

The USAID Contribution to the Economic Development of MADHYA PRADESH



U S A.I.D. Mission to India, New Delhi
Office of Development Policy
Program Division

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MADHYA PRADESH

Madhya Pradesh is one of the more interesting states of the Indian Union. As its name indicates, it lies in the heart of the country. Intersected by meandering rivers, and dotted with hills and lakes, the region has a varied natural beauty.

A variety of wild animals inhabit its rich tropical forests. Man-eating tigers and panthers offer some of the most dangerous and exciting game in the world. Here too, are large herds of beautiful spotted deer and the stately black buck, an animal to be seen only in India. The Indian buffalo, which may weigh up to a ton, is found in the south-eastern region of Madhya Pradesh.

In its cultural heritage Madhya Pradesh is incomparable. It has innumerable monuments—exquisitely carved temples and stupas, forts and palaces. India's immortal poet-dramatist, Kalidasa, and the great musician, Tansen, belonged to this land.

Art and culture in this region reached a high watermark under the rule of the Mauryas. One of the famous sculptures of the period is the Great Stupa at Sanchi with its vivid stone carvings. Fine examples of mural paintings which date from the Gupta period are found in the Bagh Cave and the Hindu and Jain temples in Udayagiri. These, along with the Ajanta murals, are the only surviving specimens of ancient Indian paintings.

Khajuraho, Udayapur and Gyaraspur have some of the most beautiful temples built between the 8th and 12th centuries. The Khajuraho temples are famed not only for beauty of outline but also for the lively texture of their surface decoration.

GEOGRAPHY AND CLIMATE

The State of Madhya Pradesh was created in 1956 out of Vindhya Pradesh, Bhopal and fourteen (Mahakoshal) districts of old Madhya Pradesh. The State's area is comprised of tableland covering about 171,217 square miles (about 12,500 square miles larger than California). Madhya Pradesh is bounded by the upper Gangetic Valley in the north, Orissa in the east, Rajasthan in the west, and Maharashtra and Andhra Pradesh in the south.

Hundreds of rivers trace their sources to the "Heart of India". Tributaries rising in the State meet the Ganga and the Yamuna to the north, the Narmada and Tapti flow westward to the Arabian Sea, and the Wardha, Wainganga and Mahanadi course north and eastwards to the Bay of Bengal.

Madhya Pradesh has a tropical climate. As in most of northern India, there is a

hot dry summer followed by the monsoons and a cool and relatively dry winter. The average rainfall is about 40 inches. The heaviest rainfall is in the south-eastern districts. It decreases as one moves westwards, the western and north-western districts receiving 30 inches or less.

Low mountain ranges intersected by river valleys divide the State into regions making communications difficult. The main valleys of the Narmada and the Son run diagonally across the State. Both rise close together in the Maikal ranges - the Narmada flowing south-west between the Vindhya and the Satpura ranges thus creating a fertile belt between the hills, and the Son flowing north towards the Ganges.

The Vindhya and other ranges to the north merge into a broken plateau which finally unites with the Gangetic plain. While most of the area is covered by lava, there is a narrow strip of alluvial soil in the north. In the northern area, erosion is a serious problem due to inadequate forest cover.

The southern hills are generally higher and cover more area than their northern counterparts. The highlands of the Son and the Maikal, which form the eastern shoulder of these hills, descend to the Chattisgarh plains - the rice growing area of the State. South of these plains another range of low hills eventually yields to a strip of plain on the west and south-west fringes of the State.

POPULATION

The population of Madhya Pradesh in 1971 is estimated at 41.4 million, with a population density of 93 persons per square kilometre compared to the all-India average of 182 persons per square kilometre. About 86 per cent of the State's population live in rural areas. Further, the average size of the villages in the State is about 330 persons per village, much smaller than the average Indian village. Roughly 44 per cent of the population live in widely scattered, isolated settlements of less than 500 people. The absence of adequate transportation and communication facilities between the villages have contributed to the State's depressed economy.

Only about 14 per cent of the State's population is in the urban areas. The State has eight cities with a population of 100,000 or more. The largest city is Indore, followed by Jabalpur, Gwalior and Bhopal, the State capital. Other cities are : Ujjain, Raipur, Durg and Sagar.

AGRICULTURE

The State's economy is predominantly agricultural and is the mainstay of nearly 80 per cent of its population. The net area sown in the State in 1966-67 was about 17.20 million hectares (42.50 million acres) while the area under irrigation was 1.09 million hectares (2.7 million acres) which is only 6.3 per cent of the total area sown. The State has abundant water resources and it is estimated that the irrigation potential of all its river basins that can ultimately be developed, will provide irrigation facilities to about 8.94 million hectares (17.15 million acres). At the end of 1968-69, the irrigation potential developed by

large and medium projects was about 0.43 million hectares (1.06 million acres.)

The major portion of the State is covered by medium black soil. This soil is quite fertile and is suitable for growing wheat, cotton, tobacco and chillies.

The acreage and production data for the State's major crops for 1968-69 are as follows :

	<i>AREA</i> (000 hectares)	<i>PRODUCTION</i> (000 tons)
FOODGRAINS		
Rice	4,391.2	3,004.6
Jowar	2,707.9	1,812.4
Gram	1,573.0	756.6
Bajra	299.8	147.8
Maize	618.9	350.9
Wheat	3,055.6	2,007.5
Small Millets	1,664.1	358.8
Barley	170.2	126.8
Tur	487.0	309.2
Other Pulses	1,965.5	580.7
CASH CROPS		
Oil seeds	1,547.0	427.2
Cotton	761.2	373.2 *
Potato	24.5	215.3
Sugarcane	46.5	120.3
Dry Chillies	49.3	16.3
Tobacco	3.1	1.5
Opium	16.0	0.6

FORESTS

With as much as one-fourth of the total forest area of the country located within its borders, Madhya Pradesh abounds in forest wealth. It is the only State which has more than one-third (about 66,000 square miles) of its total area under forests, as against one-fifth of the country as a whole.

Sal and teak are the important varieties of wood found in the forests. The State Government derives a revenue of over Rs 252.8 million every year from forestry. A sum of Rs 114.3 million was spent on various forest development schemes during the last three Five-Year Plans and the Plan intervals (1966-1967 to 1968-1969).

* Thousand bales of 180 kgs. each
1 Hectare = 2.471 acres

INDUSTRY

While Madhya Pradesh's full industrial potential is yet to be developed, several important undertakings have been established in recent years. These include the following large public sector under-takings : a Steel Plant at Bhilai; a Heavy Electrical Factory at Bhopal; and a National Newsprint Paper mill at Nepanagar, with a rated capacity of 30,000 tons per annum. In this last undertaking, a license has been granted for expanding the mills capacity to 75,000 tonnes of newsprint per year. This expansion is now under progress. Another paper plant, the biggest in Asia having a single unit capacity of 200 tonnes of paper daily has also been set up at Amlai. The State Government also owns and operates several industries—a cotton spinning mill; a cement factory; an alcohol plant; a steel casting factory, and the Indore Wire Co., Ltd.

The development of industries in the private sector has also been progressing. Several industries—textile mills, cement factories, and factories manufacturing power driven pumps, cables, straw board, glass, scooters and starch products have been set up. To speed up industrialization in the State and to attract entrepreneurs, the State Government has adopted a very liberal industrial policy. A Policy decision taken by the State Government to underwrite the shares or participate itself in the share capital of medium and large scale industries has proved an important stimulus to increase economic activity. Special concessions in respect to power, octroi and sales taxes have also been granted to industries.

MINERALS

After Bihar and West Bengal, Madhya Pradesh is the third richest State in regard to mineral resources, accounting for about 14 per cent of the total value of mineral output in the country. It is the only State in the country producing both quality gems and industrial uses diamonds.

Among the important minerals exploited in the State are coal, iron ore, bauxite, limestone and china-clay. The State accounts for the highest output of limestone in the Union, with limestone deposits widely scattered in almost all the districts of the State. Many of these deposits are presently being mined on a large scale for use in the iron and steel, cement, and chemical industries.

Iron ore deposits, particularly those located in Dalli-Rajhara, Bailadila and Rowghat areas, are exceptional both in terms of quantity and quality, with an iron content as high as 67-69 per cent in some cases. A recent survey conducted by the Geological Survey of India has indicated iron ore reserves of 82 million tonnes at the Kaucher deposits in the State. The total indicated reserves of iron ore in the State amount to an estimated five billion tonnes.

Coal reserves in the State have been estimated at around 5,500 million tonnes. These deposits are mainly of the non-coking variety with a high-ash content.

Apart from the above important minerals, the State also has deposits of dolomite, quartz and silica, ochre, sillimanite, steatite, pyrophyllite and fluorite. Deposits of copper

and lead ores have also been reported in some districts of the State where geo-chemical and geo-physical investigations are being carried out by the State Geological Department.

POWER

The State possesses a very high hydro-power potential, second only to Assam. The Energy Survey of India Committee has estimated the hydro-power potential of Madhya Pradesh at 4,582 million kw. This is about one-tenth of the total for country as a whole.

Electricity was first introduced for public consumption in the State in 1905. By 1946, the total installed capacity was 26.5 mw. Generating capacity has been expanding steadily with each Five Year Plan, and by 1968-1969, the installed capacity was about 713 megawatts. By the end of the Fourth Five Year Plan (1973-1974), the State is expected to have a total installed capacity of about 825 megawatts.

The annual per capita consumption of electricity is 54 kwh. Spurred by the State's intensified electrification program, the per capita consumption is expected to increase further to 86 kwh.

Basic Data on Madhya Pradesh 1970

Capital : Bhopal
Language : Hindi

LAND AREA	171,217 square miles	EDUCATION			
Districts	43	Literacy		22.0 per cent	
POPULATION	41.4 million	Universities		8	
Density	93 (per sq. km)				
	(Thousand of Hectares)	<i>Type of</i>	<i>Insti-</i>	<i>Enroll-</i>	
GEOGRAPHICAL AREA	44,313	<i>Schools</i>	<i>tutions</i>	<i>ment</i>	<i>Teachers</i>
Area Cropped (gross)	18,336	Colleges for	165	66,354	3,985
Area Cultivated (net)	17,205	General Edu-			
Forests	14,703	cation			
Not available for cultivation	4,310	Colleges for	268	51,138	4,254
Permanent Pastures and	6,015	Professional			
Cultural Waste, etc.		Education			
Fallow Land	2,080	Middle/High/	5,844	833,023	41,539
		Higher/Secon-			
POWER		dary			
Installed Generating Capacity	713 MW	Primary Schools	34,435	2,848,941	85,402
Per Capita consumption	54 kwh	Special/Profe-	74	4,107	813
Villages electrified	705,050	ssional Schools			
Pump sets energized	53,469	Schools for other	1,325	27,946	N.A.
		Education			
INDUSTRY					
Factories	2,607				
Persons employed	733,517	HEALTH			
COOPERATIVES		Hospitals and Dispensaries		696	
Societies	10,814	Primary Health Centers		457	
Membership (million)	2.2	Doctors		2,621	
		Beds		14,439	
LABOR		Nurses (trained)		2,742	
Craftsmen Training Institutes	23	Nurses (untrained)		4,880	
Enrollment	5,477	Family Planning Clinics		524	

SOURCES : i) Times of India Directory, 1971.
ii) Statistical Abstract of India, 1969.

AID ASSISTED PROJECTS IN MADHYA PRADESH



DEVELOPMENT LOANS

- Satpura Thermal Power Station (near Tawa)
- Birsinghpur (Amarkantak) Thermal Power Station (Amlai)
- ▼ Orient Paper Mills Ltd. (Amlai)
- ▼ Shama Forge Ltd., (Bhopal)

MAJOR TECHNICAL COOPERATION PROJECTS

- * Foodgrain Storage (Bhopal, Raipur, Bilaspur and Chamtari)
- Agricultural Universities Development (Jabalpur)
- Soil Fertility & Fertilizer Use (Jabalpur, Gwalior)
- Soil & Water Conservation (Sheopur)
- Agriculture Extension (Raipur)
- Dairy Development (Jabalpur)
- Multipurpose Secondary Education (Jabalpur, Dewas, Bhopal & Raipur)
- Higher Technical College (Bhopal)
- National Productivity Council (Indore)
- Nursing College Development (Indore)
- Assistance to Medical Colleges & Allied Institutions (Indore)
- Craftsmen Training (Konr-Bilaspur, Indore, Gwalior, Jabalpur, Raigarh, Ujjain and Baragarh (Bhopal))

LEGEND

- * FOODGRAIN STORAGE
- INSTITUTES AND UNIVERSITIES
(Agricultural, educational, technological & research)
- THERMAL POWER STATIONS
- ▼ INDUSTRIAL EXPANSION
- OTHERS

Summary of USAID Assistance

(Figures in Thousands)

<i>US-GOI Projects and Activities</i>	<i>L O A N S</i>		<i>G R A N T S</i>	
	<i>Dollars</i>	<i>Rupees</i>	<i>Dollars</i>	<i>Rupees</i>
Confined to Madhya Pradesh ^f	26,712	230,770	206	15
Amarkantak Thermal Power Station	7,596	66,700		
Satpura Thermal Power Station	19,116	159,320		
Shama Forge Ltd.		4,750		
Training in Agricultural Machinery Utilization			206	15
Countrywideⁱⁱ	2,634,801	3,628,600	288,166	3,220,868
Agriculture	10,845		71,447	79,015
Agricultural Universities Development			15,624	56,231
Agricultural Inputs Development			2,540	10,916
Acquisition & Distribution of Fertilizers	8,854		20,118	
Soil Fertility & Fertilizer Use			1,029	194
Expansion & Modernization of Marine and Inland Fisheries			2,902	63
Agricultural Extension			3,013	2,458
Community Development	1,991		11,518	
Foodgrain Storage			1,664	97
Agricultural Education & Research			8,981	5,144
Agricultural Economics Research			289	17
Crop Production			1,536	1,711
Dairy Development			994	239
Farmers' Organization			275	396
Soil & Water Conservation			964	1,549
Education			12,404	38,795
Science Education Improvement			6,162	28,855
Multipurpose Secondary Education			3,992	8,250
Teacher Training in Engineering Education			2,250	1,690
Health	12,233		90,610	14,018
Malaria Control and Eradication	9,533		80,773	1,726
Family Welfare Planning	2,700		5,422	8,940

i) See Annex I

ii) See Annex II and III

Benefiting Madhya Pradesh

<i>US-GOI Projects and Activities</i>	(Figures in Thousands)			
	<i>LOANS</i>		<i>GRANTS</i>	
	<i>Dollars</i>	<i>Rupees</i>	<i>Dollars</i>	<i>Rupees</i>
Assistance to Medical Colleges and Allied Institutions			1,056	
Medical Educator Training			1,751	2,023
Nursing Colleges			1,223	1,023
Public Health Education			385	306
Labor			1,130	1,597
Trades Training			661	
Labor Ministry Training			469	1,597
Transportation	229,224		29,325	
Railway Modernization	229,224		29,325	
Industry and Mining	10,399		53,880	8,050
Acquisition & Distribution of Iron & Steel	10,399		50,394	
National Productivity Council			3,337	7,898
Coal Industry Modernization			149	152
Power			1,470	576
Electrical Distribution Systems			394	88
Technical Services in Water and Power Development			1,076	488
Commodity Imports	2,372,100		20,000	
Program Assistance-Loans	2,372,100			
Program Assistance-Grants			20,000	
PL 480 Rupee Assistance for Development Activities		3,628,600	7,900	3,078,817
River Valley Development		2,359,000	7,900	59,400
Higher Technical Education		265,700		165,600
Elementary Education		428,300		783,100
Primary Health Centers		60,000		105,500
Smallpox Eradication		27,300		102,900
Malaria Control & Eradication		194,600		851,500
Family Welfare Planning				84,690
Medical Educator Training				74,000
Foodgrain Storage		29,500		160,735
Soil & Water Conservation		29,000		100,829
National Highways				196,000
Craftsmen Training		235,200		394,563

USAID Assisted Projects and Activities

Projects and Activities

U. S. Inputs

A. DEVELOPMENT LOANS

Amarkantak (Birsinghpur) Thermal Power Plant : To increase electric generating capacity of the State of Madhya Pradesh. An agreement for a development loan was signed in FY 1962 to finance the foreign exchange cost of two units of 30 MW each. The plant is located in the northwest of Madhya Pradesh at Amlai in Shahdol district.

USAID provided a loan of \$7,595,728 to finance the foreign exchange cost of the Amarkantak Thermal Power Plant. The GOI also allocated Rs 66,700,000 from PL 480 loan funds for the local costs of the project. Both these units were commissioned in April 1965.

Satpura Thermal Power Station : To increase the electric generating capacity and irrigation potential by electrifying tubewells of the State. The Satpura Thermal Power project consists of five units of 62.5 MW each. The project is jointly shared by Madhya Pradesh (3 units) and Rajasthan (2 units), and is controlled by the Madhya Pradesh Electricity Board. It serves the western part of Madhya Pradesh which has been short of power, and a portion of the neighbouring area of Rajasthan.

USAID in FY 1963 authorised a loan of \$19,116,000 in foreign exchange for the import of equipment. In addition, the GOI allocated Rs 159,320,000 from PL 480 loan funds to meet the local costs of the project.

"FY" Used in this booklet designates U.S. Fiscal Year, July 1 to following June 30.

Confined to the State of Madhya Pradesh

Projects and Activities

U. S. Inputs

B. COOLEY LOANS

Orient Paper Mills Ltd., Amlai : To finance foreign exchange costs of a plant at Amlai to produce 50,000 metric tons of writing and printing paper annually, by using bamboos as the raw material.

The Export Import Bank authorized a loan of \$18,497,000 in foreign exchange for the procurement of plant and equipment. The plant is in operation.

Shama Forge Ltd., Bhopal : To finance local capital costs of a steel forgings manufacturing plant at Bhopal. The company is collaborating with Kropp Forge Co. Inc., Chicago.

USAID authorized Rs 4,750,000 to the company from PL 480 Cooley loans.

C. TECHNICAL ASSISTANCE

Agriculture

Training in Agricultural Machinery Utilization (FY 1954 - FY 1960) : To assist the GOI to impart practical training on : (i) tractor operation, maintenance, repair and use of other farm equipment; and (ii) adopting machines and equipment to Indian farm conditions by simplifying, redesigning and demonstrating their use.

USAID assisted the GOI in establishing a Tractor Training and Testing Center at Budhni, Madhya Pradesh. The services of one U.S. advisor were provided for a total of 4½ years to the Center. Total assistance : \$206,000 and Rs 15,000 including procurement of equipment worth \$114,652 for the Center and six months of U.S. training for one participant.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

A. CURRENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

AGRICULTURE

Agricultural Universities Development : (FY 1964-continuing) : To assist the GOI in developing state agricultural universities capable of planning and administering fully integrated statewide programs in agricultural teaching, research and extension. The seven universities which have been assisted under this project since 1964 are : Andhra Pradesh, Madhya Pradesh, Punjab, Mysore, Uttar Pradesh, Rajasthan and Orissa. The eighth, Maharashtra University, was added to the project in 1968. U.S. assistance through March 31, 1971 totalled \$15,624,000 and Rs 56,231,000.

The Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV) was established in 1964 with the transfer to its jurisdiction of eight existing agricultural and veterinary colleges. All the state research stations and 16 research farms were also transferred to the University's control. Approximately, 1,050 students are presently enrolled at the University including about 130 post-graduates. The main campus of the University is located at Jabalpur, and there are seven other campuses scattered throughout the State. USAID is assisting the JNKVV through a contract with the University of Illinois. The U.S. team at Jabalpur includes advisors in agricultural education, agronomy, agricultural marketing, research, farm development, animal science and communications and publications. USAID is also providing training facilities in the United States for eight to ten staff members for advanced training. Twenty staff members have received advanced training in the United States for

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

ACTIVITIES

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Agricultural Universities Development (contd.)

a total of 297 man-months.

The U.S. specialists have developed effective relationship with their counterparts and other staff members of the University. This has resulted in an improved understanding of the service-oriented nature of the "Land Grant College" concept. The University is to consolidate and strengthen its colleges and research stations and to develop an effective extension education program.

Programs such as the mobile clinic of the Veterinary College and the Soybean Research project have brought credit to the University. There is a growing trend of cultivator responsiveness and support. Total USAID assistance through March 31, 1971 was \$ 2,143,000 and Rs 7,506,000.

Agricultural Inputs Development (FY 1967 - continuing): To assist the GOI to increase the availability and encourage the efficient use of essential agricultural production inputs, reduce foodgrain losses, and improve the processing of agricultural products. This project is divided into five sub-projects: fertilizer, seeds, plant protection and rodent control, farm implements, and oilseeds processing. Total assistance through March 31, 1971 was \$2,540,000 and Rs 10,916,000.

USAID financed the training of two State's participants for a total of 10-months in the United States in the fields of fertilizer marketing and distribution and soil micro-nutrients. In addition, USAID provided an observation tour of six weeks for one participant in fertilizer engineering.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

EDUCATION

Science Education Improvement (FY 1963-continuing): To improve the teaching of science, mathematics and technology by training Indian teachers at the higher secondary and college levels in the most recent developments in their specialities and in modern teaching methods. From FY 1963 through FY 1970, a total of 891 summer institutes were conducted in biology, physics, chemistry, mathematics, engineering and polytechnics for approximately 30,000 teachers and professors of these subjects. A total of 1,078 U.S. consultants participated in these summer sessions. Total assistance through March 31, 1971 was \$6,162,000 and Rs 28,855,000. U.S. technical assistance is being provided through the National Science Foundation.

Through FY 1970, 62 summer institutes were held in Madhya Pradesh and approximately 2,500 teachers and professors received training. One participant also received advanced training in the United States for a total of three months.

HEALTH

Family Welfare Planning (FY 1966-continuing): To assist the GOI to achieve its declared goal of reducing India's annual rate of population increase from an estimated 2.5 per cent to 1.5 per cent by 1975.

Although the Government of India was the first in the world to adopt comprehensive national family planning policy as a part of its development plans in 1952, the program has gathered real momentum only since 1966.

Since then, USAID has financed the procurement of one million cycles of oral contraceptives, 170 million condoms, and a large quantity of audio-visual equipment and training aids. In addition, USAID has supplied technical advisory services and participant training in the United States and other countries. Total grant

Madhya Pradesh is one of the states which is participating in this countrywide program of family planning. More than 524 family welfare planning clinics and centers have been established in urban and rural areas by the State Government. Through June 1970, 174,393 IUCD insertions and 622,814 sterilizations were carried out in the State.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

Projects and Activities with Countrywide Objectives

State Participation and Benefits

assistance through March 31, 1971 was \$5,422,000 and Rs 8,940,000.

A loan of \$2,700,000 in foreign exchange has also been made available to the Government of India to meet the cost of imported components for vehicles required for the project. The USAID has further provided a grant of Rs 60,000,000 out of PL 480 funds for the initial procurement of 1,540 vehicles during the first year of the Fourth Five year Plan period, for capital expenditures for the Central and State Health Transport Organizations, and for operation and routine maintenance of the vehicles.

Another grant of Rs 84,690,000 from PL 480 funds has also been made available to the GOI for family planning activities. This grant is now being used for increasing the effectiveness of the program including experimental and innovative activities in research, training, motivation, and mass communication. In addition to the above grants and loans, the U.S. has made a Program Assistance grant of \$20,000,000 in June 1970 to the Government of India for procurement of commodities; this grant will enable the GOI to increase its budgetary allocation for family planning activities in India.

Malaria Control and Eradication (FY 1953-FY 1970): To assist the GOI in its National Malaria Control and Eradication Program. Prior to 1953, malaria was considered to be India's greatest health scourge. Every year there were about 75 million cases resulting 750,000 deaths, with substantial increases during epidemic years. After five years of concentrated effort in the Control Program, there were two million cases and approximately 200,000 deaths annually. In 1958, the program was converted to "eradication". By June 30, 1970, 69 units

The State of Madhya Pradesh participates in the national program of malaria control and eradication. During 1970, three units with a population of five million had passed into the consolidation phase while the remaining 25 units with 36 million people still were in the attack phase of the program.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

Projects and Activities with Countrywide Objectives

State Participation and Benefits

with a population of 91 million had passed into consolidation phase; and 217 units with 287 million people had been approved for the maintenance phase. Thus there were 107 units with 136 million people in the attack phase of the program. The annual number of reported cases had been reduced to less than 300,000.

Since 1953, the United States Agency for International Development has financed the procurement of several thousand tons of DDT, malaria drugs, spray equipment, vehicles and has provided the services of technicians. The project has also provided training to 32 key National Malaria Eradication and Control program personnel. Total assistance through March 31, 1971 was \$90,306,000 (grant \$80,773,000 and loan \$9,533,000) and Rs 1,726,000. In addition, the GOI has allocated from PL 480 funds Rs 1,046,100,000 (grant Rs 851,500,000 and loan Rs 194,600,000) to meet the local costs of the project. The above figures do not include the imports made under the USAID Non-Project Loans estimated at \$13,000,000 for DDT and anti-malaria drugs.

NON-PROJECT LOANS

Commodity Imports Under AID Non-Project Loans:

To assist the Government of India to procure from the United States essential raw materials, machinery, and spare parts required for the growth of India's agriculture and industry. Since 1958, the USAID has made available to India \$2,372 million as non-project loans through the Government of India. Industrial commodities imported under the various loans included chemicals, non-ferrous metals, specialized components such as roller bearings, and spares for industrial and constru-

The agricultural and industrial sectors in Madhya Pradesh benefit from these general commodity import loans. In addition, part of the non-project loan financed the procurement of transmission equipment for the Chambal Valley development project.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

ction equipment. Some portion of these loans was used for the import of DDT and anti-malaria drugs.

Prior to 1963, these non-project loans were used mainly for industry and transport. Since that time, however, these loans have been used increasingly for agricultural inputs, with emphasis placed on fertilizer production. Almost 50 per cent of the recently authorized loans has been earmarked for the agricultural sector. None of these loans has been used for the import of consumer goods or luxury items.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

off-shore fishing stations and fishermen's cooperatives. Six U.S. technicians and three short-term consultants were provided. Participants were trained in the United States and commodities worth \$2,500,000 were supplied. Total assistance: \$2,902,000 and Rs 63,000.

Agricultural Extension (FY 1951-FY 1967): To assist the Central and state governments in training an efficient corps of extension workers, planning and developing an effective extension program, and implementing the programs in these fields. The GOI has established with USAID assistance 100 extension and 44 home science training centers to train Village Level Workers. Total assistance: \$3,013,000 and Rs 2,458,000.

Community Development Program (FY 1952-FY 1959): To develop the material and human resources pre-requisite for greater agricultural production through rural community development blocks. Agricultural extension centres, panchayats and cooperatives, village schools, community centers and social education programs were initiated in many rural areas. Advisory services were provided as well as substantial commodity aid including jeeps, audio visual materials, and agricultural implements. Total assistance: grant \$11,518,000 and loan \$1,991,000.

Foodgrain Storage (FY 1955-FY 1966): To demonstrate efficient grain storage through construction of modern grain elevators and to determine the most economical type of grain handling facilities for Indian conditions. Total assistance: \$1,664,000 and Rs 97,000. In addition, the GOI had provided from PL 480 funds

USAID financed the training of 19 participants for a total of 158 man-months in the United States.

Assistance was provided to the State Government for development of rural community blocks; extension centers, village schools, etc.

Construction of four godowns with a total storage capacity of 45,000 tons (Bhopal 20,000 tons; Raipur 10,000 tons; Bilaspur 10,000 tons and Dhamtari 5,000 tons) was financed under this project.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Rs 190,235,000 (grant to GOI Rs 160,735,000 and loan Rs 29,500,000) for the construction of over 100 go-downs.

Agricultural Education and Research (FY 1955-FY 1963) : To strengthen and expand agricultural education and research in about 80 colleges and institutions throughout India by providing commodity support, technical advisory services, and participant training at a total cost of \$8,981,000 and Rs 5,144,000. Assistance for the development of eighth selected agricultural universities has been provided since 1963 under the Agricultural Universities Development project.

Under this project, the Madhya Pradesh Agricultural University, at Jabalpur was assisted through a contract with the University of Illinois. USAID provided the services of nine University of Illinois contract technicians for a total of 141 man-months to the eight colleges (the Agricultural Colleges at Jabalpur, Gwalior, Rewa, Raipur, Sehore, and Indore and the Veterinary Colleges at Jabalpur and Mhow) as well as 821 man-months of US training for 57 participants and books and equipment worth \$ 170,000. USAID assistance to the University is being provided under the Agricultural Universities Development project.

Agricultural Economics Research(FY 1955-FY 1961): To promote research and development in agricultural economics and farm management. Six Agro-Economic Research Centers were established. USAID provided training facilities for 12 participants for 12 months each and the services of two technicians for two years each and commodities worth about \$51,000. Total assistance : \$289,000 and Rs 17,000.

USAID provided equipment worth \$ 740 to the Argo-economic Research Center at Gwalior under the project and financed a year's training for one participant.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Dairy Development (FY 1955-FY 1962): To assist the GOI in its dairy development by providing technical services and essential equipment for modern dairy plants in India. Total assistance: \$994,000 and Rs 239,000. In addition, a grant of Rs 40,700,000 was also provided from PL 480 funds for the construction and development of 15 milk and milk-product schemes in the country.

USAID provided \$ 100,000 worth of equipment for the development of dairy plant at Bhopal, to which a technician was assigned for 10 months to assist in the installation and operation of the equipment. In addition, the GOI provided from PL 480 funds a grant of Rs 1.5 million for the Jabalpur Milk Scheme.

Crop Production (FY 1955-FY 1967): To assist the GOI to increase foodgrain production by promoting and demonstrating the use of high yield hybrid seeds of adapted varieties, establishing seed production control and certification standards, promoting correct agricultural practices controlling fertilizer quality and expanding its widespread use. Assistance provided includes technician services, supporting commodities (primarily for seed production and seed testing laboratories), and participant training. Total assistance: \$1,536,000 and Rs 1,711,000.

USAID financed the training of seven participants in the United States for a total of 39 man-months.

Farmer's Organisation (FY 1956 - FY 1961): To increase agricultural production through establishment of national, state, and local farmers' organizations capable of providing agricultural information to farmers. A Farmers' Forum was established. United States assistance was directed towards strengthening and expanding the Forum's leadership. Total assistance: \$275,000 and Rs 396,000.

A four-month tour of the United States and other countries was provided for three Madhya Pradesh farm leaders, and a limited quantity of training equipment was supplied to the State Government.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

Projects and Activities with Countrywide Objectives

State Participation and Benefits

Soil and Water Conservation (FY 1959 - FY 1967): To assist the GOI in increasing agricultural production through effective soil and water management practices, to train Indian soil and water conservation technicians from the Union and state governments, and to conduct pilot projects. Total assistance : \$ 964,000 and Rs 1,549,000. In addition, the GOI had allocated Rs 145,829,000 (grant Rs 100,829,000 and loan Rs 45,000,000) from PL 480 funds for this project.

USAID financed the training of seven participants from Madhya Pradesh for a total of 34 man-months in the United States.

EDUCATION

Multipurpose Secondary Education (FY 1956-FY 1969): To help reorganize and improve secondary education in India. The first phase established 54 extension training centers for secondary school teachers. The second phase emphasized vocational education in the multi-purpose secondary schools. The third phase emphasized the development of four regional teacher training colleges with attached demonstration schools. Total assistance: \$3,992,000 and Rs 8,250,000.

USAID under the first phase assisted four extension training centers (Prantiya Shiksha Mahavidyalaya, Jabalpur; Teachers Training College, Dewas; the Government Post Graduate Basic Training College, Bhopal; and the Government Training College at Raipur) by providing scientific and training equipment worth \$20,000. In the second phase, the model Multipurpose Higher Secondary School at Jabalpur received training equipment.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Multipurpose Secondary Education (contd.)

In the third phase, the Regional College of Education at Bhopal was set up under the National Council of Education Research and Training of the Ministry of Education. The college has been in existence since August 1964. The college serves India's western region (Maharashtra and Gujarat). The USAID through a contract with Ohio State University provided advisors in the fields of agriculture, commerce, technology and science. In addition, USAID provided scientific and training equipment worth \$37,000 to the college and financed the training of eight participants for a total of 49 man-months in the United States.

Teacher Training in Engineering Education (FY 1958-FY 1961): To assist in improving the facilities and quality of engineering education in India. Under a four-year crash program, USAID provided an average of 18 months training to each of 299 Indian participants. Total assistance: \$2,250,000 and Rs 1,690,000.

Eleven engineers from the State received training in the United States for a total of 220 man-months.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

HEALTH

Assistance to Medical Colleges and Allied Institutions (FY 1954-FY 1957): To assist in upgrading and expanding medical education institutions in India. Scientific, laboratory and professional equipment was provided to 16 medical research institutions, 41 medical colleges and various allied institutions. Total assistance: \$1,056,000 consisted mainly of commodities.

The Mahatma Gandhi Memorial College at Indore received scientific equipment worth \$60,000.

Medical Educator Training (FY 1958-FY 1967): To improve the quality of medical education by providing technicians, participant training and commodity support. Total assistance: \$1,751,000 and Rs 2,023,000. In addition, the GOI had allocated Rs 74,000,000 from PL 480 funds for improving medical education in India.

USAID financed the training of 13 participants from Madhya Pradesh for a total of 134 man-months and also provided equipment worth \$19,000 to the Mahatma Gandhi Memorial Medical College, Indore.

Public Health Education (FY 1958-FY 1967): To assist the GOI in its efforts to effectively use educational concepts and procedures in the nation's public health program. USAID focused its efforts on the establishment and operation of the Central Health Education Bureau. Total assistance: \$385,000 and Rs 306,000.

USAID provided the services of one technician to the State Health Department for a total of two years; and financed the training of one participant for a total of 14 months in the United States.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Nursing Colleges (FY 1958-FY 1967): To improve the quality of nursing administration, nurse education, and in service training in hospitals and nursing colleges by providing technicians services, participant training and commodity support. Total assistance: \$1,223,000 and Rs 1,023,000.

USAID provided the advisory services of five technicians for a total of 12 man-years to the College of Nursing, Indore and financed the training of five participants for a total of 79 man-months in the United States. In addition, equipment, publications and professional scientific instruments were provided to the College of Nursing, Indore.

LABOR

Trades Training (FY 1955 - FY 1959): To assist the Ministry of Labor to expand and upgrade training facilities in basic trades and crafts for pre-employed youths. Total assistance: \$ 661,000

USAID provided equipment worth \$ 21,723, to the State's 23 industrial training institutes including those at Gwalior, Indore, Ujjain, Raipur, Jabalpur and Bhopal.

Labor Ministry Training (FY 1960 - FY 1969): To improve the services provided by the Indian Central and State Ministries of Labor in the fields of manpower research and analysis, labor statistics, employment services, industrial skill improvement, conciliation and mediation and labor law administration. Total assistance under this project was \$ 469,000 and Rs 1,597,000, including \$ 352,000 for participant training.

USAID financed the training of five participants in the United States for a total of 34 man-months. In addition, under a related project titled "Trade Union Development" four additional participants from Madhya Pradesh were sent for training in the United States for a total of 24 man-months.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

TRANSPORTATION

Railway Modernization (FY 1953 - FY 1965): To provide foreign exchange for the procurement of structural steel locomotives, rolling stock components, centralized traffic control, electric and signalling equipment, machinery and tools required to manufacture and to carry out a program of modernization and expansion in order to increase the efficiency and volume of passenger and commodity transport operation.

As railways provide more than 90 per cent of the surface transport for industries, agriculture, and other domestic requirements they are the main arteries of transport. Railway expansion and modernization has had a high priority in India's economic development program. India has taken effective measures to increase the production of railroad stock, and has made rapid strides to improve and expand transport.

Since 1953, USAID has provided massive assistance to Indian railways totalling \$259,549,000 (loan \$229,224,000 and grant \$ 29,325,000) to enable the Indian railways to carry out its planned program of modernization and expansion. In addition, the U. S. Export-Import Bank has advanced to the Indian Railways a loan of \$48,750,000 for the same purpose. The USAID assistance included advanced training facilities in the United States for approximately 100 Indian railway officials from the high and middle levels of management.

Madhya Pradesh was one of the states which participated in this country-wide program of railway expansion and modernization. Five participants from the State went abroad to receive USAID sponsored training for a total of 22 man-months.

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

INDUSTRY AND MINING

Acquisition and Distribution of Iron and Steel (FY 1952 - FY 1958): The objectives of the project were : 1) to help increase food and agricultural production by making available to farmers improved agricultural implements such as steel-point ploughs, spike tooth harrows, steel cart-tires, irrigation devices ; 2) to make steel available for the replacement and rehabilitation of railways; and 3) to stimulate general industrial activity in the country. Approximately 459,280 tons of steel and steel products were procured and distributed to several Indian manufacturers and state governments. Total USAID assistance through FY 1958 : grant \$ 50,394,000 and loan \$ 10,399,000. These figures do not include the allocations made for the import of industrial raw materials under Non-Project AID Loans.

Madhya Pradesh was one of the states which benefitted from this country-wide program for increasing agricultural and industrial production.

National Productivity Council (FY 1959 - FY 1966) : To assist the GOI through the National Productivity Council to establish and operate a national program for increasing industrial efficiency. USAID provided training facilities for 300 Indian participants and seven-week observation tours in the United States and elsewhere for 43 productivity teams with six to seven members each. Operating through the National Productivity Council and its six Regional Directorates and 45 Local Productivity Councils, U. S. technicians organized and conducted training courses, seminars, and demonstration workshops within India. Total assistance : \$3,337,000 and Rs 7,898,000.

USAID financed the training of five participants for a total of 34 man-months in the United States and also a seven-week observation tour of the United States and other countries for four participants.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

Projects and Activities with Countrywide Objectives

State Participation and Benefits

Coal Industry Modernization (FY 1958 - FY 1960): To help India improve coal mining efficiency, increase coal production and bring a new lignite mining development into efficient operation. USAID provided engineering services of U. S. experts and financed training facilities for Indian participants. Total assistance :\$149,000 and Rs 152,000.

USAID financed the training of four participants from the State, for a total of 21 man-months in the United States.

POWER

Electrical Distribution Systems "Hot-Lines" (FY 1955 - FY 1962): To introduce "Hot-Line" techniques in repairing, maintaining, and reconstructing electrical transmission lines, switchgear, and facilities, while energized. The GOI with USAID assistance established two "Hot-Line" training centers in the country. AID provided 20 sets of "Hot-Line" tools for these centers and also for various electricity departments. Services of four U. S. technicians for a total of 101 man-months and U.S. training for two Indian engineers were provided. Total assistance: \$ 394,000 and Rs 88,000.

USAID provided a tool trailer valued at \$ 5,226 to the Madhya Pradesh Electricity Board for its use in training program.

Technical Services in Water Resources and Power Development (FY 1952 - FY 1962): To assist the GOI in the development of its multipurpose river basin program, irrigation, flood control, inland waterway navigation, power generation and transmission of electric power. Thirty-six U. S. technicians and consultants contributed about 41 man-years of service, 108 Indian engineers received training in the United States, and technical books and radio gauge equipment were provided under the project. Total assistance: \$ 1,076,000 and Rs 488,000.

USAID financed the training of four participants in the United States for a total of 42 man-months:

Countrywide Projects and Activities

TECHNICAL ASSISTANCE, DEVELOPMENT

PL 480 Rupee Assistance For Development Activities

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

Agriculture

River Valley Development : The USAID assisted the GOI by providing heavy earth moving equipment and PL 480 funds for expanding 12 multipurpose river valley projects in various states. These projects will provide facilities for hydro-electric power generation, irrigation and flood control. The combined electric generating capacity of these projects, when completed, will be about 2,000 megawatts and will irrigate about 12 million acres of land. The GOI allocated from PL 480 funds Rs 2,418,400,000 (loan Rs 2,359,000,000 and grant Rs 59,400,000) for execution of these projects. The value of the U. S. financed equipment was over \$ 7,900,000.

Rs 340,700,000 were allocated for the Chambal River Valley project which involves the construction of four dams, three hydro-electric power plants and an extensive irrigation canal system. A co-operative project between the states of Madhya Pradesh and Rajasthan is designed to ensure adequate irrigation for both states. USAID technical assistance included the services of an advisor for two years in the Madhya Pradesh section of the project and another advisor to the Technical Training Center in Kotah (Rajasthan) assisted in solving problems of earth-moving equipment operation and maintenance.

The project which is expected to be completed by 1972, will irrigate about 550,000 acres of land in Madhya Pradesh and about 700,000 acres of land in Rajasthan. The total installed generating capacity of the project will be about 375 megawatts.

benefiting the State of Madhya Pradesh

LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

EDUCATION

Higher Technical Education : To develop regional engineering colleges and other facilities for higher technical education. As of March 31, 1971 the GOI had allocated Rs 431,300,000 from PL 480 funds (grant Rs 165,600,000 and loan Rs 265,700,000) for their support.

Under this activity the Maulana Azad College of Technology at Bhopal has received support.

Elementary Education : In support of its elementary education program throughout the country, the GOI has allocated from PL 480 funds a total of Rs 1,211,400,000 (grant Rs 783,100,000 and loan Rs 428,300,000).

Assistance has been provided for development of elementary education in Madhya Pradesh.

HEALTH

Smallpox Eradication : Rs 130,200,000 from PL 480 funds (grant Rs 102,900,000 and loan Rs 27,300,000) were allocated to the countrywide smallpox eradication program.

Operations in Madhya Pradesh began in December 1962, and since that time steady progress has been made. As of June 1969, 39,842,699 revaccinations and 11,176,399 primary vaccinations had been performed.

Primary Health Centers : The GOI is establishing primary health centers throughout the country, each to serve about 60,000 persons. Rs 165,500,000 had been allocated from PL 480 funds (grant Rs 105,500,000 and loan Rs 60,000,000) for the establishment of primary health centers through March 31, 1971.

428 primary health centers were functioning in Madhya Pradesh.

Countrywide Projects and Activities benefiting the State of Madhya Pradesh

TECHNICAL ASSISTANCE, DEVELOPMENT LOANS AND FOOD ASSISTANCE

*Projects and Activities with
Countrywide Objectives*

*State Participation
and Benefits*

TRANSPORTATION

National Highways : For its countrywide program of expanding and strengthening roads and bridges the GOI allocated Rs 196,000,000 from PL 480 grant funds.

Rs 12,500,000 were made available for the State's 45 schemes, including construction of new bridges and improvement of existing roads.

LABOR

Craftsmen Training : To expand facilities for the training of craftsmen through seven Central and 357 Industrial Training Institutes. As of March 31, 1971, the GOI, had allocated Rs 629,763,000 from PL 480 funds (grant Rs 394,563,000 and loan Rs 235,200,000).

Twenty-three Industrial Training Institutes including those at Gwalior, Indore, Ujjain, Jabalpur, Raipur and Bhopal have benefitted under the program.

MADHYA PRADESH

210 PARTICIPANTS

AGRICULTURE

EXTENSION	24
LAND AND WATER	11
CROP PRODUCTION	5
LIVESTOCK	2
FERTILIZER	7
AGR. UNIV. DEV.	83
RICE RESEARCH CONT.	1

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EDUCATION

EDUCATION	24
SC. EDU. IMP.	2

26

HEALTH

HEALTH	13
NURSING	1
FAMILY PLANNING	3

17

MANAGEMENT

PERSONNEL	4
INDUSTRIAL	2
GENERAL	3

9

ENGINEERING

INDUSTRIAL	4
NUCLEAR	1

5

LABOR

11

TRANSPORTATION

1

POWER & WATER DEV.

5

MINING

2

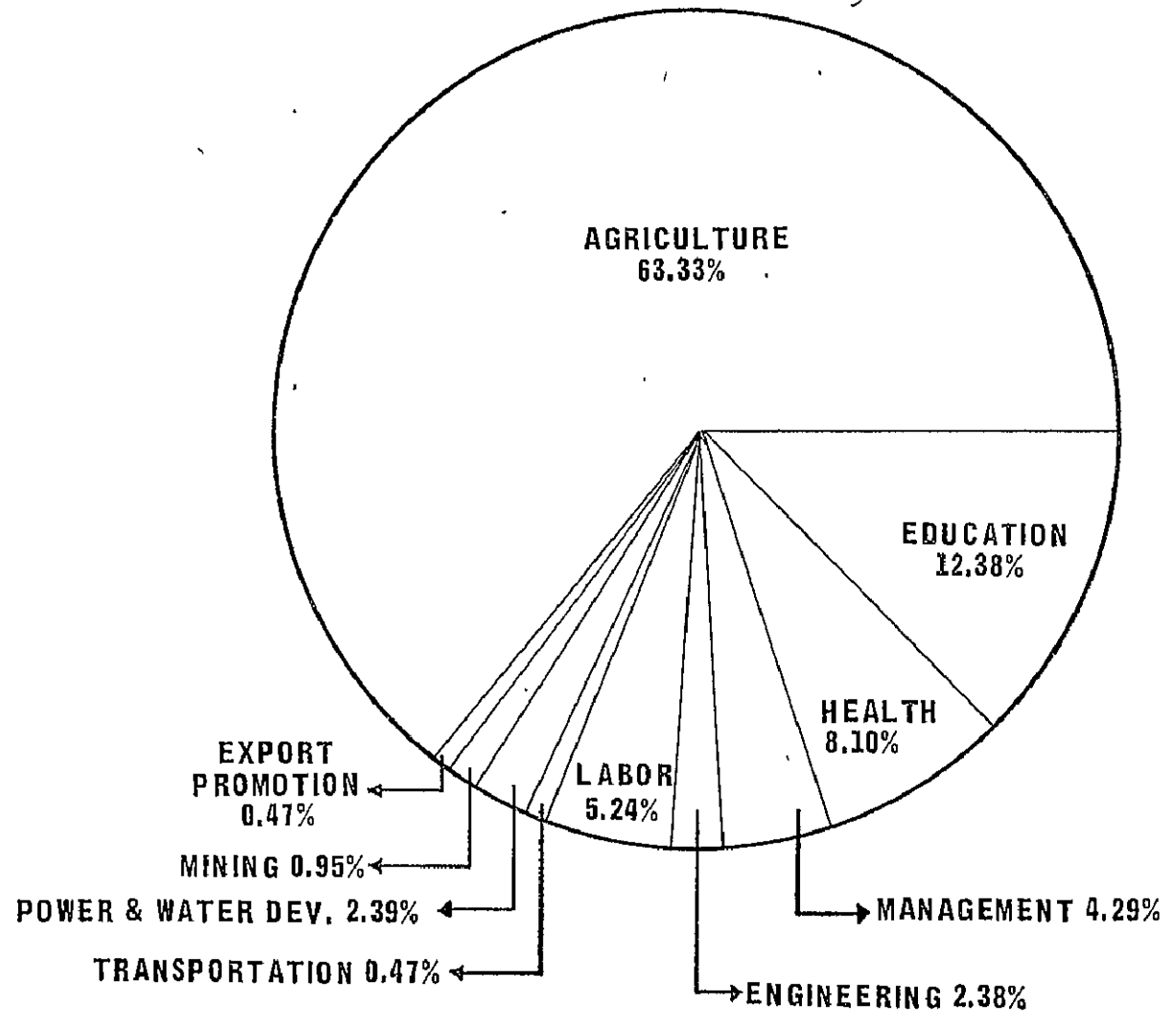
EXPORT PROMOTION

1

210

RETURNED PARTICIPANTS

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