

COMMITTEE ON PLAN PROJECTS  
(IRRIGATION & POWER TEAM)



REPORT  
ON  
CHAMBAL PROJECT  
(MADHYA PRADESH AND RAJASTHAN)

MARCH 1958

**LETTER OF TRANSMITTAL**

No. COPP/IP/92/57  
COMMITTEE ON PLAN PROJECTS  
NEW DELHI.

*New Delhi, the 31st March, 1958*

**MY DEAR PANTJI,**

I have great pleasure in forwarding to you the Report of the Team for Irrigation and Power on Chambal Project. The Report is the result of close study of all relevant facts and observation of necessary matters. The method followed was to consult the Project Authorities concerned at every step, the dominant thought being to do everything in close co-operation and in a spirit of joint endeavour.

2. As the work of the Team proceeded, interim reports were submitted from time to time and thus no time was allowed to be wasted for such recommendations being implemented as were agreed to and approved. The Report has the concurrence of the Consultative Committee which was appointed to advise the Team on technical questions. The main recommendations of the Team were discussed with the concerned State Authorities and the Draft Report was discussed with the Chambal Control Board. The reactions of various concerned authorities, are being placed in the form of a tabular statement in accordance with Memorandum No. COPP/7/1/5/57, dated the 7th February, 1957, of the Committee on Plan Projects to the Leader of the Irrigation and Power Team.

3. I take this opportunity of thanking you for the close personal interest you have taken in the investigation and for the guidance you gave me throughout the period of investigation and enquiry. I take this opportunity to thank the Secretary of the Committee on Plan Projects whose co-operation was invaluable and also to place on record the help and guidance which the members of the Consultative Committee made available to the Team throughout.

**YOURS SINCERELY,**  
**N. V. GADGIL.**

**SHRI GOVIND BALLABH PANT,**

**MINISTER FOR HOME AFFAIRS,**  
**NEW DELHI.**

## CONTENTS

Chapter No.	SUBJECT	Pages
	Preface . . . . .	i to iii
1	Introductory . . . . .	I
2	Administration . . . . .	2—8
3	Features of Design and construction . . . . .	9—16
4	Phasing of Project . . . . .	17—22
5	Management of irrigation and utilization of water . . . . .	23—45
6	Power generation . . . . .	46—53
7	Works needing urgent attention . . . . .	54—56
8	Costs of Project . . . . .	57—63
9	Summary of the Report . . . . .	64—75
	*Statement of recommendations and observations and comments of the Control Board and the State Governments concerned.	
	Appendices	76—119

## PREFACE

The Irrigation and Power Team with Shri N. V. Gadgil as Leader was set up in February 1957 by the Committee on Plan Projects which in turn was constituted by the National Development Council. The Team was entrusted with the task of conducting investigations on the Chambal and Lakkavalli Projects with the objects detailed in para 2 with a view to securing economy and efficiency in the utilisation of financial and other scarce resources. The other members of the Team were:

Shri Lal Singh, Ex-M.P., Director of  
Agriculture (Retd.) Punjab.

Shri M. Narasimhaiya, Chief Engineer  
for Irrigation (Retd.) Mysore.      Members for the Chambal Project.

Shri C. L. Handa, formerly Director  
Bhakra Dam Designs Directorate,  
Punjab.

Shri G. N. Pandit, formerly Superin-      Member for Lakkavalli Project.  
tending Engineer, Bombay.

The Team was guided by a Consultative Committee consisting of senior engineers:

Shri A. N. Khosla, Vice Chancellor,  
Roorkee University.

Shri N. N. Iengar, Adviser, Ministry  
of Iron and Steel.

Shri M. S. Thirumale Iyengar, Chief  
Engineer, Hirakud.

Shri R. K. Gupta, Managing Director,  
National Projects Construction Cor-  
poration.

Shri D. S. Borker worked as Secretary to the Consultative Committee and also the Irrigation and Power Team.

2. The Irrigation and Power Team was required to make a study of various aspects of the two Projects with Special reference to:

(1) To study all aspects of the Project having a bearing on economy and efficiency with special reference to:

- (a) Utilisation of trained personnel and materials;
- (b) utilisation of machinery and equipment;
- (c) construction—Plant lay-out;
- (d) adequacy of original estimates and designs as evidenced from actual construction of the Project;
- (e) phasing of construction with a view to studying whether:

(i) timely utilisation of benefits accruing from the Project has been ensured;

(ii) it is possible to accelerate accrual of benefits;

(iii) benefits could be increased by rephrasing the Project at this stage;

(f) sufficiency of investigations conducted at the planning stage with a view to the formulation of Project Estimates;

(g) the effect of the above study on the financial results of the Project, if any.

(2) Generally to assess the progress made in construction, the reasons for shortfall, if any, and to suggest measures for improvements in the future.

(3) To examine the possibility of decreasing dependence upon imported materials and equipment required for the Project.

(4) To examine whether adequate steps have been taken by the authorities concerned for fixing and realising the contemplated water rates, betterment fees and/or any other rates, cesses or taxes.

(5) Any other recommendation that the Team may like to make in order to ensure economy and efficiency in the construction of the Project.

3. The Members of the Team made a number of visits to Chambal Hydrel Works, Kotah Barrage site, Right Bank Canal and Left Bank Canal of the Chambal Project and had detailed discussions with the Chief Engineer (Irrigation) Rajasthan, Chief Engineer Chambal Hydrel Works and other officials connected with the Project. The Leader along with the Members of the Consultative Committee visited the Gandhi Sagar Dam, the Canals and the Kotah Barrage from 7th to 12th July, 1957. The Team gave its interim recommendations on 10th May 1957 which were discussed by the Consultative Committee at its meeting held at Kotah.

4. The Draft Report was submitted to the Consultative Committee on 29th September, 1957. Subsequently the Team and the Consultative Committee had a joint meeting with the Central Water and Power Commission to discuss the design of Kotah Barrage. The final decision was taken after the Team visited the Site of Works on 15th January 1958 as previously programmed. They also met the Minister for Irrigation and Power informally and discussed the tentative recommendations. The Team has also the benefit of discussions with Shri S. Ratnam, Secretary to the Government of India, Ministry of Finance regarding the audit side, in particular the recommendations relating to preparation of the estimates and schedule of rates. The recommendations relating to agricultural aspects have been approved generally by the Governments of Madhya Pradesh and Rajasthan.

5. The work of the Team was considerably facilitated by the willing co-operation of the Ministry of Irrigation and Power, Central Water and Power Commission, the Governments of Rajasthan and Madhya Pradesh and the Chambal Control Board. We take this opportunity to convey our gratitude to Shri V. T. Krishnamachari, Deputy Chairman and Shri C. M. Trivedi, Member, Irrigation and Power, Planning Commission for the keen interest evinced by them in the enquiry. We also wish to record our appreciation of the valuable assistance rendered by Shri Indarjit Singh, Secretary, Committee on Plan Projects regarding the administrative and financial aspects of the Project. But for his co-operation the completion of the work and the submission of the Report would not have been an easy task.