

# IRRIGATION IN MADHYA PRADESH



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# **IRRIGATION IN MADHYA PRADESH**

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## FOREWORD

This brochure is intended to give a bird's eye-view of the historical background of State Irrigation in the four constituent units of the State and the general progress of the works during the first plan and up-to-date in the second plan.

The State possesses immense water resources in her rivers. However, at the commencement of the First Five-Year Plan the total quantity of water utilised for irrigation in the State was only about 3 million acre ft., which is less than two per cent of the normal run-off. The area irrigated was 22 lakh acres (comprising 8.8 lakh acres by the State works and 13.2 lakh acres by private sources) which constituted a mere six per cent of the State's cultivated area. As against this the areas irrigated in some of the other States were 37.1 per cent in Punjab, 35.5 per cent in Madras, and 29.8 per cent in Uttar Pradesh.



State Irrigation in the Mahakoshal districts of Madhya Pradesh dates back almost to the start of this century but there was a long hiatus in its activities from 1930 to the start of the first plan. In the Madhya Bharat districts the irrigation works were confined to the Gwalior region and were constructed mainly in the two decades preceding the second world war. Vindhya Pradesh and Bhopal had hardly any state irrigation when the first plan started.

It was with this background that the First Five-Year Plan was launched in the four constituent units of Madhya Pradesh. A good part of the plan period, however, had to be devoted to necessary detailed surveys and investigations before the projects could be actually taken in hand. Similar was the case with the second plan schemes whose progress was further adversely affected by the acute shortage of technical personnel and by the State's reorganisation. In spite of these major bottlenecks, Government's efforts to make agriculture independent of the vagaries of the weather made substantial progress during the eight years since the commencement of the first plan. The total irrigation potential (under State works) has grown from about 10 lakh acres to 11.5 lakh acres. This is expected to be increased by a further 1,30,000 acres in the next two years.

The State is expected to spend about Rs. 35 crores, *i.e.*, Rs. 15 crores on Major, Medium and Minor Irrigation Projects and Rs. 20 crores on the Chambal Scheme which amounts to about 20 per cent of the State's total outlay on the second plan. This may be compared with an expenditure of Rs. 10.00 crore, inclusive of the Chambal Project, incurred on irrigation works during the first plan period. This impressive increase in the working capacity of the State in the field of Irrigation enables us to plan on a much bigger and bolder scale for the future. Madhya Pradesh is among the important granaries of the country and it has been Government's endeavour not only to maintain this Status but to fully harness the State's potentialities in order that the State may continue to make her contribution in the battle of food in ever-increasing measure. The brochure sets out in brief the efforts being made in the sphere of irrigation.

# IRRIGATION IN MADHYA PRADESH

The economy of Madhya Pradesh being mainly agricultural, the provision of adequate water for irrigation purposes is of primary importance for the development of agriculture. The average annual rainfall, varying from 28 inches in the north-western parts to about 68 inches in the eastern districts, is irregular and unevenly distributed. The importance, therefore, of irrigation through canals, tanks, wells, etc., can hardly be over-emphasised.

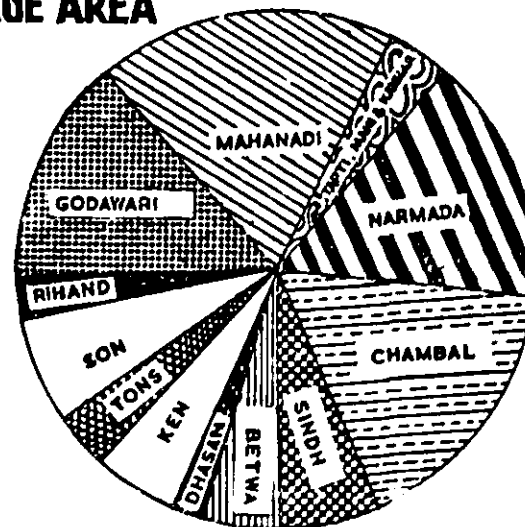
The main physical regions of the state are the Malwa Plateau, the Gird region, the Narmada Valley, the Satpura ridge and the Chhattisgarh plain formed by the rivers of the Mahanadi system. The Malwa region possesses rich black cotton soil, while Gird, Bundelkhand and

Baghelkhand have lighter soil with a proportion of sand. The Narmada Valley abounds in deep alluvial deposits of extreme richness and the Chhattisgarh plains have sandy yellow soil.

The main food crops are wheat in Malwa, Bhopal, the Narmada Valley, Chhatarpur and Satna ; rice in the Chhattisgarh tract,

## DISTRIBUTION OF DRAINAGE AREA

S. No.	RIVERBASIN	DRAINAGE AREA IN M.P. SQ. MILES
1	Godavari	24,300
2	Mahanadi	32,000
3	Tapti	2,200
4	Mahli	2,400
5	Kanhar	1,370
6	Narmada	27,400
7	Chambal	29,700
8	Sindh	10,320
9	Betw	7,560
10	Dhasari	2,530
11	Ken	9,670
12	Tons	4,620
13	Son	12,350
14	Rihand	4,620
		171,040





Wainganga Valley, Shahdol, Sidhi and Rewa ; jowar in Bhopal, Nimar, Ujjain, Shajapur, Mandsaur and Guna, and pulses all over the state. Amongst the important cash crops are cotton in Nimar and Malwa and sugarcane and oilseeds all over the state.

The important rivers of the state are the Chambal, Betwa, Ken, Son, Narmada, Wainganga, Indravati, Sabri and Mahanadi and they possess immense potential for irrigation and power. The average annual run-off of the Madhya Pradesh rivers has been estimated at 143 million acre feet, of which about 45 million acre feet can be used for irrigation.

Nature has thus endowed this state with plenty of valuable resources. Properly exploited they could frame the foundation of a vibrant economy.

## HISTORY

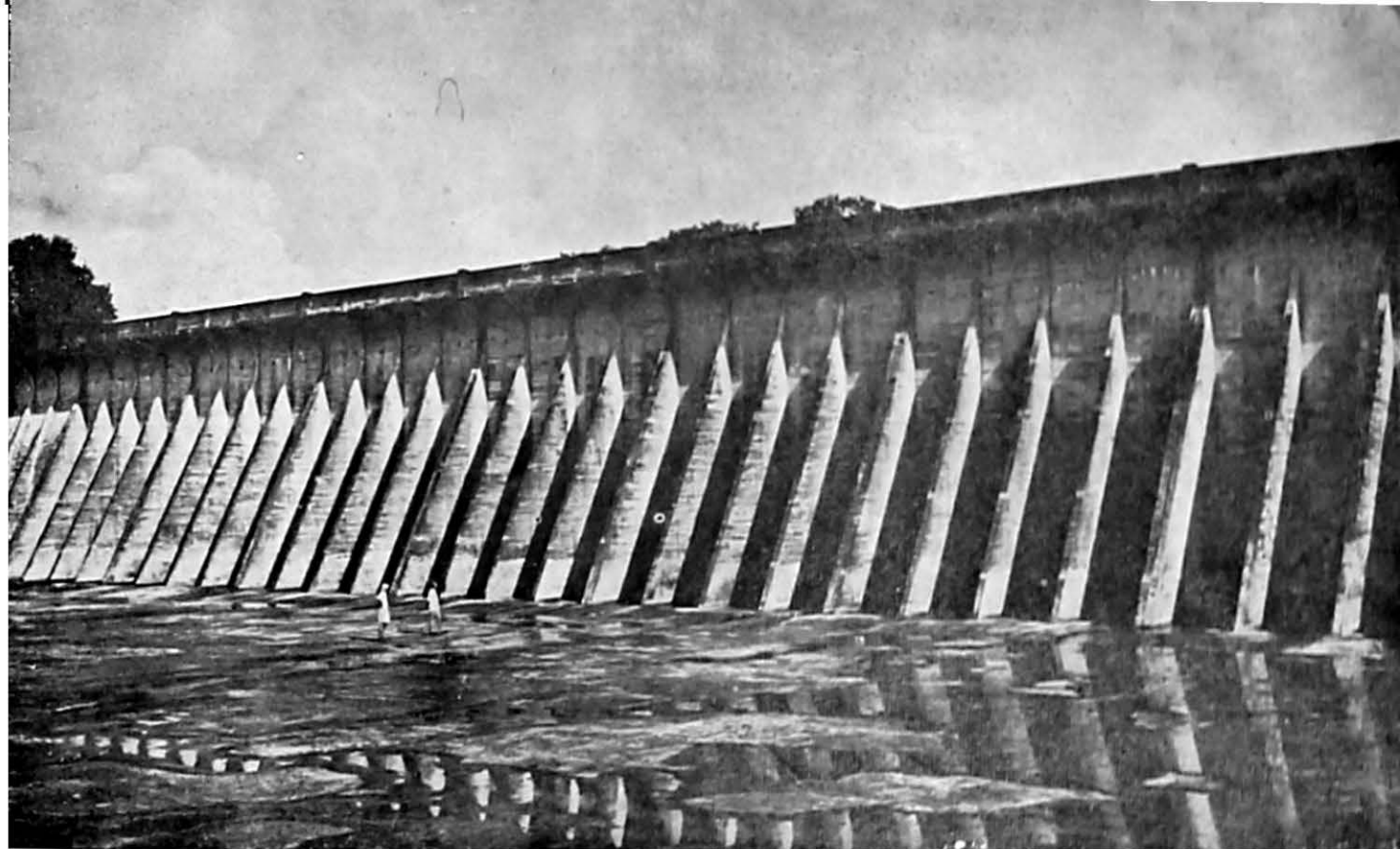
### Mahakoshal

Of the four constituent units of the new state of Madhya Pradesh, the Chhattisgarh

region of the former Madhya Pradesh and the Gwalior region of the erstwhile state of Madhya Bharat can only claim somewhat fairly developed state irrigation facilities. In Mahakoshal it was at the dawn of the century, *i.e.*, in the year 1902, that an organisation in the form of an Irrigation Circle was set up in pursuance of the recommendations of the Irrigation Commission to undertake construction of State Irrigation works to serve as an insurance against famine. By the end of 1928, a sum of Rs 640 lakh (on both the Mahakoshal and Vidarbha regions) or more than double of what was contemplated by the Irrigation Commission, had been spent on the State Irrigation works. In view, however, of the slow development of irrigation, the State Government appointed a Committee in 1927, which *inter alia*, recommended that no new works should be undertaken on any appreciable scale until the Government was satisfied with the development of and the return received from the works already constructed. As a result of these recommendations, all the new construction works were stopped and the Irrigation Branch of the P. W.

abolished. In 1932, there were 22 major and 74 minor works capable of irrigating an area of about 8,10,000 acres with 3,000 miles of canal system. The notable amongst the major projects thus completed were the Muramsilli Reservoir and the Mahanadi

Canal system, irrigating an area of 2,10,000 acres in the Raipur District, the Tandula Reservoir irrigating 1,65,000 acres in the Durg District, the Kharung and Maniari Reservoirs irrigating 1,70,000 acres in the Bilaspur District, and the Wainganga Canal irrigating 70,000 acres in the Balaghat District.

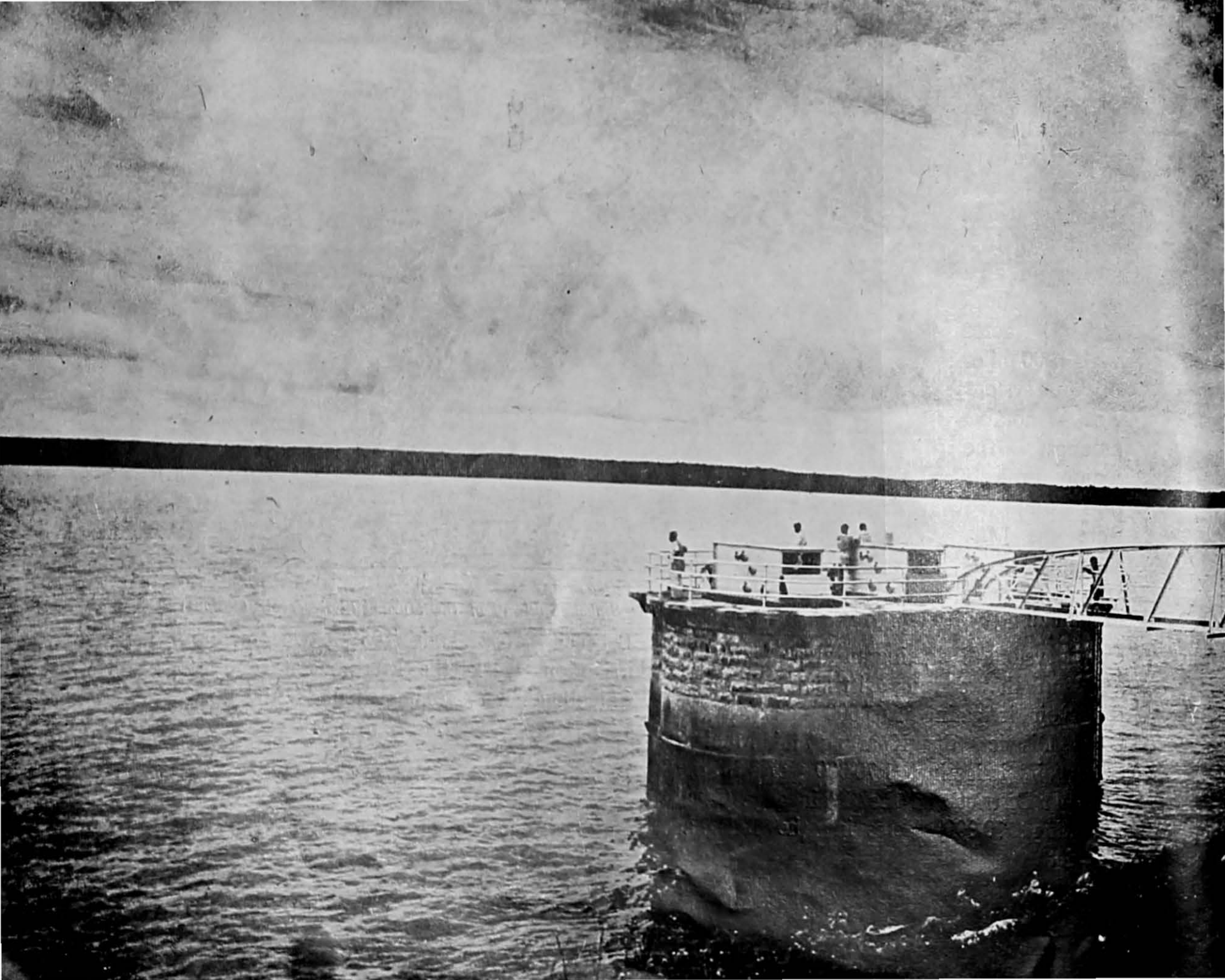


*The Siphon Spillway of the Muramsilli Reservoir (Raipur)*

Between 1932 and 1951, two medium irrigation works, the Muramnala and the Chichbund, were completed under the Post-War Reconstruction Programme.

### **Madhya Bharat**

The development of irrigation in the erstwhile state of Madhya Bharat was confined

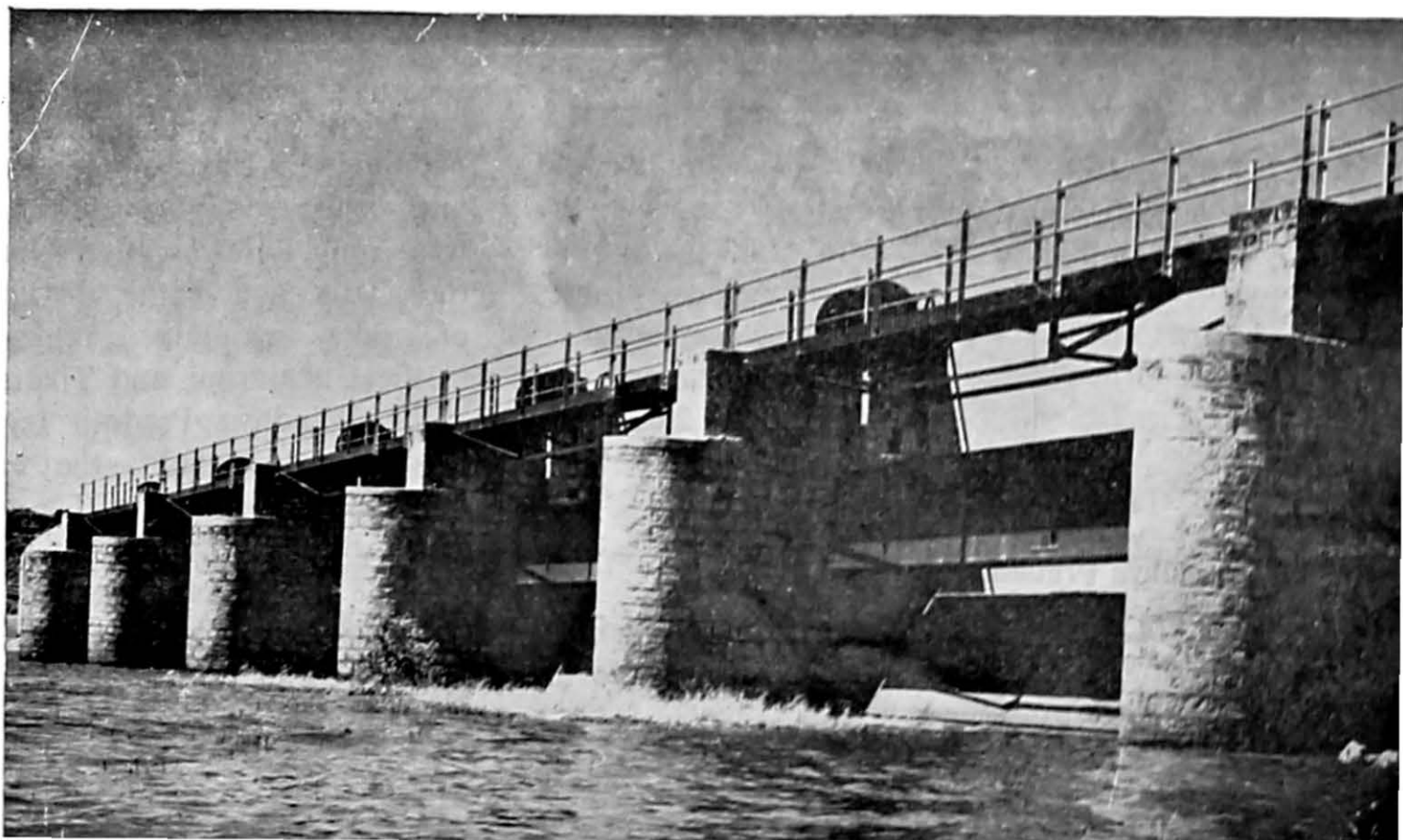




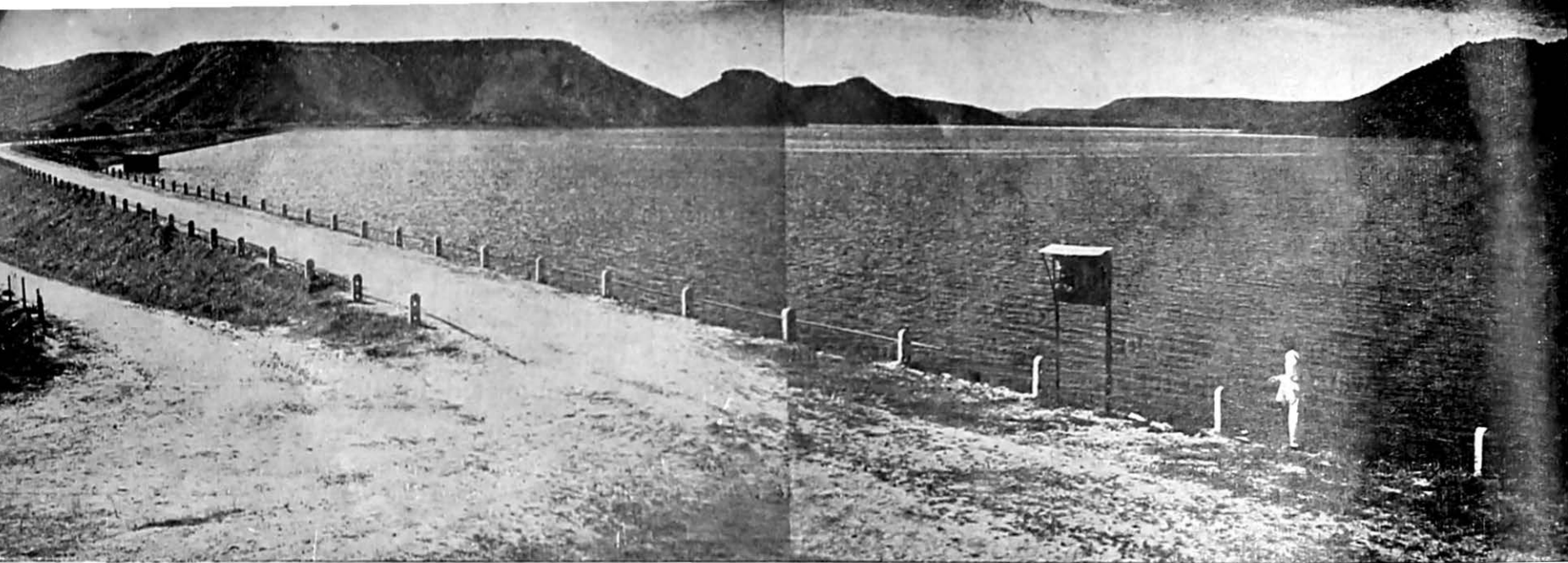
to the period between the two Wor'd Wars. The first major work to be constructed was a masonry dam named Madhosagar, also known as the Tigra dam, across the Sank river in 1917, which, however, breached the same year of its completion and was restored in 1920. Besides letting out water through the Tigra canal, this reservoir

provides drinking water to the Greater Gwalior and caters to the need of several industries also. Other important projects, later undertaken, included the Pagara dam and the Bhind Canal in the Morena and Bhind districts, which were completed in 1927. The Rampur reservoir in the Guna district was completed in 1931, Aoda dam

*A view of the automatic gates for flood water disposal Pagara Dam (Morena) constructed in 1927. It irrigates 65,000 acres through the Bhind Canal.*



*Opposite;  
Tandula Reser-  
voir (Durg), the  
biggest so far  
constructed in  
Madhya Pradesh*



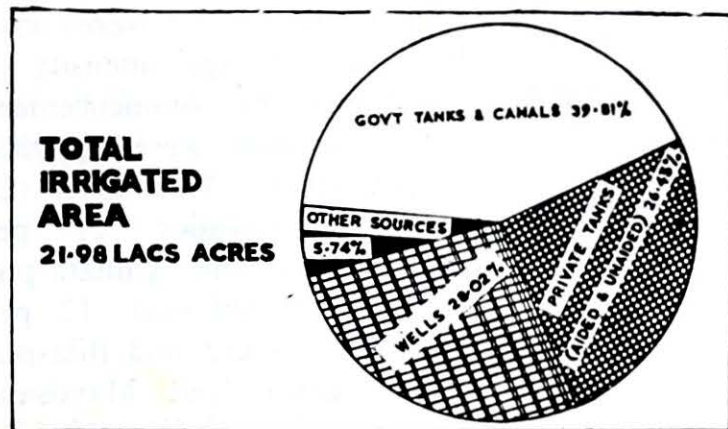
*The Harsi Reservoir (Gwalior)*

in the Morena district in 1934 and Parwati Project, comprising the Harsi reservoir, the Kaketo dam and Mastura canal in Gwalior district in 1937. These, together with a large number of small tanks spread over the northern Madhya Bharat region, possessed an irrigation potential of about 2.01 lakh acres, the total length of canals being about 1,000 miles.

#### **Vindhya Pradesh and Bhopal**

State irrigation in the former Vindhya Pradesh and in Bhopal has no history worth

mentioning. There was lack of a unified and concerted drive and, till 1949, there were only a few scattered minor works in the Datia and Satna districts, a number of poorly maintained tanks and bandhis in the Chhatarpur and Tikamgarh districts in the Vindhya Pradesh region and only two irrigation tanks—the Palakmati and Jamunia, in Bhopal. The area irrigated in the Bhopal region from the state works was 932 acres at the start of the first plan. (No such statistics were maintained in the Vindhya Pradesh region at that time.)



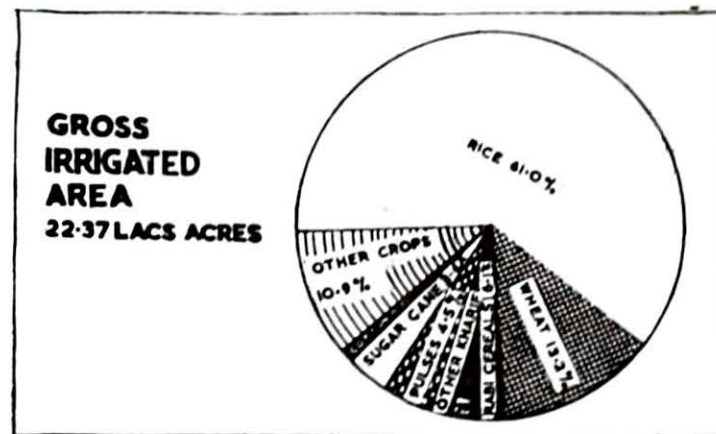
#### Position in 1950-51

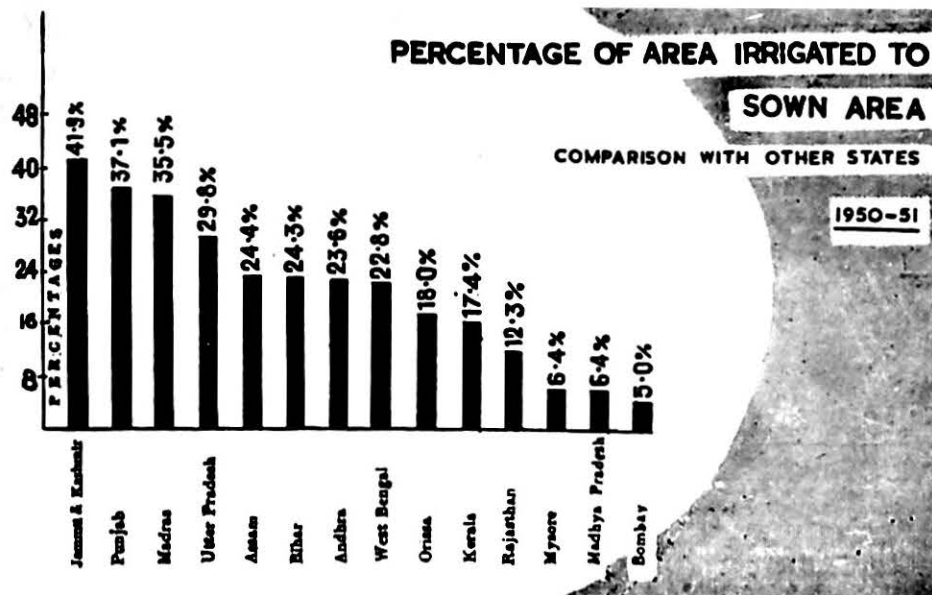
It has been roughly estimated that an area of about 20 million acres can be ultimately irrigated in the state from various sources, which would require about 45 million acre feet of water every year, *i.e.*, 30 per cent of the normal annual run-off. Prior to the first plan, *i.e.*, in the year 1950-51 the net area sown in the state was 345.93 lakh acres, out of which State Irrigation was done in 8.75 lakh acres and irrigation from private tanks, wells and other sources in 13.23 lakh acres, making a total of 21.98

lakh acres. The area under rice and wheat crops constituted 61 and 13.2 per cent respectively of the gross area irrigated in the state.

#### Intensity of Irrigation

The irrigation statistics of the re-organised states for the year 1950-51 reveal that the percentage of the irrigated area in Madhya Pradesh, *viz.*, 6.36 was almost the lowest (only slightly higher than Bombay, which was 5 per cent). This may be compared with the percentages in the Punjab, Madras





and Uttar Pradesh, where construction of irrigation works had started a century ago and which, respectively had 37.1, 35.5 and 29.8 of irrigated to the sown area.

The districts which were above the state's average intensity of irrigation at the commencement of the first plan were Balaghat (34 per cent), Tikamgarh (25 per cent), Gwalior (21 per cent), Raipur and Chhatarpur (18 per cent), Shivpuri (12 per cent). Bhind, Durg and Bilaspur (10 per cent) and Mandsaur (8 per cent). Eleven districts, viz., Damoh, Jabalpur, Betul, Seoni, Raigarh, Bastar, Dhar, Guna, Morena, Rajgarh and Ratlam had irrigation intensities anrging from 3 to 6 per cent,

The remaining 22 districts had irrigation in less than 3 per cent of their cultivated areas.

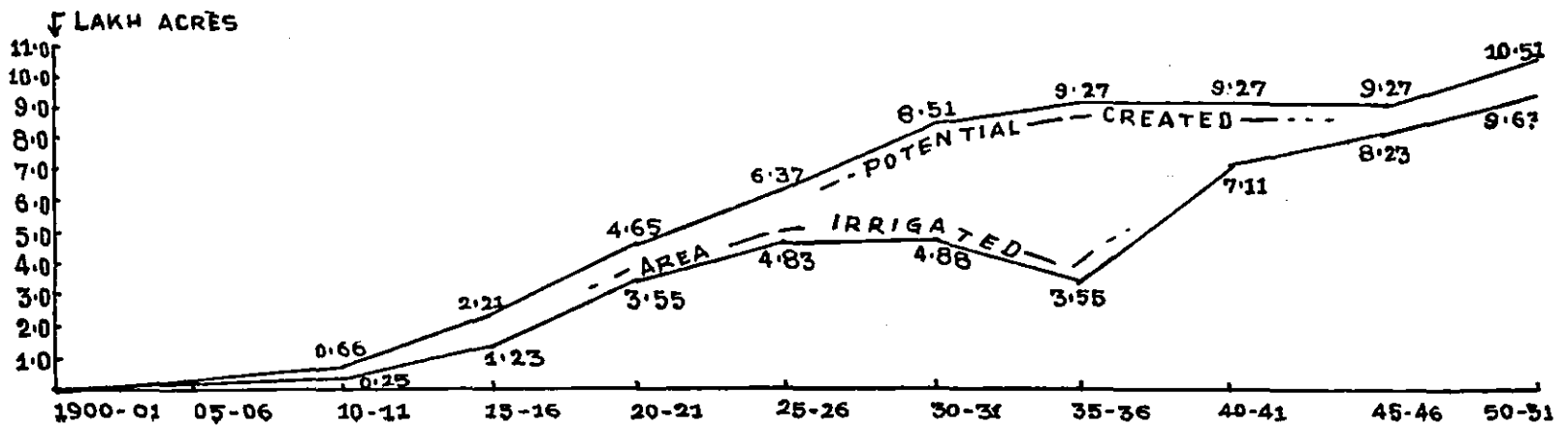
## STATE IRRIGATION LAND MARKS

15th Sept. 1901 ..	Indian Irrigation Commission appointed.	21st Oct. 1924 ..	Kharung Project (Bilaspur) sanctioned.
May 1902 ..	First Irrigation Circle constituted with Headquarter at Raipur.	1927 ..	Mahanadi Canal System and Pagara Dam completed.
1903 ..	First State Irrigation work, viz., Lachora Tank in Nimar, starts irrigation.	22nd June 1927 ..	C. P. Irrigation Committee appointed.
26th March 1909	Tandula Canal Project (Durg distt.) sanctioned.	7th May 1929 ..	Irrigation Committee submitted its report recommending suspension of all irrigation construction works in old C. P. and Berar.
14th July 1911 ..	Mahanadi and Wainganga Canal Project sanctioned.	1931 ..	Kharung Canal completed. Irrigation and B & R Branches in former C. P. P. W. D. amalgamated.
Sept. 1915 ..	Mahanadi Canal starts operation and irrigates 6,731 acres.	1933 ..	Maniari Canal completed.
1917 ..	Tigra Dam (Gwalior) completed.	June 1936 ..	First State Irrigation Work, viz., Palakmatt completed in former Bhopal State.
1918-19 ..	Long-term (10-year) agreement system introduced in old Madhya Pradesh.		
1921 ..	Tandula Canal completed.		
1923 ..	Wainganga Canal completed.		



June 1937 .. Harsi Dam, Third Major Project of Madhya Bharat region completed.

Nov. 1943 .. First Post-War Reconstruction work, viz. Muramnala started.



# FIRST FIVE-YEAR PLAN

## FIRST FIVE-YEAR PLAN

(1951—56)

It was with this background that the First Five-Year Plan in these constituent units was put into operation. Apart from the multipurpose Chambal Valley Development Scheme, these states had, in their first plan, 26 medium projects with an estimated cost of Rs. 11.27 crore and irrigation potential of 1.74 lakh acres. These included Ari, Dudhawa, Gondli, Saroda, Gangulapara, Sampna and Dukrikheda and nine medium scarcity area schemes in the Mahakoshal region; Mola, Borad, Kundanala, Shivgarh-Bhedli, Morwan and Barodia in the Madhya Bharat region; Kulgarhi, Gurma Nala and Narkuni in the Vindhya Pradesh region and Kaliasote in Bhopal.

As most of these schemes were lacking in necessary

investigations and surveys—the logical outcome of suspension of irrigation activities, during the two decades, preceding the first plan—work could start only on 11 projects, *i. e.*, all the seven medium schemes of the

*The Ramaua Tank (Gwalior)*



Mahakoshal region (excepting the scarcity area projects), and four medium projects, viz., Mola, Kunda, Shivgarh-Bhedli and Borad Project of the Madhya Bharat region. By the end of the first plan one project, viz., Ari (irrigating 10,500 acres) was completed, while the rest spilled over for completion to the Second Five-Year Plan only.

Under the Minor Irrigation Programme, 342 schemes costing Rs. 6.85 crore and capable of irrigating 2.46 lakh acres were taken up. This included construction of new tanks, restoration and improvement of

old works and a few lift irrigation schemes. By the end of the first plan period 214 Minor Irrigation Projects had been almost completed and the remaining 128 projects were carried over to the second plan for completion.

The total expenditure incurred on the medium, minor and village projects during the First Five-Year Plan was Rs. 6.29 crore (including Rs. 1.71 crore on machinery) and the area actually irrigated was 35,540 acres against the irrigation potential of 58,800 acres created up to 1955-56.





# SECOND FIVE-YEAR PLAN



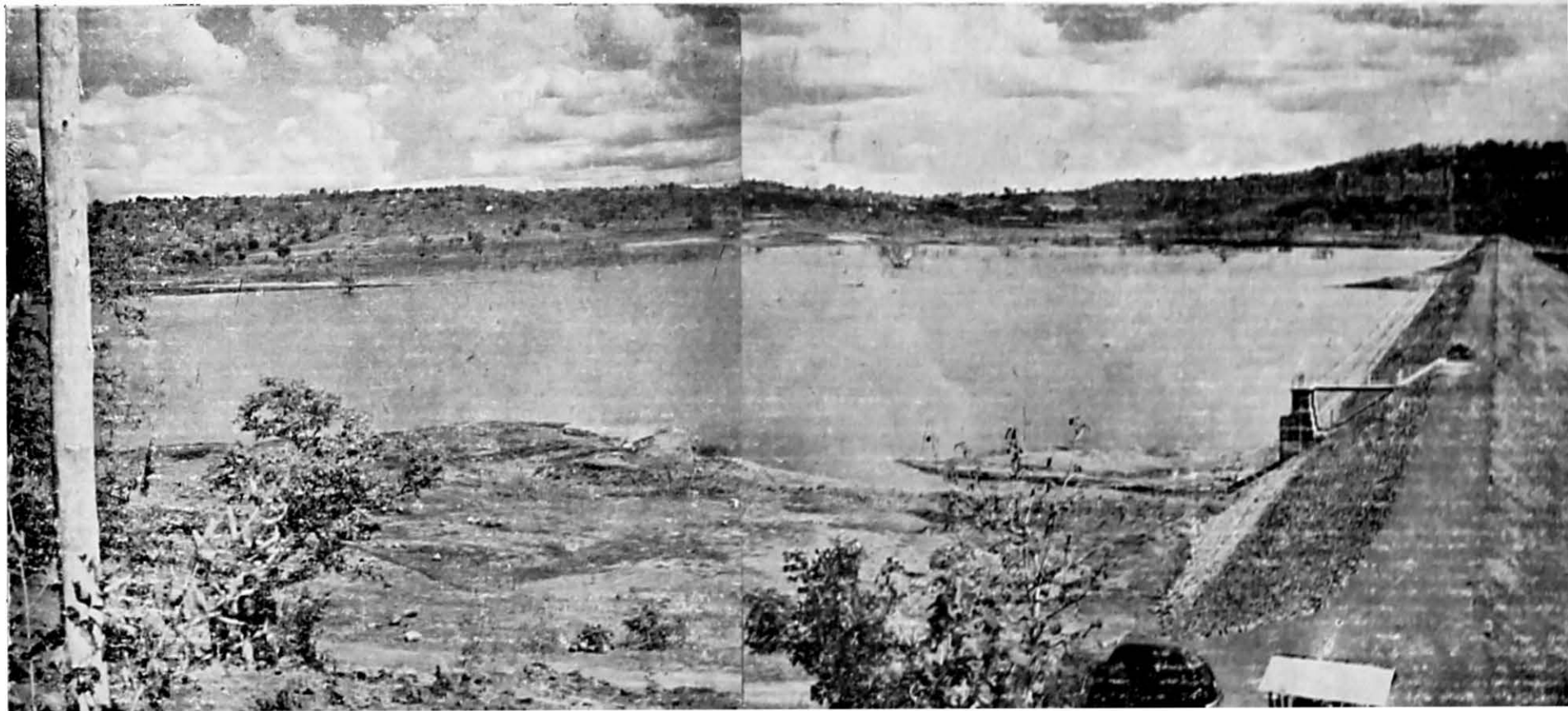
## SECOND FIVE-YEAR PLAN (1956—61)

### Major and Medium Projects

In addition to the 25 medium projects carried over from the first plan, the Second Plan of Madhya Pradesh included 32 new major and medium schemes (including Rs. 20 crore Tawa Multipurpose Project) at a total cost of Rs. 41.62 crore and with an irrigation potential of 12.18 lakh acres.

Five schemes continuing from the first plan with a potential of 38,000 acres have so far been completed. These are : Gondli in Durg, Gangulpara in Balaghat, Sampna in Betul, Dukrikheda in Hoshangabad and Mola in Guna district. The Gondli Tank which was originally designed to serve an area of 52,000 acres was later earmarked

*The Sampna Tank (Betul) a Pilot Scheme for Rabi irrigation, completed in 1956-57.*



mainly for the Bhilai Steel Plant, and now irrigates only 7,200 acres. Two tanks, viz., Shivgarh-Bhedli (Ratlam) and Kunda Nala (Dhar) have also been completed and work has been started on their canals. More than 50 per cent work has been completed on five tanks, viz., Dudhawa (Raipur), Saroda (Durg), Morwan (Mandsaur), Barodia (Raigarh) and Satak-Segwal (West Nimar). Work to the extent of 20 per cent has been done on nine projects, viz., Keswa and Mahanadi Canal Remodelling (Raipur), Maniyari Development (Bilaspur), Kedar-nala (Raigarh), Nalhesara (Balaghat), Dhuan-dhar (Mandla), Sagarnadi (Seoni), Daroli (Damoh) and Nandanwara Canal (Tikamgarh). Preliminary work is being started on seven schemes. These are : Sarai Tola (Raigarh), Bhitrigarh (Jabalpur), Chandrakeshar (Dewas), Pampavati (Jhabua), Devendranagar (Panna), Benigunj (Chhatarpur) and Bila (Sagar). Nine projects are found to be unfeasible, while the remaining projects are still under investigation.

During 1956-57 an expenditure of Rs. 121.69 lakh was incurred and during 1957-58 the

expenditure amounted to Rs. 142.69 lakh. The anticipated expenditure during the year 1958-59 amounts to Rs. 122.81 lakh.

By March 1958, a potential of 11,500 acres was created under major and medium projects, the actual area irrigated being 6,845 acres. During 1958-59 irrigation facilities have been extended to additional 18,000 acres.

#### Minor Projects

Under the minor irrigation, the second plan envisages implementation of 67 new schemes, at a cost of Rs. 3.45 crore with an irrigation potential of 88.553 acres, besides 125 schemes continuing from the first plan.

Fifty-nine minor irrigation schemes costing Rs. 1.95 crore have been completed by December 1958. Ten more schemes are expected to be completed practically in all respects by March 1959. The work is in progress on 65 projects (including four new schemes) costing Rs. 4.35 crore and capable

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*Opposite:*

*The Gangulpara Tank (Balaghat)*



of irrigating an area of 1.3 lakh acres. These include 19 projects whose headworks have been completed with part or no canals. Twenty-three projects have been administratively approved and are ready for being taken up for execution. Twenty projects are under investigation, while 25 have been found to be unfeasible.

### **Tube-wells**

Owing to the topographical conditions certain parts of the State are not suitable for canal irrigation. Some of these areas hold out promise for providing underground water. To ascertain the potential of such underground water resources a few experimental tube-wells were bored during the first plan period in the Narmada basin under the Exploratory Tube-well Projects, Government of India, with the co-operation of the T. C. M. Fifteen wells which yielded satisfactory supplies have been fitted with pumps and motors by the Government of India. These have now been taken over by the State Government. Pump houses and channels are being constructed for these wells which are expected to irrigate 5,400

acres. It is proposed to complete 40 more tube-well schemes by 1960-61. The tube-well irrigation programme under the Second Five-Year Plan has an ultimate potential of 20,000 acres and is estimated to cost Rs. 35 lakh. An expenditure of Rs. 14.7 lakh is expected to be incurred on the tube-well schemes by March 1959.

An expenditure of Rs. 1.61 crore was incurred on minor irrigation programme (including tube-wells) during the first two years of the second plan. It is expected that an amount of Rs. 93 lakh will be spent during the year 1958-59. An irrigation potential of 34,658 acres was created by 1957-58 and an area of 14,220 acres was actually irrigated. It has been tentatively estimated that an additional potential of 14,000 acres has been added during 1958-59.

### **Works under C. D. Blocks**

Besides the major and minor projects mentioned in the preceding pages, work to the tune of Rs. 2.0 crore are to be completed in the Community Development Blocks. Construction of 60 works at a cost of Rs. 40.0 lakh and with an irrigation potential of



*The Dukrikheda Tank (Hoshangabad)*

21,000 acres is in progress and investigation of 65 works costing Rs. 33.5 lakh are nearing completion, while investigation on 337 schemes costing Rs. 1.27 crore are proposed to be taken up. An expenditure of Rs. 25 lakh is likely to be incurred till March 1959 on these works. Irrigation potential of about 30,000 acres is expected to be created by the end of the second plan under this programme.

### **Famine Relief Works**

Due to the failure of rains during the year 1957-58, certain Small Irrigation schemes taken up in the affected districts at the instance of Revenue Department, are being continued during the year 1958-59. The total expenditure anticipated on these works during 1958-59 is about Rs. 6.00 lakh.



### Other Miscellaneous Works

#### *Water Supply Scheme for Bhilai Steel Project*

In addition to the Second Plan Irrigation Projects, considerable amount of work is being done by the Irrigation Branch in connection with the Water Supply Scheme for the Bhilai Steel Project, which is to yield a revenue of Rs. 6 to 8 lakh a year. These works include the diversion of the Tandula Canal, costing Rs. 27.36 lakh (already completed), construction of a feeding reservoir costing Rs. 58.0 lakh (in progress) and the construction of a cooling and circulating reservoir costing Rs. 65.77 lakh (in progress). Besides, some work is being done by the Irrigation Branch on behalf of the Railways who are constructing a marshalling yard for this steel plant. This work is to cost Rs. 6.47 lakh. Total work to be done in this connection is estimated to cost Rs. 157.6 lakh is to be completed by 1959-60.

#### *Flood Protection works*

The Technical Advisory Committee of the state has considered 11 Flood Protection Schemes relating to various parts of the state. Work is already in progress on

Rs. 3.4 lakh Hoshangabad Ghat Scheme. Investigations have been conducted in connection with two works relating to the protection of Kantaphor town in the Dewas district and to the low-lying areas in the town of Mandsaur. The Chandrakeshar and Shivana Irrigation Projects of which the above two flood protection works form part, are estimated to cost Rs. 89 lakh and Rs. 196 lakh respectively. The remaining eight flood protection schemes are under various stages of investigation.

Since the commencement of the First Five-Year Plan, six medium tanks have been completed with their canal systems serving an area of 50,000 acres. Also, 273 minor irrigation works comprising new construction, restoration of old tanks, extension of channels, etc., and capable of irrigating an area of 1.23 lakh acres have been almost completed,

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#### *Opposite:*

*The Tandula Diversion Canal completed at a cost of Rs. 27 lakhs near Bhilai. Involving an earth work almost equal to that of a medium-size tank and having a number of intricate masonry works this diversion was completed in a record period of 10 months.*



As the Second Five-Year Plan draws to a close, it is hoped that many more storeys will be added to the slowly rising edifice of the welfare state. It is expected that by the end of second plan, *i.e.*, in 1960-61, an additional area of 2.82 lakh acres will be assured of irrigation facilities under various categories of works as indicated below:—

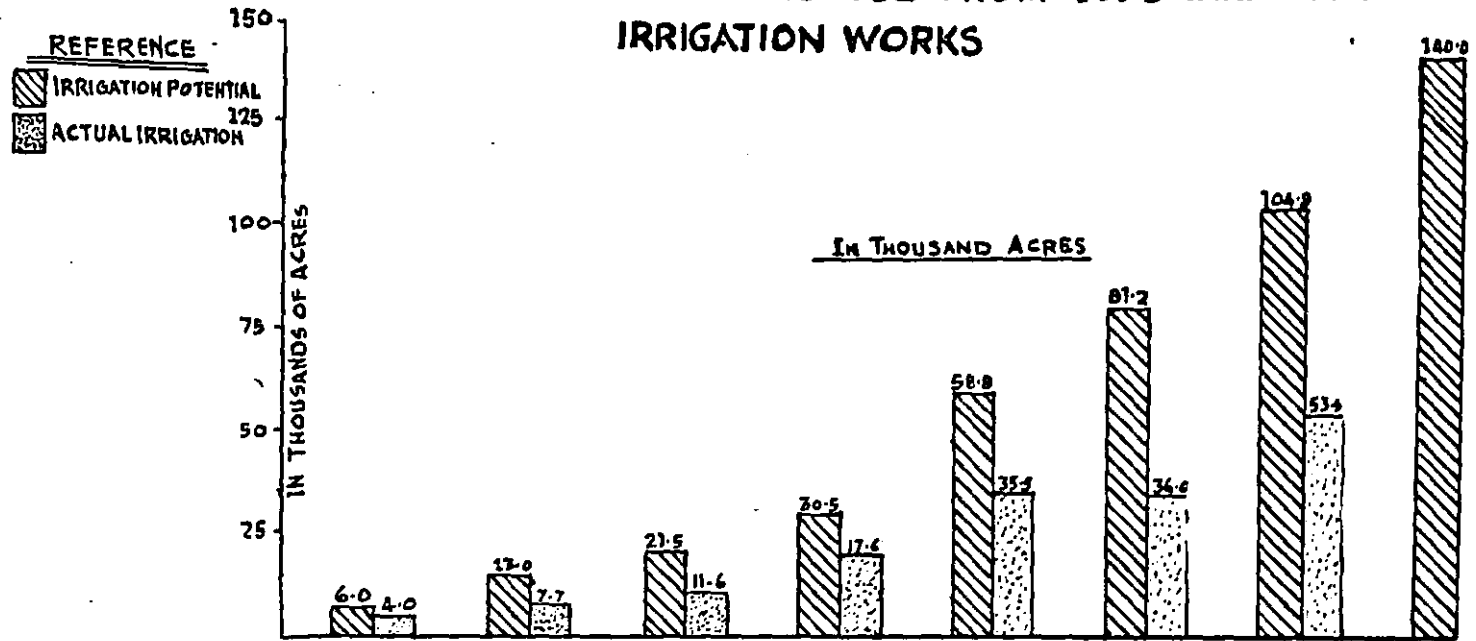
(i) Major and Medium	67,500	Acres.
(ii) Minor (Agr.)	1,19,700	"
(iii) Tube-wells	15,000	"
(iv) Minor (C.D. Blocks)	30,000	"
	<hr/>	
Total	2,32,200	
	<hr/>	

(Exclusive of 58,800 acres added in the first plan).

During the same year a potential of 50,000 acres will also be created under the Chambal canal, thus increasing the overall irrigation potential under the second plan works to 2,82,200 acres. The ultimate area to be irrigated under the Chambal Project (first stage) during the third plan is five lakh acres. The Bhandar Canal of the Matatila Dam will also irrigate 1,50,000 acres during the third plan.

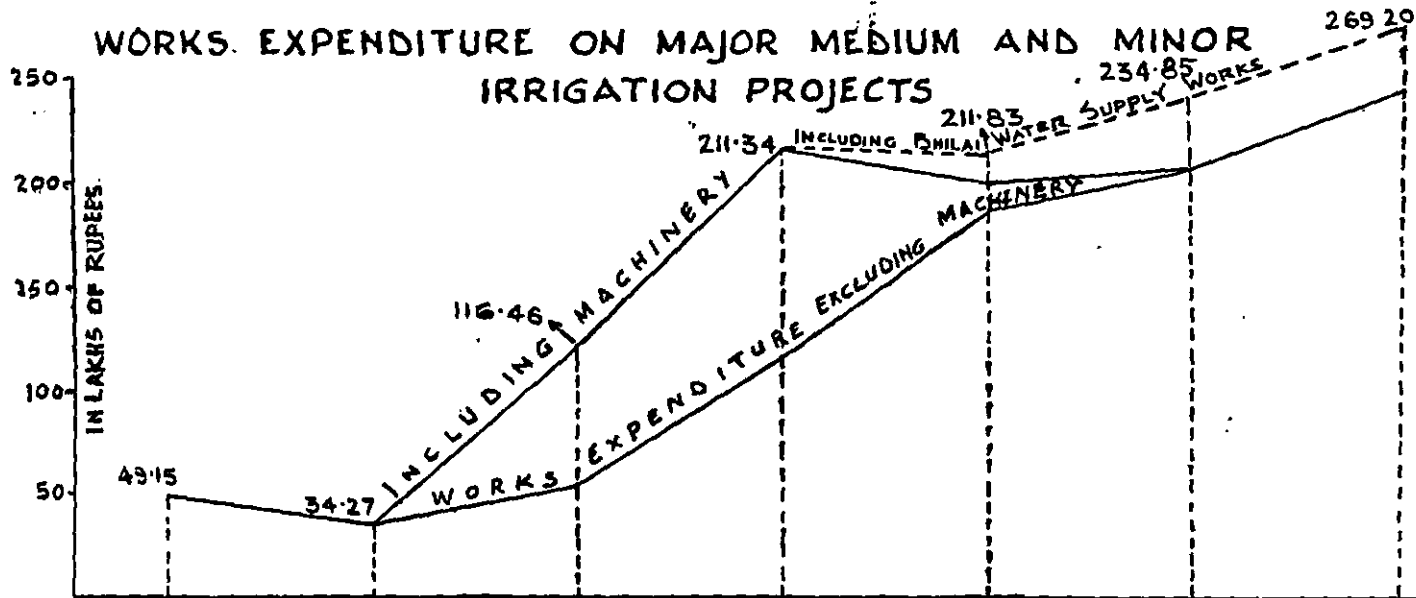


# IRRIGATION POTENTIAL & AREA IRRIGATED FROM 1st & 2nd PLAN IRRIGATION WORKS



REGION		1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
1. MAHA KOSHAL	Potential	6.0	13.0	21.5	30.5	58.8	81.2	104.9	140.0
	Actual Irrig.	4.0	7.7	11.6	17.6	35.5	36.0	53.9	-
2. MADHYA BHARAT	"	N.A.	N.A.	N.A.	-	16.8	17.4	17.4	-
3. VINDHYA PRADESH	"	-	-	-	-	1.8	6.6	13.9	-
	"	-	-	-	-	0.7	1.6	2.4	-
4. BHOPAL	"	-	-	-	5.0	10.0	12.0	14.0	-
	"	-	-	-	-	1.6	0.8	3.0	-
TOTAL FOR M.P.		6.0	13.0	21.5	30.5	58.8	81.2	104.9	140.0
		4.0	7.7	11.6	17.6	35.5	36.0	53.9	-

## WORKS EXPENDITURE ON MAJOR MEDIUM AND MINOR IRRIGATION PROJECTS



REGION	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
MAHA KOSHAL	10.18	2.47	<sup>A</sup> 80.09	<sup>B</sup> 157.88	94.49	113.73	175.54
MADHYA BHARAT	32.09	24.16	26.40	33.29	<sup>C</sup> 75.19	64.61	47.38
VINDHYA PRADESH	-	1.98	5.68	9.30	19.64	17.55	11.07
BHOPAL	6.85	5.66	6.28	10.87	7.35	5.40	5.95
TOTAL FORM.P.	49.15	34.27	116.46	211.34	196.67	201.92	239.94
BHILAI WATER SUPPLY	-	-	-	-	15.16	32.93	29.20

A - INCLUDES Rs. 64.87 LAKHS FOR MACHINERY

B - " Rs. 95.20 " "

C - " Rs. 11.20 " "



# Activities in Different Regions

## ACTIVITIES IN DIFFERENT REGIONS

### Major, Medium & Minor Projects

The achievements under the First Five-Year Plan in each of the constituent units—Mahakoshal, Madhya Bharat, Vindhya Pradesh and Bhopal—and the progress of implementation of the Second Five-Year Plan are briefly given below.

#### Mahakoshal Region

In the first plan, there were 16 medium projects (including nine scarcity area schemes) costing Rs. 7.29 crore with an irrigation potential of 88,990 acres. Under the head of minor irrigation, 28 schemes, costing Rs. 3.27 crore and capable of irrigating an area of 88,520 acres were included. Besides, there were 49 village project works costing Rs. 25.44 lakh. By the end of the first plan one medium project, *viz.*, Ari and 46 village project works were almost completed and work was in full swing on the remaining projects. The total expenditure incurred during the first plan was Rs. 3.66 crore including Rs. 1.6 crore on machinery and Rs. 21.2 lakh on the village project works.

In the second plan, there are seven new major and medium projects costing Rs. 27

crore in addition to 15 projects carried over from the first plan. These are Rs. 20 crore Tawa Multipurpose Project, Rs. 4 crore Mahanadi Canal Remodelling, Rs. 138-lakh Bila, Rs. 55-lakh Nalhesara, Rs. 44-lakh Keswa, Rs. 37-lakh Kedar and Rs. 25-lakh Maniari Development Project. On full development these seven works will irrigate an area of 8.21 lakh acres.

Of the 15 medium-sized carry-over schemes, work is almost completed on four, *viz.*, Gondli, Gangulpara, Sampna and Dukri-kheda, while work is in progress on six projects, *viz.*, Dudhawa, Saroda, Saraitola, Sagarnadi, Dhuandhar and Daroli. Amongst the new medium schemes, work has fairly advanced on the Mahanadi remodelling, Keswa, Kedar, Maniari Development and Nalhesara. The detailed surveys and subsurface investigations for locating a better alignment for the Tawa Dam are continuing. The preliminary work, *e.g.*, the construction of approach roads and the staff quarters has also been taken on hand.

The proposals for the Bila Project have also been finalised and the execution of this scheme which is already administratively approved will start as soon as the project is technically sanctioned by the Central Water and Power Commission.

It is expected that by 1960-61 an additional area of 89,000 acres will receive irrigation facilities in this region.

### **Madhya Bharat Region**

The first Five-Year Plan of the erstwhile Madhya Bharat included six medium projects, costing Rs. 2.41 crore and capable of irrigating an area of 41,200 acres. The minor irrigation programme included 184 schemes, comprising the construction of new tanks, restoration of old tanks and extension and improvement of channels. During the first plan period, work had started on four medium projects. Also, 122 minor schemes costing Rs. 52.84 lakh were completed, creating a net additional irrigation potential of 25,000 acres. The renovation and extension of 400 existing channels was completed, with a view to stabilising irrigation to 30,000 acres. The total expenditure on the medium and

minor irrigation works, during the First Five-year plan was Rs. 191.12 lakh including Rs. 11.2 lakh on machinery.

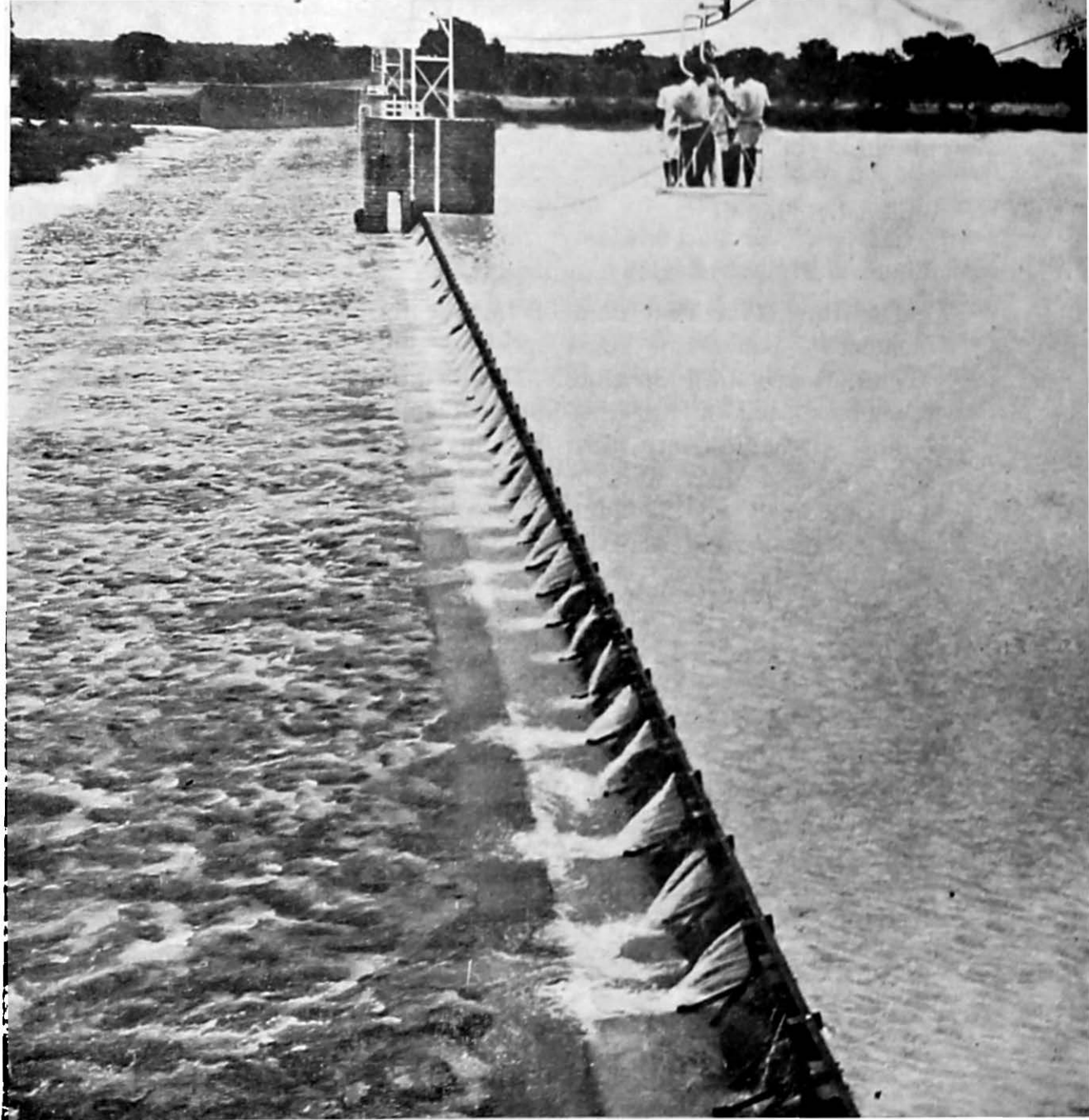
Besides, six medium schemes continuing from the first plan the Second Five-Year Plan included 12 new medium projects costing Rs. 4.85 crore and capable of irrigating an area of 91,980 acres. The minor irrigation programme under the Second Five-Year Plan included 62 schemes continued from the first plan and 38 new projects. These 100 schemes estimated to cost Rs. 2.49 crore will on full development irrigate an area of 73,888 acres.

Of the six continuing medium schemes one project *viz.* Mola, capable of irrigating 7,000 acres has been completed. The head-works of two other medium schemes, *viz.*, Kunda Nala and Shivgarh-Bhedli have also been completed and work is progressing on their canals. The work is also in full swing on the Satak-Segwal, Morwan and Barodia tanks. Amongst new medium schemes, two projects, *viz.*, Chandrakeshar and Pampavati have been administratively approved and work will be taken up shortly. The remaining 10 medium Schemes are under

various stages of investigation. Of the 62 minor schemes continuing from the first plan 20 works capable of irrigating 11,043 acres have so far been completed and 41 schemes with a potential of 34,392 acres are in advanced stage of construction. Sixteen new minor projects have been administratively sanctioned recently and work will be taken shortly. The remaining minor schemes are being investigated.

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*A view of the Rudri Headworks (Raipur) across the Mahanadi.*



It is estimated that an additional irrigation potential of 45,000 acres will be created under the medium and minor works in this region by 1960-61.

### **Vindhya Pradesh Region**

The First Five-Year Plan of this region included 3 medium sized projects and 23 minor irrigation Schemes. No medium schemes started in the first plan. Under minor irrigation, a few bundhis and some weir schemes were partly completed and practically all the minor works spilled over to the second plan for completion.

In addition to three medium projects continuing from first plan, the Second Five-Year Plan includes 12 new medium Schemes costing Rs. 4.26 crore and with an irrigation potential of 1,41,206 acres. The minor irrigation programme envisages, besides 23 continuing schemes, the implementation of 19 new projects costing Rs. 109.67 lakh and capable of irrigating 36,050 acres. The work is in progress at present on one new medium project, viz., the Nandanwara Canal, while Beniganj and Devendranagar Projects have been administratively approved and

work on these two schemes will be taken up shortly. The remaining medium projects are under various stages of investigations. Out of 23 continuing minor schemes 13 projects with an irrigation potential of 35,267 acres have been completed and work on six schemes costing Rs. 32.05 lakh is in progress. Of the 19 new minor schemes the work is in progress on one, 6 are administratively approved for construction and will be taken up shortly and the remaining are under investigation.

It is expected that by 1960-61, additional irrigation facilities would be available in this region for an area of 36,200 acres.

### **Bhopal Region**

At the commencement of the first plan, the percentage of irrigated to cultivated area in this region was only 1.9, which was the lowest of all States. In the First Five-Year Plan, one medium Project, viz., Kaliasote and 58 minor Schemes costing Rs. 49.38 lakh were included. The Kaliasote Project was under investigation stage, but 46 minor works comprising small tanks, weirs and lift irrigation schemes were completed by the



end of the first plan, thus creating an irrigation potential of 10,000 acres. Most of these small schemes were later transferred to the Revenue Department for operation and maintenance.

The Second Five-Year Plan envisages implementation of the Kaliasote Project and one major scheme, viz., Barna, costing Rs. 5.5 crore with an irrigation potential of 1.64 lakh acres. The plan under minor irrigation provides for 12 continuing schemes and 10 new projects costing Rs. 123.62 lakh and capable of irrigating an area of 24,110 acres. Project

proposals are being finalised on the Kaliasote and Barna Projects which would be taken up for execution on receipt of the technical sanction from the Central Water and Power Commission. All the 12 minor schemes which spilled over from the first plan have so far been completed and work has just started on three new minor projects. The remaining schemes are under investigation.

It is estimated that by the year 1960-61, an additional area of 17,000 acres will be assured of irrigation facilities in this region.

MADHYA PRADESH P. W. D. (IRRIGATION BRANCH)

FIRST FIVE-YEAR PLAN

(1951—1956)

Abstract

Region	Projects included in the plan			Projects taken up for execution			Projects completed in the plan			Financial and physical achievements of the plan			Remarks
	No.	Estima- ted cost (Rs.lakhs)	Area proposed for irri- gation (acres)	No.	Estima- ted cost (Rs.lakhs)	Area proposed (acres)	No.	Estima- ted cost (Rs.lakhs)	Area proposed for irri- gation (acres)	Expendi- ture in- curred during the plan (Rs.lakhs)	Irrgn. potential created (acres)	Area actually irrigated (1955-56) (acres.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>I. Major and Medium—</b>													
(i) Mahakoshal ..	16	729.28	88,990	7	553.73	60,500	1	30.00	10,500	212.62*	10,500	10,162	*Including Rs. 81.27 lakh for machinery
(ii) Madhya Bharat	6	241.15	41,200	4	178.25	31,600	..	..	..	39.09**	..	..	**Including Rs. 11.20 lakh for machinery.
(iii) Vindhya Pradesh	3	118.57	37,360	..	..	..	..	..	..	3.63	..	..	On investigation only
(iv) Bhopal ..	1	38.00	6,500	..	..	..	..	..	..	..	..	..	
Total for Major and Medium	26	1127.00	1,74,050	11	731.98	92,100	1	30.00	10,500	255.34	10,500	10,162	
<b>II. Minor (G.M.F.)—</b>													
(i) Mahakoshal ..	28	327.40	88,520	27	321.13	85,020	..	..	..	132.49*	250	212	*Including Rs. 78.80 lakh for machinery.
	**49	25.44	12,754	46	24.49	12,077	46	24.00	12,100	21.21	11,250	6,064	** Village project.
(ii) Madhya Bharat	184	189.25	70,495	184	189.25	70,495	122	52.84	25,000	152.03	25,000	16,800	
(iii) Vindhya Pradesh	23	94.00	52,654	19	80.01	47,669	..	..	..	30.98	1,800	719	
(iv) Bhopal ..	58	49.38	21,570	58	49.38	21,570	46	14.19	8,495	37.05	10,000	1,583	
Total for Minor	342	685.47	245,993	334	664.26	236,831	214	91.03	45,595	373.76	48,300	25,378	
Grand Total for Major, Medium and Minor	368	1,812.47	420,043	345	1,396.24	328,931	215	121.03	56,095	629.10	58,800	35,540	

MADHYA PRADESH P. W. D. (IRRIGATION BRANCH)

SECOND FIVE-YEAR PLAN (1956-61)

Abstract

Region	Projects included in the Plan			Projects completed till 31-12-58			Projects in progress			No. of projects under Investigation		No. of projects found unfeasible		Financial & physical achievements till 31st Marh 1958		
	No.	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	No.	Cost (Rs. Lakhs)	Area (Acres)	No.	Cost (Rs. Lakhs)	Area (Acres)	Projects about to be started	Projects under investigation	No.	Expenditure (Rs. Lakhs)	Irrigation potential created (Acres)	Area actually irrigated (Acres)	Rs. A R K S
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Multipurpose (New)	1	2000.0	6,00,000	..	..	..	..	..	..	1	..	..	15.54	..	..	
	1	2000.0	6,00,000	..	..	..	..	..	..	1	..	..	15.54	..	..	
<b>Major and Medium (Carry over/NEW—</b>																
Mahakoshal ..	15/6	699.28	78,490	4/-	226.82	31,800	6/5	366.01	30,730	1/1	1/-	3/-	178.70	10,500	6,745	
		699.93	2,20,800					561.03	194,800							
Madhya Bharat	6/12	241.15	41,200	1/-	36.45	7,000	5/-	204.70	34,200	-2	7/-	-3	75.81	1,000	100	
		485.01	91,980					..	..							
Vindhya Pradesh	3/12	118.57	37,360	..	..	..	-1	..	..	-2	3/4	-5	8.37	..	..	
		420.12	1,41,206					11.09	4,326							
Bhopal ..	1/1	38.00	6,500	..	..	..	..	..	..	..	1/1	..	1.50	..	..	
		551.56	1,64,200													
Total for Major and Medium	25/31	1097.00	1,63,550	5/-	263.27	38,800	11/6	570.71	64,930	1/5	7/12	1/8	264.38	11,500	6,845	
		2162.02	6,18,186					572.15	199,126							
<b>Minor Carry over/NEW—</b>																
Mahakoshal ..	28/-	327.40	88,520	14/-	77.73	18,000	14/-	249.67	70,520	..	..	..	95.03	9,500	7,261	
		..	..					..	..							
Madhya Bharat	62/38	136.41	45,495	2/-	34.04	11,043	41/-	101.57	34,392	-1/6	-8	1/14	36.18	9,000	3,300	
		112.17	28,393					..	..							
Vindhya Pradesh	23/19	94.00	52,654	13/-	47.96	35,267	6/1	32.05	12,402	-6	2/4	2/8	20.25	12,158	2,459	
		109.67	36,050					2.00	400							
Bhopal ..	12/10	35.19	13,075	12/-	35.19	13,075	-3	..	..	-1	-6	..	9.85	4,000	1,600	
		123.62	24,110					50.07	10,800							
Total for Minor	125/67	593.00	1,99,744	59/-	194.92	77,385	61/4	383.29	117,314	-2/3	2/18	3/22	161.31	34,658	14,620	
		345.46	88,553					52.07	11,200							
Total for Multi-purpose Major, Medium and Minor	150/99	1690.00	3,63,294	64/-	458.19	1,16,185	72/10	954.0	1,82,244	1/28	9/30	4/30	441.23	46,158	21,465	
		4507.48	13,06,739					624.22	210,326							

**MADHYA PRADESH P.W.D. (IRRIGATION BRANCH)**

**FIRST FIVE-YEAR PLAN (1951-1956)**

**Major and Medium Projects**

S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
<b>I.—Mahakoshal Region</b>					
(A)	Projects completed in first plan—				
1	Ari	Seoni	30.00	10,500	Completed in 1952-53.
(B)	Projects spilled over to second plan—				
1	Dudhawa	Raipur	212.11	Same area as shown under Mahanadi Remodelling a new scheme of 2nd plan.	Headworks 60%
2	Saroda	Durg	84.80	18,200	Headworks 40% Canals 50%
3	Gondli	Durg	89.20	7,200	Completed.
4	Gangulpara	Balaghat	49.75	8,500	Headworks 100% Canals... 70%
5	Sampna	Betul	48.78	9,500	Completed.
6	Dukrikheda	Hoshangabad.	39.09	6,600	Do.
<b>Scarcity Area Schemes</b>					
7	Daroli	Damoh	15.00	3,600	Headworks 20% Canal... 1%
8	Jhigiri	Jabalpur	13.50	2,700	Under investigation with State P.W.D.
9	Bhitrigarh	Do.	11.00	2,000	Do.
10	Dhuandhar	Mandla	22.00	3,440	Headworks 15% Canals—%
11	Saraitola	Raigarh	13.08	1,550	Headworks 5% Canals—%

S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958	
(1)	(2)	(3)	(4)	(5)	(6)	
12	Singhora	Raipur	12.30	1,800	Substitute for Amarua.	
13	Dumaria	Durg	36.34	4,500	Under investigation with State P. W. D.	
14	Sahaspur Lohara	Durg	33.41	4,960	Unfeasible.	
15	Sagarnadi	Seoni	19.02	3,940	Headworks 30% Canals—%	
Total spilled over schemes			699.28	78,490		
Total for Mahakoshal Region			729.28	88,990		
<b>II.—Madhya Bharat Region</b>						
(A)	Projects completed in first plan.					
			Nil.			
(B)	Projects spilled over to second plan—					
1	Mola Dam	Guna	36.45	7,000	Completed.	
2	Borad Project			10,000	Headworks 60% Canals—%	
		West Nimar	97.4	4,500	Headworks 50% Canals—%	
(i) Satak				2,500	Under investigation.	
(ii) Segwal						
(iii) Jerwai Pick up weir.				2,500	Under investigation.	
3	Morwan	Mandaur	48.6	6,600	Headworks 70% Canals—%	
4	Shivgarh Bhedi	Ratlam	20.1	3,600	Headworks 100% Canals—5%	
5	Barodia	Rajgarh	14.3	3,000	Headworks 60% Canals—%	
6	Kunda Nala	Dhar	24.3	4,000	Headworks 100% Canals—%	
Total for Madhya Bharat Region			241.15	41,200		

S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)

### III.—Vindhya Pradesh Region

(A) Projects completed in first plan.	Nil.				
(B) Projects spilled over to second plan—					
1. Kulgarhi	..	Satna	.. 21.52	10,000	Under investigation with State P.W.D.
2. Gurma Nala	..	Rewa	.. 54.55	13,460	Do.
3. Narkuni	..	Sidhi	.. 42.50	13,900	Do.
Total for Vindhya Pradesh Region			118.57	37,360	

### IV.—Bhopal Region

(A) Projects completed in first plan.	Nil.				
(B) Projects spilled over to second plan—					
1. Kaliasote	..	Schore	.. 38.00	6,500	Under investigation with State P. W. D.
Total for Bhopal Region			38.00	6,500	
Grand Total for Madhya Pradesh			1,127.00	1,74,050	

## MADHYA PRADESH P.W.D. (IRRIGATION BRANCH)

### FIRST FIVE-YEAR PLAN (1951-1956)

#### Minor Irrigation Projects

S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)

#### I.—Mahakoshal Region (A) Construction of New Tanks and Canals

(i) Projects completed in first plan.	.. Nil. ..				
(ii) Projects spilled over to second plan for completion—					
1. Pikridih	..	Raipur	.. 4.07	910	Completed.
2. Parsoda	..	Do.	.. 3.03	550	Do.
3. Manpur	..	Do.	.. 7.45	1,850	Do.
4. Ghugwa	..	Do.	.. 7.86	1,660	Do.
5. Lamkeni Dongri	..	Do.	.. 5.46	1,290	Do.
6. Kalmijhar	..	Raipur	.. 4.87	1,40	Completed.
7. Thakurdayya	..	Do.	.. 5.63	1,880	Do.
8. Dharanala	..	Durg	.. 14.72	3,000	Do.
9. Surhi	..	Do.	.. 63.00	15,000	Headworks 80% Canals 30%
10. Nawegaon	..	Do.	.. 18.45	3,500	Headworks 10% Canals —%
11. Madiyan	..	Do.	.. 20.94	6,400	Headworks 30% Canals —%
12. Barnoo	..	Jabalpur	.. 17.10	5,950	Headworks 20% Canals —%
13. Marai	..	Do.	.. 13.44	4,100	Headworks 60% Canals 10%



S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres).	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
14.	Gutehi .. ..	Jabalpur	5.31	1,680	Headworks 100% Canals 75%.
15.	Bohribund Canal	Do.	6.27	3,500	Canals 5%.
16.	Simrar .. ..	Do.	13.48	5,600	Headworks 100% Canals 60%.
17.	Datla .. ..	Do.	16.98	5,000	Headworks 15% Canals—%.
18.	Jalherighana ..	Damoh ..	3.59	760	Completed.
19.	Barpati .. ..	Do.	4.39	1,170	Do.
20.	Jabera .. ..	Do.	7.62	2,250	Do.
21.	Motinala .. ..	Do.	5.04	1,000	Headworks 95% Canals—%.
22.	Piparia Jograj ..	Do.	3.85	540	Completed.
23.	Tejgarh .. ..	Do.	17.47	4,000	Headworks 60% Canals.. 20%.
24.	Badalpur .. ..	Seoni ..	2.54	300	Completed.
25.	Kharari .. ..	Balaghat	23.26	9,000	Headworks 20% Canals—%.
26.	Chawarpani ..	Do.	18.05	3,560	Headworks 80% Canals.. 20%.
27.	Chikhla .. ..	Do.	2.65	500	Completed.
28.	Jalgaon .. ..	Do.	10.88	1,330	Headworks 100% Canals.. 30%.
			<u>327.40</u>	<u>88,520</u>	

(B) Village Projects

(i) Projects completed in first plan—

1.	Lalbanda .. ..	Raipur	0.20	100
2.	Dhond .. ..	Do.	0.22	270
3.	Bhoina .. ..	Do.	0.32	100
4.	Deori Nala .. ..	Do.	0.28	200

S. No.	Name of Project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres).	REMARKS Progress upto 31st December 1958.
(1)	(2)	(3)	(4)	(5)	(6)
5.	Keoradih .. ..	Raipur	0.26	143	
6.	Narasinghpur ..	Do.	0.84	426	
7.	Cheria .. ..	Do.	0.68	370	
8.	Girhola .. ..	Do.	0.71	362	
9.	Gotiardihi .. ..	Do.	0.44	195	
10.	Bardihi .. ..	Do.	0.43	126	
11.	Benaika .. ..	Do.	0.27	120	
12.	Nakta .. ..	Durg	0.29	128	
13.	Badgaon .. ..	Do.	0.29	105	
14.	Parry .. ..	Do.	0.75	300	
15.	Jamgaon .. ..	Do.	0.53	120	
16.	Naradhi .. ..	Do.	0.38	200	
17.	Sanjari .. ..	Do.	0.46	517	
18.	Khursul .. ..	Do.	0.87	493	
19.	Kokpur .. ..	Do.	1.11	440	
20.	Khudmudi .. ..	Do.	1.92	690	
21.	Sahaspur .. ..	Do.	0.69	240	
22.	Kirari .. ..	Bilaspur	0.57	196	
23.	Auraikalan .. ..	Do.	0.24	96	
24.	Auraikhurd .. ..	Do.	0.25	105	
25.	Jarway .. ..	Do.	0.75	231	
26.	Akaltara .. ..	Do.	0.25	99	
27.	Rasda .. ..	Do.	0.58	200	
28.	Nariyara .. ..	Do.	0.85	530	
29.	Sendri .. ..	Do.	0.32	175	
30.	Mehgaon Nala ..	Jabalpur	0.22	500	
31.	Potahan .. ..	Do.	1.45	340	
32.	Kawaria .. ..	Do.	0.41	500	
33.	Noonpani .. ..	Damoh ..	1.63	550	
34.	Kcolari .. ..	Do.	1.20	391	
35.	Phutera .. ..	Do.	0.34	400	

S. No.	Name of Project	District	Estimated cost. (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
36.	Bhatkamaria ..	Damoh	1.20	450	
37.	Bhapel ..	Sagar ..	0.32	200	
38.	Powarkheda ..	Hoshangabad	0.13	56	
39.	Hirankheda ..	Do.	0.20	316	
40.	Karni Anicut ..	Mandla ..	0.21	300	
41.	Mehta ..	Seoni ..	0.10	100	
42.	Mendki ..	Chhindwara	0.60	324	
43.	Gogrinala ..	Betul ..	0.19	145	
44.	Improvement of Abna Anicut ..	E. Nimar	0.11	50	
45.	Harsawad ..	Do.	0.10	63	
46.	Badgaongujar ..	Do.	0.33	117	
			24.49	12,077	
(ii) Projects spilled over to second plan—					
1.	Naikbandha ..	Raipur ..	0.35	143	
2.	Hirapur ..	Hoshangabad	0.51	357	
3.	Dalsagar ..	Seoni ..	0.09	177	
			0.95	677	
Total for village projects ..			25.44	12,754	
Total for Mahakoshal Region ..			352.84	1,01,274	

## II—Madhya Bharat Region

### (A) Projects completed in first plan—

1.	Rangarai ..	Bhind ..	0.42	65
2.	Madan ..	Do.	0.04	15
3.	Lalpura ..	Do.	0.10	45
4.	Schas ..	Do.	0.35	130

S. No.	Name of project	District	Estimated cost (Rs. lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
5.	Deora ..	Bhind	0.46	75	
6.	Byani ..	Do.	0.37	125	
7.	Khader ..	Do.	0.21	80	
8.	Bilkhedi No. 1 tank	Do.	0.18	35	
9.	Mahadoli Upper tank	Do.	0.06	15	
10.	Khaneta ..	Do.	0.12	15	
11.	Mahdoli Lower ..	Do.	0.03	7	
12.	Bagia Pura ..	Do.	0.13	55	
13.	Dadrowa ..	Do.	0.07	29	
14.	Baisly ..	Do.	0.25	85	
15.	Bagrai ..	Do.	0.10	40	
16.	Dehgaon ..	Do.	0.04	15	
17.	Thankri ..	Do.	1.12	800	
18.	Chharenta ..	Do.	0.19	112	
19.	Ajnoda ..	Do.	0.20	80	
20.	Gorai Kemara	Do.	0.08	35	
21.	Pachera ..	Do.	0.25	..	
22.	Ujhawal ..	Do.	0.23	..	
23.	Jhallokhedi ..	Do.	0.04	..	
24.	Taroli ..	Do.	0.07	..	
25.	Lami ..	Do.	0.15	75	
26.	Bamroli ..	Do.	0.29	125	
27.	Basaiya Behad ..	Morena	0.20	85	
28.	Rachad ..	Do.	0.16	66	
29.	Orhena ..	Do.	0.04	17	
30.	Rajod ..	Do.	0.46	400	
31.	Dhoreta ..	Do.	0.60	48	
32.	Nayagaon Anjari	Do.	0.40	48	
33.	Pahadi ..	Do.	0.25	30	
34.	Baboor Basia ..	Do.	0.25	30	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
35	Lohgarh ..	Morena	0.25	30	
36	Jawahargarh ..	Do.	0.30	35	
37	Naikpura ..	Do.	0.25	25	
38	Nonera ..	Do.	0.10	40	
39	Dhanela ..	Do.	0.26	..	
40	Aroli ..	Do.	0.13	..	
41	Bara Rithora ..	Do.	0.15	..	
42	Pandola ..	Do.	0.29	400	
43	Badwari ..	Do.	0.07	..	
44	Mahidpur ..	Gwalior	0.30	65	
45	Sirsa ..	Do.	2.90	1,000	
46	Ramnua ..	Do.	6.01	6,000	
47	Rairoo ..	Do.	0.45	200	
48	Bara Pasa ..	Do.	0.31	250	
49	Gangamalanpur ..	Do.	0.25	125	
50	Diwan ..	Do.	0.50	200	
51	Kalora ..	Guna ..	12.00	2,422	
52	Sakra ..	Do.	0.05	50	
53	Jamkhedi ..	Do.	0.10	25	
54	Bandia ..	Do.	0.03	10	
55	Umaria ..	Do.	0.07	50	
56	Kankria ..	Do.	0.09	25	
57	Sajan man ..	Do.	0.08	50	
58	Bhojpur ..	Rajgarh ..	0.08	..	
59	Sojna ..	Vidisha ..	0.08	150	
60	Sherwasa ..	Do.	0.41	25	
61	Jastekheri ..	Ujjain ..	0.41	500	
62	Ramova ..	Do.	0.24	450	
63	Kanardi ..	Do.	0.28	300	
64	Bhimakheda ..	Do. ..	0.21	130	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
65	Narela ..	Ujjain	0.34	500	
66	Shamgi ..	Do.	0.30	240	
67	Antalwasa ..	Do.	0.54	600	
68	Undasa ..	Do.	0.07	10	
69	Malwasa ..	Ratlam	0.46	130	
70	Dodiana ..	Do.	0.39	100	
71	Pan Bhatta ..	Do.	0.14	20	
72	Kamer ..	Do.	0.31	200	
73	Ramsagar ..	Do.	0.25	100	
74	Khudana ..	Mandsaur	0.40	1,000	
75	Telia ..	Do.	0.16	350	
76	Ghatonda ..	Do.	0.91	600	
77	Jamonia ..	Do.	0.10	250	
78	Palarkhedi ..	Do.	0.18	160	
79	Rampuria ..	Do.	0.07	30	
80	Bhameshwar ..	Do.	0.66	195	
81	Bhensla ..	Do.	0.17	70	
82	Takarwada ..	Do.	0.33	200	
83	Hansli ..	Do.	0.15	171	
84	Dhikola ..	Do.	0.15	120	
85	Panbarod ..	Do.	0.30	200	
86	Momanpur ..	Dewas	0.17	65	
87	Satwas ..	Do.	0.45	150	
88	Aghera ..	Do.	0.20	400	
89	Bagdi ..	Dhat ..	0.15	50	
90	Dedla ..	Do.	0.30	140	
91	Delmi ..	Do.	0.22	30	
92	Karnawad ..	Do.	0.28	25	
93	Hansapur ..	Indore ..	0.14	150	
94	Mithya ..	Do.	0.19	100	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
95	Khajraya ..	Indore	0.53	800	
96	Yashwant Sagar ..	Do.	1.00	2,000	
97	Depalpur ..	Do.	1.60	800	
98	Simrol ..	Jhabua ..	0.11	..	
99	Bhabra ..	Do.	0.14	100	
100	Karwat ..	Do.	0.07	..	
101	Petalawad ..	Do.	0.92	26	
102	Kardawada ..	Do.	0.28	40	
103	Phuledi ..	Do.	0.30	..	
104	Bhagore ..	Do.	0.21	172	
105	Pitol ..	Do.	0.10	40	
106	Kakanwani ..	Do.	0.17	..	
107	Harinagar ..	Do.	0.13	..	
108	Talaoli ..	Do.	0.31	70	
109	Bardia ..	Do.	0.46	500	
110	Kartyakhedi Pick-up W. Weir.	Nimar ..	0.34	100	
111	Sura Pick-up Weir	Do.	0.26	45	
112	Suran Pick-up Weir	Do.	0.15	45	
113	Pipaldhar ..	Do.	0.53	200	
114	Jamonia ..	Do.	0.56	200	
115	Balwada ..	Do.	0.22	200	
116	Madhrakhurd ..	Do.	0.80	600	
117	Bandhrakhurd ..	Do.	0.11	50	
118	Bilwa Pick-up Weir	Do.	0.12	50	
119	Sesainala Pick-up Weir.	Shivpuri	0.47	650	
120	Barkheda ..	Do.	0.38	250	
121	Banskhedi	Do.	0.07	80	
122	Hatlai Pick-up Weir	Do.	0.06	..	
			52.84	28,713	(Net 25,000)

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
(B) Projects Spilled over to second plan—					
1	Nimrol ..	Bhind ..	0.52	390	Completed.
2	Nenoli Mehdoli	Do.	0.20	40	Do.
3	Konhar ..	Do.	0.25	30	Do.
4	Alori ..	Do.	0.81	1,293	Headworks 70%.
5	Khatkia ..	Do.	0.16	75	Do.
6	Jhund Pura ..	Morena	1.00	125	Work in progress.
7	Siaroo ..	Do.	0.80	60	Unfeasible.
8	Piparsana ..	Do.	0.90	490	Headworks 70%
9	Dehlia ..	Shivpuri	0.80	360	Work in Progress.
10	Bhujaraia Jamonia	Do.	0.80	400	Do.
11	Ramnagar ..	Do.	0.43	150	Completed.
12	Buri Barod ..	Do.	4.91	1,400	Do.
13	Munjwar ..	Do.	11.13	3,337	Headworks 90% Canals—%.
14	Benda Bhendra ..	Rajgarh	4.27	861	Completed.
15	Ghatera ..	Vidisha	9.01	2,422	Do.
16	Goberhela ..	Do.	0.43	200	Work in Progress.
17	Bagrod ..	Do.	0.40	40	Completed.
18	Phupher ..	Do.	1.70	870	Headworks 40% Canals—%.
19	Bhiliya ..	Do ..	2.00	500	Headworks 40% Canals—%.
20	Chitoria ..	Do.	2.63	1,500	Work in Progress.
21	Thar ..	Do.	1.41	200	Headwork 40% Canals—%.
22	Padlia ..	Ujjain ..	0.40	300	Completed.
23	Kanodia ..	Do.	0.64	300	Do.
24	Silarkhedi Channel	Do.	2.33	1,900	Canals 80%.
25	Poladongar ..	Mandsaur	5.00	800	Completed.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
26	Jeeran .. ..	Mandsaur	1.25	200	Work in Progress.
27	Harwar .. ..	Do.	1.46	200	Headworks 100 % Canals—%.
28	Gopalpura ..	Do.	7.65	2,422	Breach portion to be restored.
29	Jamner .. ..	Dewas ..	1.41	500	Headworks 90 % Channels 50 %
30	Bamni .. ..	Do.	0.70	500	Work in progress
31	Ganora .. ..	Do.	0.65	1,000	Headworks 100 % Canals—%.
32	Tikasa .. ..	Do.	0.29	79	Headworks 100 % Canals—%.
33	Dhayli .. ..	Do.	0.33	100	Headworks 100 % Canals—%.
34	Pipalrawan ..	Do.	1.50	300	Headworks 100 % Canals—%.
35	Bhopwar .. ..	Dhar ..	0.80	100	Breached portion to be restored.
36	Pakheda .. ..	Do.	1.51	900	Headworks 100. Canals—%.
37	Kesthali .. ..	Do.	0.43	95	Completed.
38	Jhapdi .. ..	Do.	3.24	4,000	Headworks 20 % Canal —%.
39	Talwada .. ..	Do.	1.96	500	Headwork 100 % Canals—%.
40	Semalda .. ..	Do.	14.76	2,096	Headworks 100 % Canals—%.
41	Neori .. ..	Indore	0.26	50	Headworks 100 % Canals—90 %.
42	Hatod .. ..	Do.	1.49	200	Headworks 100 % Canals—%.
43	Methwada ..	Do.	0.42	160	Headworks 100 % Canals—%.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
44	Nahatara .. ..	Jhabua	41.01		Work in Progress
45	Sater Tank .. ..	Do.	0.99	170	Do.
46	Sarlai Tank No.2	W. Nimar	1.30	350	Completed.
47	Kundinala .. ..	Do.	0.66	100	Do.
48	Moyda Nala .. ..	Do.	0.59	100	Do.
49	Semal Khodra ..	Do.	0.70	250	90 % work done.
50	Sura Pick-up Weir	Do.	0.32	45	Completed.
51	Talund .. ..	Do.	0.97	120	Do.
52	Chichalia .. ..	Do.	0.29	150	Do.
53	Surpala Pick-up Weir	Do.	0.70	400	Headworks 100 % Canals—%.
54	Warla Pick-up weir	Do.	0.55	250	Headworks 100 % Canals—%.
55	Jethwai .. ..	Do.	1.45	2,500	Work in Progress.
56	Seslia .. ..	Do.	0.67	350	Completed.
57	Lachhora .. ..	Do.	0.33	400	Headworks 100 % Canals—%.
58	Ranjit Tal .. ..	Do.	1.78	3,000	Completed
59	Gagantalao .. ..	Do.	19.68	4,064	Headworks 70 % Canals—%.
60	Extension of channels of Bhourod Tank.	Shajapur	0.46	300	Partly completed. Remaining portion to be done on the basis of re- vised estimates.
61	Extension of channels of Napnera Tank.	Do.	5.60	300	Do.
62	Extension of Channels of Nawara Tank.	Do.	0.60	400	Do.
Total for Madhya Bharat Region ..			136.41	45,495	
			189.25	70,495	



S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)

### III.—Vindhya Pradesh Region

(A) Project completed in first plan— <i>Nil</i>					
(B) Projects spilled over to second Plan—					
1	Loni Dam	.. Rewa ..	8.58	4,000	Completed.
2	Amkoi	.. Satna ..	0.90	702	Do.
3	Kotli Anicut	.. Do	0.51	450	Do
4	Singhpur Canal	.. Do.	6.76	3,750	Do.
5	Rajapur Canal	.. Do.	7.06	3,750	Do.
6	Deori Anicut	.. Do.	0.45	1,440	Do.
7	Jaitwara	.. Do.	3.00	1,875	Unfeasible.
8	Sawaiganj Canal	Panna ..	2.37	1,500	Work in Progress.
9	Kohni Canal	.. Do.	0.56	1,200	Completed.
10	Ranipur Canal	.. Do.	1.37	3,000	Do.
11	Baraiah Tank and Pick-up Weir.	.. Do.	6.00	1,650	Work in Progress.
12	Govindgarh Canal	Rewa ..	0.89	1,100	Completed.
13	Baisa Weir	.. Do.	6.73	4,500	Do.
14	Ghogri Dam	.. Sidhi ..	9.87	2,200	Under investigation with State P. W. D.
15	Madwas Anicut	.. Do.	1.20	1,250	90% work done.
16	Sidhi Dam	.. Do.	11.59	1,622	Work in progress.
17	Manpur Weir	.. Do.	5.51	3,700	Completed.
18	Teharka Canal	.. Tikamgarh	6.40	2,750	Work in Progress.
19	Goratal	.. Chhatarpur	6.00	6,000	Completed.
20	Macha Canal	.. Do.	0.12	110	Unfeasible.
21	Andhari Tal	.. Do.	1.00	800	Under Investigation with State P. W. D.
22	Baroni	.. Datia	0.14	100	Completed.
23	Singhpur Weir	.. Shahdol..	4.49	3,630	Work in Progress.
23(a)	Landies (8Nos.)	..	2.50	1,565	Completed.
Total for Vindhya Pradesh Region			94.00	52,654	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)

### IV.—Bhopal Region

(A) Projects completed in first plan—					
1	Kankhera	.. Raisen ..	0.19	80	
2	Paokhera	.. Do.	0.09	50	
3	Nandora	.. Do.	0.07	40	
4	Deewatia	.. Do.	0.39	100	
5	Keelajbir	.. Do.	0.06	25	
6	Salkanpur	.. Do.	0.22	25	
7	Amoda	.. Do.	0.01	100	
8	Asapuri	.. Do. ..	0.06	80	
9	Murhari	.. Do. ..	0.27	150	
10	Goharganj	.. Do. ..	0.06	1,200	
11	Saigaon Barrage	.. Do. ..	0.11	100	
12	Harrai Barrage	.. Do. ..	0.13	60	
13	Machwai Barrage	.. Do. ..	0.20	100	
14	Sagpur Barrage	.. Do. ..	0.17	100	
15	Durkhera	.. Sehore ..	0.16	60	
16	Rai Bamolia	.. Do. ..	0.28	120	
17	Rupheda	.. Do. ..	0.06	80	
18	Bamhora	.. Do. ..	0.15	100	
19	Bhojnagar	.. Do. ..	0.14	50	
20	Gaori	.. Do. ..	0.03	25	
21	Kansia	.. Do. ..	0.47	200	
22	Rasoolpura	.. Do. ..	0.59	150	
23	Parwati Barrage	.. Do. ..	1.33	1,000	
24	Taraoli	.. Do. ..	0.04	25	
25	Jherkheda	.. Do. ..	0.13	100	
26	Jirighat Barrage	.. Do. ..	0.16	100	
27	Barkheda Kurmi Barrage.	.. Do. ..	0.19	55	
28	Bhojpur Barrage	.. Do. ..	0.15	50	

S. No	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958.
(1)	(2)	(3)	(4)	(5)	(6)
29	Palkhedi Barrage	Sehore ..	0.18	35	
30	Parwalia Barrage	Do. ..	0.43	350	
31	Maulakhedi Barrage.	Do. ..	0.11	50	
32	Pipalkhedi Barrage	Do. ..	0.10	100	
33	Menakhedi Barrage	Do. ..	0.09	100	
34	Tumra Barrage ..	Do. ..	0.24	100	
35	Rasoolpura Barrage	Do. ..	0.90	100	
36	Extension of Ajnal Canal.	Do. ..	0.71	..	
37	Kolar Barrage ..	Do. ..	0.28	200	
38	Dondinadi Barrage	Do. ..	0.45	200	
39	Lowarapur Barrage	Do. ..	0.10	80	
40	Karmankheri Barrage.	Do. ..	0.20	200	
41	Kolari Barrage ..	Do. ..	0.18	20	
42	Ramnagar ..	Do. ..	0.27	250	
43	Narsingkheda	Do. ..	0.17	..	
44	Kaliasote (lift Irrigation Scheme).	Do. ..	1.90	1,000	
45	Intkhedi (lift Irrigation Scheme).	Do. ..	1.91	1,000	
46	Kararia (lift Irrigation Scheme).	Do. ..	0.89	800	
			<u>14.19</u>	<u>8,495</u>	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
(B) Projects spilled over to second plan—					
1	Dahod ..	.. Raichur ..	15.00	6,000	Completed.
2	Dhamdhosar ..	Do. ..	2.62	1,200	Do.
3	Barbatpur ..	Do. ..	1.00	500	Do.
4	Special Repairs to Palakmati.	Do. ..	17.80	..	Do.
5	Gorakhpur ..	Do. ..	5.80	700	Do.
6	Sudia ..	.. Do. ..	0.95	600	Do.
7	Palakmati Lift Irrigation Scheme.	Do. ..	1.54	1,000	Do.
8	Barna Lift Irrigation Scheme.	Do. ..	1.50	450	Do.
9	Chamarsal Lift Irrigation Scheme.	Do. ..	2.00	1,000	Do.
10	Raipura ..	.. Sehore ..	1.00	325	Do.
11	Gulgaon ..	.. Do. ..	0.08	100	Do.
12	Papnas Lift Irrigation Scheme.	Do. ..	1.90	1,200	Do.
			<u>35.19</u>	<u>13,075</u>	
Total for Bhopal Region			.. 49.38	21,570	
Grand Total for Madhya Pradesh			<u>685.47</u>	<u>2,45,993</u>	

MADHYA PRADESH P. W. D. (IRRIGATION BRANCH)

SECOND FIVE-YEAR PLAN (1956-61)

New Major and Medium Projects

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
<b>I.—Mahakoshal Region</b>					
1	Tawa ..	Hoshangabad.	2000.00	6,00,000	Investigation Continuing at site and final designs are being prepared by C. W., & P. C.
2	Bila ..	Sagar ..	138.27	26,000	Administratively approved, but awaiting technical sanction of C. W., & P. C.
3	Development of Maniari	Bilaspur ..	25.00	24,000	15% of work done.
4	Kedar Nala	Raigarh ..	37.00	11,500	Headworks—15% Canals—10%.
5	Keswa Nala	Raipur ..	44.00	8,000	Headworks—20% Canals—%
6	Remodelling of Mahanadi Canals.	Raipur ..	400.00	1,40,000	Remodelling—20% Bhatapar Br. Canal—5%
7	Nalhesara	Balaghat	55.06	11,300	Headworks 20% Canal—%
8	Total for Mahakoshal Region		2699.33	8,20,800	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
<b>II.—Madhya Bharat Region</b>					
1	Development of Harsi, Gwalior	..	48.33	11,700	Awaiting C. W. and P.C.'s technical sanction.
2	Jasaiyya ..	Guna ..	77.90	14,000	do.
3	Bamori ..	Guna ..	17.00	2,000	Unfeasible.
4	Akhajhon	Shivpuri	21.60	4,000	Under investigation with State P. W. D.
5	Tillar (Chillar)	Shajapur	51.89	6,400	Do.
6	Pampavat	Jhabua ..	17.25	2,500	Administratively approved and is being sent to C. W. P. C., for technical sanction.
7	Bhensakhedi	Ujjain ..	22.45	3,380	Awaiting C. W. P. C. technical sanction.
8	Pingal Nala	Ratlam ..	35.00	15,000	Unfeasible.
9	Chandrakeshar	Dewas ..	88.59	12,000	Preliminary work started.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
10	Choral .. ..	Indore ..	40.00	9,000	Unfeasible.
11	Ketan .. ..	Vidisha	30.00	5,000	Under investigation with State P. W. D.
12	Chhapi .. ..	Rajgarh	35.00	7,000	Do.
Total for Madhya Bharat Region..			485.01	91,980	

### III.—Vindhya Pradesh Region

1	Nagda Nala .. ..	Tikamgarh	42.95	7,500	Project recently finalised by C. W. P. C.
2	Nadanwara canal	Tikamgarh	11.09	4,326	Canal—20%.
3	Parari .. ..	Panna ..	28.55	13,600	Under investigation with State W. P. C.
4	Devendranagar ..	Panna ..	28.38	6,380	Administratively approved but awaiting technical sanction of C. W. P. C.
5	Upper Ken Valley	Panna ..	125.00	40,000	Under investigation with State W. P. C.
6	Unchhera .. ..	Satna ..	10.80	6,000	Unfeasible.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
7	Raigawan .. ..	Satna ..	63.50	8,400	Unfeasible.
8	West Sohawal ..	Satna ..	20.00	12,000	Do.
9	Nagod Canal .. ..	Satna ..	20.00	20,000	Do.
10	Galhatta .. ..	Shahdol	18.40	8,000	Under investigation with State P. W. D.
11	Chathat .. ..	Shahdol	14.00	5,000	Unfeasible.
12	Beniganj Dam ..	Chhatarpur	43.43	10,000	Administratively approved but awaiting technical sanction of C. W. P. C.
Total for Vindhya Pradesh Region.			426.12	1,41,200	

### IV.—Bhopal Region

1	Barna/Kolar .. ..		551.56	1,64,200	Under Investigation with C. W. P. C.
Total for Bhopal Region ..			551.56	1,64,200	
Grand Total for Madhya Pradesh			4162.02	12,18,186	

**MADHYA PRADESH P. W. D. (IRRIGATION BRANCH)**

**SECOND FIVE-YEAR PLAN (1956—61)**

**New Minor Irrigation Projects**

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed to be irrigated (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
<b>I.—Mahakoshal Regions.</b>					
Nil					
<b>II.—Madhya Bharat Region.</b>					
<i>(A) New Construction—</i>					
1	Harthon .. ..	Shivpuri	2.50	375	Unfeasible.
2	Simeria .. ..	Gwalior	11.15	2,300	Administratively sanctioned work to start shortly.
43	Jajone .. ..	Bhilsa ..	13.24	2,700	Do.
	Jhiri weir .. ..	Shajapur	0.60	150	Unfeasible.
5	Parolia .. ..	Shajapur	2.04	348	Project report under preparation.
5	Panbihar .. ..	Ujjain ..	17.92	2,860	Project report finalised.
7	Pardha .. ..	Mandsaur	2.00	1,000	Project report under preparation.
8	Mohanpur .. ..	Shajapur	6.00	1,700	Unfeasible.
9	Dhanoria .. ..	Mandsaur	3.00	1,000	Do.
10	Amritsagar .. ..	Mandsaur	0.80	300	Do.
11	Nean .. ..	Ratlam ..	2.00	600	Do.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed to be irrigated (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
12	Jhiri Nala pick up weir.	Jhabua ..	1.16	200	Administratively approved. Work to start shortly.
13	Tapli .. ..	Jhabua ..	1.82	400	Do.
14	Bolasa .. ..	Jhabua ..	1.50	300	Under investigation.
15	Oblad .. ..	Jhabua ..	1.00	200	Administratively approved. Work to start shortly.
16	Barmandal .. ..	Dhar ..	8.50	2,000	Under investigation.
17	Paj .. ..	Dhar ..	4.00	1,200	Unfeasible.
18	Nima chavan .. ..	Rajgarh	0.84	150	Administratively approved. Work to start shortly.
19	Jerkia chavan .. ..	Rajgarh	0.52	200	Do.
20	Biora Chavan .. ..	Rajgarh	0.50	200	Unfeasible.
21	Kotra Chavan .. ..	Rajgarh	0.30	100	Unfeasible.
<i>(B) Restoration of Old Tanks</i>					
22	Bilran pick up weir	Shivpuri	1.00	400	Unfeasible.



S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed to be irrigated (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
23	Piploda	.. Shivpuri	10.44	2,000	Administratively approved. Work to start shortly.
24	Phutiwar	.. Shivpuri	3.70	1,000	Do.
25	Dhakora ..	.. Rajgarh	0.75	300	Unfeasible.
26	Lakhnwas	.. Rajgarh	1.05	150	Administratively approved. Work to start shortly.
27	Sika ..	.. Rajgarh	0.60	150	Do.
28	Kheria ..	.. Ujjain ..	1.06	230	Do.
29	Simrol ..	.. Ujjain ..	2.50	1,200	Project report under preparation.
30	Raoti ..	.. Ratlam ..	0.62	1,000	Administratively approved. Work to start shortly.
31	Harsola ..	.. Indore ..	2.05	180	Do.
32	Datoda ..	.. Indore ..	2.00	400	Do.
33	Rau Tank No. I	Indore ..	1.31	270	Administratively approved. Work to start shortly.
34	Rau Tank No. II	Indore ..	0.70	200	Unfeasible.
35	Uoon ..	.. W. Nimar	0.50	150	Under investigation.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed to be irrigated (Acres).	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
36	Kheria ..	.. Guna ..	1.00	2,000	Under investigation.
37	Haripura	.. Guna ..	0.50	300	Unfeasible.
38	Goda Padoria	.. Guna ..	0.50	180	Do.
Total Madhya Bharat Region ..			112.17	28,393	

### III.—Vindhya Pradesh Region

1	Rampur Canal ..	.. Rewa ..	8.98	4,500	Administratively approved. Work to start shortly
2	Bhutali Jharia	.. Sidhi ..	1.50	750	Under investigation.
3	Baisaha Nala	.. Shahdol	2.00	1,300	Unfeasible.
4	Maika ..	.. Shahdol	2.00	400	In Progress.
5	Kachni Anicut	.. Shahdol	7.50	3,000	Unfeasible.
6	Burwa ..	.. Shahdol	15.21	2,700	Administratively approved. Work to start shortly.
7	Bhajri Nalla	.. Shahdol	0.60	250	Unfeasible.
8	Shivrajpur Canal	Satna ..	2.50	1,250	Do.
9	Perari Canal	.. Satna ..	1.00	500	Do.

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December, 1958
(1)	(2)	(3)	(4)	(5)	(6)
10	Bheiswar Canal	Satna	13.55	5,600	Administratively approved, Work to start shortly.
11	Birhana Canal	Satna	4.00	2,207	Do.
12	Gugri Canal	Satna	11.00	1,250	Under investigation.
13	Khurera	Tikamgarh	1.70	850	Unfeasible.
14	Sendpa Dam	Chhatarpur	6.58	3,000	Under investigation.
15	Sukhani Nadi	Tikamgarh	7.60	3,500	Unfeasible.
16	Sakangpur	Shahdol	2.00	1,300	Do.
17	Bahadurganj Canal	Panna	2.80	1,200	Under Investigation.
18	Karahi Canal	Panna	9.68	1,000	Administratively approved, Work to start shortly.
19	Burha Nala	Chhatarpur	9.47	3,500	Do.
Total for Vindhya Pradesh Region			109.67	36,050	

S. No.	Name of project	District	Estimated cost (Rs.lakhs)	Area proposed for irrigation (Acres)	REMARKS Progress upto 31st December 1958
(1)	(2)	(3)	(4)	(5)	(6)
<b>IV.—Bhopal Region</b>					
1	Hatnaikhera	Schore	25.40	5,000	Headworks—5% Canal—%.
2	Sukalia	Schore	6.19	1,100	Administratively approved.
3	Bagsi	Schore	14.78	1,900	Under investigation.
4	Gyaraspura	Schore	7.02	750	Do.
5	Doraha	Schore	15.00	6,000	Do.
6	Magarda Berasia	Schore	8.00	1,200	Do.
7	Imalia	Raisen	8.18	700	Do.
8	Amravad	Raisen	14.38	1,660	Do.
9	Benchhore	Raisen	9.20	1,500	Headworks—5% Canals—%.
10	Ratapani	Raisen	15.47	4,200	Headworks 5% Canal—%.
Total for Bhopal Region			123.62	24,110	
Grand Total for Madhya Pradesh			345.46	88,553	