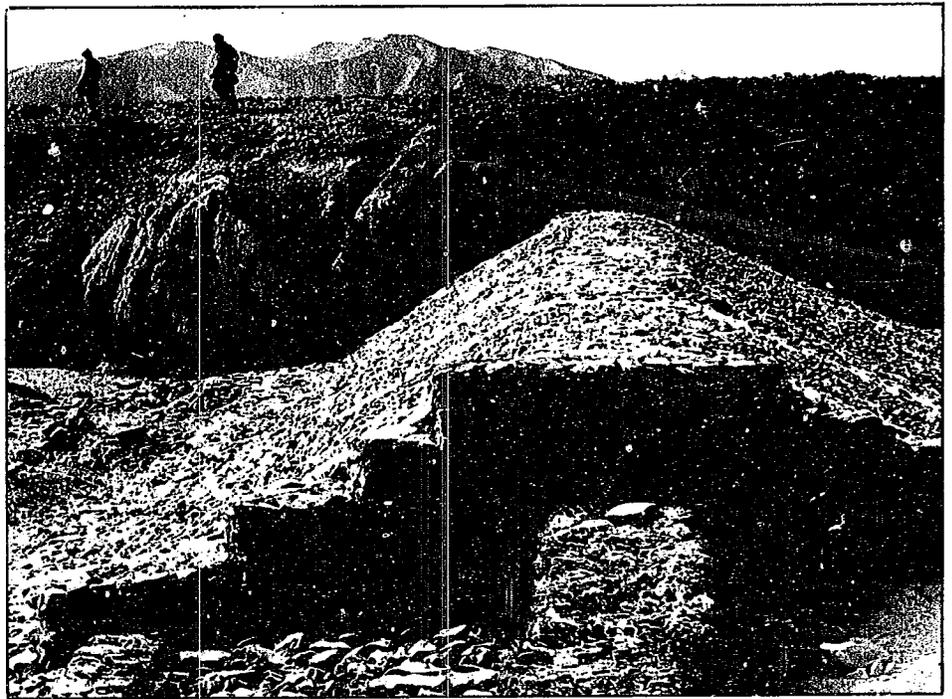


A camp established by provincial Communications and Works department on Turbat-Hoshab road for USAID-financed maintenance operations. Truck shown also financed by USAID under BALAD.



Dozers purchased using Agricultural Commodities and Equipment (ACE) funds in storage at BALAD headquarters in Turbat.

A completed Check Dam near Turbat holds water back and reduces the velocity of flash floods in the area.

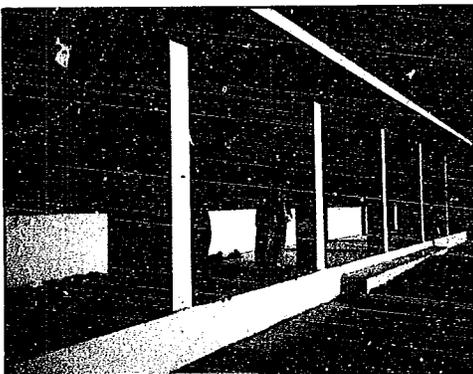


Equipment as well as technical and financial assistance is being provided to the provincial Communications and Works Department for maintenance of 900 kilometers of roads throughout Makran. Relatively simple maintenance and improvements of these tracks can result in considerable reductions in travel time.

Work is also underway to improve many of the district's karezes, the long sub-terranean tunnels that collect and transport underground water. In addition, construction has begun on several small delay dams. Nearly two dozen water schemes are complete or nearly complete. Many more are under construction or planned.

Another component of BALAD is a \$1 million reserve for small development activities, allowing the project to respond quickly to specific needs of local communities. So far 22 schools have been constructed or expanded under the project. Additional school buildings, health and sanitation facilities, and potable water schemes are likely to be included in future activities.

A completed primary school building under BALAD.



SPECIAL TRAINING PROGRAM FOR BALOCHISTAN



A computer facility at the Planning and Development Department, Quetta provided under BALAD project helps Balochistan Government employees learn computer skills.



A group of Baloch students in Islamabad attending a short English language and orientation course prior to their departure for training in the United States.

Lack of training opportunities is a major problem in Makran. In response to a request from the Government of Balochistan, USAID is funding an innovative training program for 52 young Makranis. After six weeks of English language classes and orientation in Islamabad, the students went to Singapore or the United States for further language study.

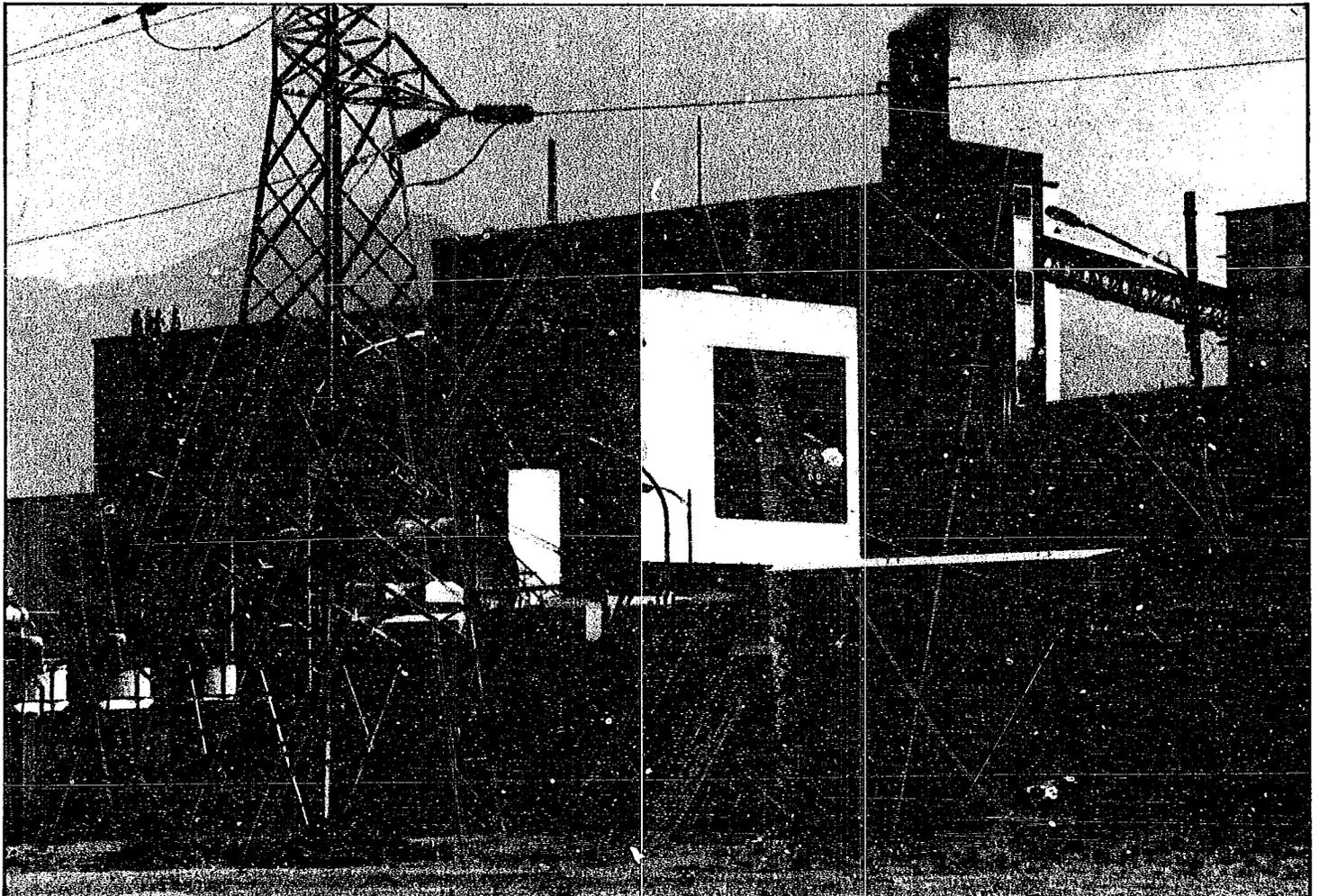
In January 1988 about two-thirds of the students enrolled in vocational training programs in the United States in such fields as drafting, well drilling, welding, mechanics, and construction. The other students will be completing undergraduate or associate degree programs.

ENERGY

Major objectives of the USAID energy program are to help Pakistan expand energy production, develop indigenous energy resources, modernize energy equipment, promote conservation activities, and strengthen energy institutions.

At present, only 19 percent of Balochistan's villages are electrified. Balochistan and the other provinces are benefitting from efforts by the Government of Pakistan and USAID to improve energy planning, increase WAPDA's electrical generating capacity, and efficiently expand reliable electric service to the population.

This coal-fired power plant was built with USAID funds in early 1960s in Quetta.



Coal Development

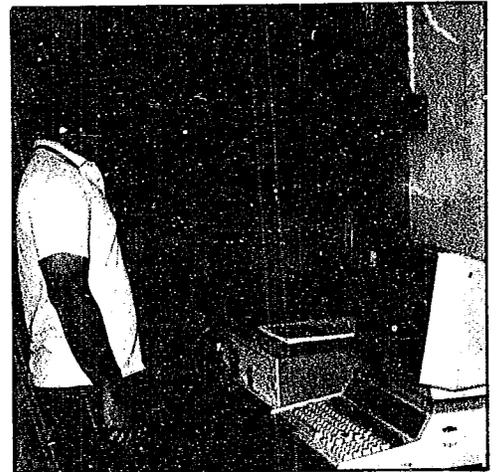
Pakistan's only coal-fired power plant was built in Quetta with USAID assistance in the early 1960s. Today efforts are underway to modernize and expand coal production and use. If properly exploited, Balochistan's indigenous coal could help the province generate its own power.

In recent months, USAID has provided the Geological Survey of Pakistan (GSP), headquartered in Quetta, with \$8 million in equipment such as drilling rigs, geophysical logging trucks, and laboratory equipment. The deep drilling rigs are for exploration of Balochistan's coal deposits. These rigs are capable of drilling to depths of 3,000 feet. Exploratory drilling and geological operations using this machinery began in 1988.

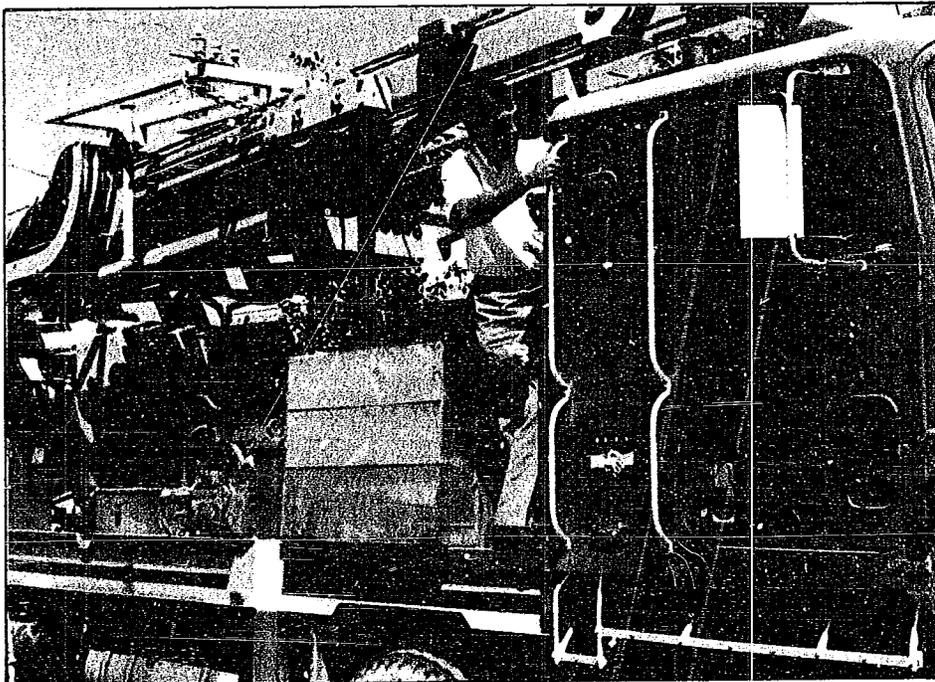
In support of private sector coal mine developers, USAID is providing scientific analysis of coal samples from a number of private mines. This analysis is required for coal sales to new industrial users and power plants.

Other Activities

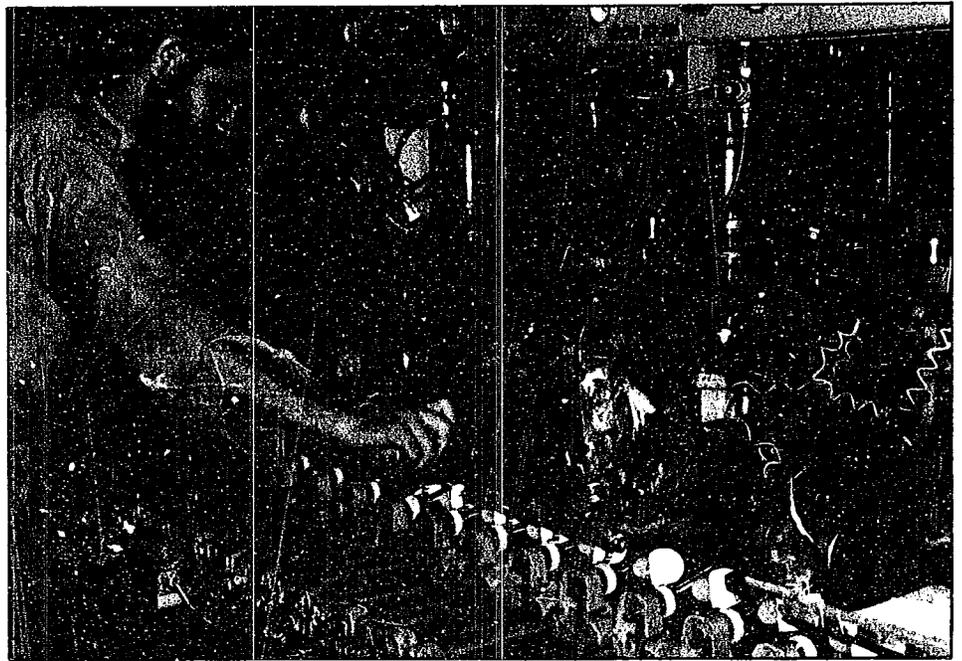
Training, national energy conservation, and renewable energy programs also have an impact in Balochistan. For example, over 1,000 WAPDA employees from Balochistan have participated in special programs aimed at improving safety practices,



USAID provided \$11 million to the Geological Survey of Pakistan, Quetta under the Energy Commodities and Equipment (ECE) program. The equipment supplied to GSP includes (above) an Image Analysis Unit with color microscope convertible to transmitted light or reflected light study; and (left) truck-mounted rotary-cum-diamond core drilling rigs capable of drilling more than 1200 metres. The rigs are suitable for geo-thermal and mineral exploration.



Private industries in Balochistan participate in a national program of energy audits.



technical expertise, and management. Similarly, private industries in Balochistan have participated in a national program of energy audits and other measures to lower energy costs.

Renewable energy offers significant potential for isolated populations in Balochistan. In the near future, USAID will be helping to develop demonstration programs in Balochistan to promote renewable sources such as solar energy for water heating, water pumping, and electricity.



A mother weighs her baby. USAID-financed Primary Health Care program supports a variety of public health activities including better child care.

SOCIAL SECTORS

Social sectors form an integral part of overall planning for economic development. Improving the quality of health services as well as expanding health coverage to rural and urban populations, keeping population increase within manageable limits and strengthening the human resource base through training are vital for achieving and sustaining the growth rates necessary for economic development. USAID provides assistance in support of major initiatives of the Government of Pakistan in these important sectors.

Health

USAID is supporting health activities aimed at reducing infant and child mortality, combatting preventable diseases, and improving basic health services, particularly in rural areas.

The majority of childhood deaths in Pakistan are a result of diarrhea. An estimated 200,000 Pakistani children die each year from dehydration and diarrhea related diseases. USAID is assisting in developing a communications and educational campaign to increase public awareness of oral rehydration therapy (ORT) as a simple and effective treatment for dehydration from diarrhea.

The extension of health services requires motivated, trained health workers and well managed rural health centers. From 1980-86 around 50 men and 50 women in Balochistan completed training as health technicians. Currently 24 men and 22 women are enrolled in the 18 month training program. USAID provided technical assistance to revise the curriculum used in training health technicians. The new curriculum has been redirected toward preventive care and community health.

Health training in Balochistan will improve further with the USAID-financed construction and furnishing of two health technician training schools, complete with classrooms, libraries, laboratories, auditoriums, tutor residences, and separate hostels for female and male students. The construction of these health technician schools in Quetta and Khuzdar started in 1988.

USAID is also assisting the Balochistan government develop comprehensive primary health care training for medical officers assigned to rural health facilities. A new health monitoring system has been introduced in rural health centers in Kachhi and Pishin Districts and later will be introduced at other sites.

Additional USAID involvement in health care includes assistance for malaria control, an ongoing activity since the 1960s. Under the present program, USAID provides insecticides, special equipment, and training opportunities to malaria control and health staff in Balochistan.

Population

Family planning affects the health of a woman and the welfare of her family and community. Pakistan's high population growth rate taxes the country's ability to provide needed jobs and social services.

At the request of the Government of Pakistan, USAID is working with the Population Welfare Division to strengthen family planning services in all four provinces. USAID is procuring contraceptives and equipment for the public and private sectors, supporting voluntary organizations involved in family planning, and providing technical assistance in social marketing and the distribution of contraceptives.

Training

The primary objective of USAID training programs is to upgrade the management and technical expertise of those involved in the implementation of priority development programs. From 1983 through 1987, over 300 individuals from Balochistan received short or long term training in the United States or third countries.

Over half of the training programs were initiated in 1987 in such fields as engineering, forestry, computer science, electrification systems, public administration, and business management. USAID also supports in-country seminars and workshops on public and private sector management and development related topics.

The human resources development program also provides assistance to training institutions and scholarships for their faculty. USAID furnished books and training equipment to the Pakistan American Cultural Center for English language instruction and to the National Institute of Public Administration. Both institutes have branches in Quetta.

This group of female Baloch students is now in the United States for undergraduate studies in their chosen disciplines under the Development Support Training Program of USAID.



USAID Support for Primary Health in Balochistan



These vans are part of 32 vehicles provided by USAID to the Balochistan Health Department for their mobile and outreach teams.



Stock of USAID supplied syringes, needles, vaccine carriers, etc., for the Expanded Program of Immunization activities under the Balochistan Health Department.

In Pakistan more than 170,000 children under the age of two die each year from diseases that could be prevented simply by immunization. The Government of Pakistan's Expanded Program of Immunization has dramatically increased immunization coverage against six preventable diseases from under 5 percent in 1982 to 70 percent in 1987.

In Balochistan, however, immunization coverage in 1987 was only 12 percent. This lower rate is largely due to (1) the vastness of the province, (2) the location of small settlements in remote areas, (3) poor road conditions, and (4) inadequate transport.

USAID has addressed the problem of inadequate transport by supplying the Balochistan Health Department with 32 vans and jeeps, 200 bicycles, and 170 motorcycles for mobile and outreach teams. USAID is also supporting the immunization program by providing syringes, needles, vaccine carriers, and other supplies.

FUTURE DIRECTIONS

The United States remains committed to economic and human resources development at all levels, national as well as regional. The Government of Pakistan's efforts to ensure that the benefits of national development are distributed to all citizens and all regions will continue to receive USAID support.

Under a new aid package, the United States anticipates providing \$1.8 billion in economic grant assistance to Pakistan over the next several years (1988-1993). An additional \$480 million is expected to help finance the import of essential food commodities such as edible oils under the PL-480 program.

Most of the USAID-funded development activities described in this booklet will continue under the new program. Greater access to water, agricultural inputs, energy supplies, social services, and training opportunities will be provided, along with new initiatives in important areas such as primary education.



New initiatives under the 1988-1993 multi-year package include primary education with emphasis on increasing the number of female students enrolled and improving primary education all over Balochistan.



A Karez digger in Nasirabad.