

NATIONAL PLANNING COMMITTEE
RIVER TRAINING & IRRIGATION



X9(026)-2-NATE
H7
13897

Chairman
PANDIT JAWAHARLAL NEHRU
Hon. Gen. Secretary
K. T. SHAN

NATIONAL PLANNING COMMITTEE SERIES

The National Planning Committee Series will consist of Reports of the various Sub-Committees, each of which deals with the several aspects of the national life. Each Sub-Committee consists of recognised Experts in the subject; and every Report prepared by them considers all the bearings, implications, and consequences of the subject. Together the Series will make a comprehensive outline of an all-embracing National Plan, which, if and when implemented, would revolutionise the conditions of life in this country. Though most of the Reports were prepared in 1939-40, each is prefaced by an Introduction showing the place of the subject in the entire Scheme of National Planning, and ended by a Summary of Developments which brings the matter fairly up to date.

Price Rs. 6/-
Shillings 12/6
Dollars 3/-

LIST OF MEMBERS
of
NATIONAL PLANNING COMMITTEE
(Including Representatives of Governments)

JAWAHARLAL NEHRU (Chairman)

Sir M. Visveswaraya, (Resigned)	J. C. Kumarappa, (Resigned)
Sir Purshottamdas Thakurdas	Walchand Hirachand
Dr. Megh Nad Saha	Dr. Radha Kamal Mukerjee
A. D. Shroff	Prof. J. C. Ghosh,
A. K. Shaha	Hon'ble Mr. Shuaib Qureshi
Dr. Nazir Ahmad	Rani Laxmibai Rajwade
Dr. V. S. Dubey	Abdur Rahman Siddiqui
Ambalal Sarabhai	Gulzarilal Nanda
N. M. Joshi	Mrs. Vijayalakshmi Pandit
K. T. Shah, (Hon. Gen. Sec.)	

Members

Hon. Mr. V. V. Giri, Minister for Industries, Madras
Hon. Mr. L. M. Patil, Minister for Industries, Bombay
Hon. Dr. Syed Mahmud, Minister for Education and
Development, Bihar
Hon. Mr. C. J. Bharuka, Minister for Industries,
Central Provinces
Director of Industries, Bombay
Director of Industries, Bihar
Director of Industries, Assam
Minister in Charge of Industries, Bhopal
Director of Industries, Hyderabad, Dn.
Director of Industries, Mysore
Development Commissioner, Baroda
Director of Industries, Baroda

RIVER TRAINING AND IRRIGATION

NATIONAL PLANNING COMMITTEE SERIES

Rural Marketing and Finance

River Training and Irrigation

Soil Conservation and Afforestation

Land Policy, Agricultural Labour and Insurance

Animal Husbandry and Dairying, Horticulture and Fisheries

Crops—Planning and Production

Rural and Cottage Industries

Power and Fuel

Chemical Industries

Mining and Metallurgical Industries

Manufacturing Industries

Industries connected with Scientific Instruments and

Engineering Industries

Labour

Population

Trade—(Internal and Foreign)

Public and Industrial Finance

Currency, Exchange and Banking

Insurance (Individual and Social)

Transport (Road, Rail, Air and Water)

Communications (Posts, Telegraphs, Telephones and Radio)

National Housing

Public Health

Education—General and Technical

Woman's Role in Planned Economy

NATIONAL PLANNING, PRINCIPLES & ADMINISTRATION

K. T. Shah.

NATIONAL PLANNING COMMITTEE SERIES
(REPORT OF SUB-COMMITTEE)

RIVER TRAINING
AND
IRRIGATION

Chairman

Nawab Ali Nawaz Jung Bahadur

Secretary

Mr. U. N. Mahida, I.S.E.

Edited by

K. T. SHAH

Honorary General Secretary

NATIONAL PLANNING COMMITTEE

VORA & CO., PUBLISHERS LTD.

3, ROUND BUILDING, KALBADEVI ROAD, BOMBAY 2.

First Edition, December, 1947

Price Rs. 6/- only

To
All Those
MEMBERS OF THE NATIONAL PLANNING COMMITTEE
and of
Its Various Sub-Committees
A TRIBUTE OF APPRECIATION

प्रारब्धमुत्तमजना न परित्यजन्ति

PERSONNEL OF THE SUB-COMMITTEE ON
RIVER TRAINING AND IRRIGATION

Chairman

NAWAB ALI NAWAZ JUNG BAHADUR

Secretary

Mr. U. N. MAHIDA

Members

Dr. Megh Nad Saha

• Dewan Bahadur V. G. Shete

Representatives of Governments

Shri Moti Ram, I.S.E., (U.P.)

Shri G. D. Agarwal, I.S.E., (C.P.)

Mr. Ali Ahmed, B.A., (Assam)

Shri S. C. Majumdar, (Bengal)

Shri G. Seshagiri Rao, L.C.E., (Mysore)

PREFACE

The National Planning Committee, appointed in 1938, began its work early in 1939. After defining the nature of a National Plan, and determining the nature and scope of the work entrusted to them, the Committee issued an elaborate and comprehensive Questionnaire which was subsequently supplemented by specific details. Twenty-nine Sub-Committees, formed into eight groups, were set up with special terms of reference to deal with all parts and aspects of the national life and work in accordance with a predetermined Plan.

After some unavoidable delay in getting replies to the Questionnaire, the Sub-Committees began their work, and submitted Reports,—some of them Final, some Interim,—which were considered at the Plenary Sessions of the Parent Committee in 1940. Towards the end of that year the Chairman, Pandit Jawaharlal Nehru, was arrested and sentenced to a long term of imprisonment, during which the work of the Committee had necessarily to be suspended.

On his release a year later, hope revived for an intensive resumption of the Committee's work. But the outbreak of war with Japan, the threat to India's own safety, and the hectic march of political events, rendered it impossible to devote any attention to such work at that time. It, therefore, inevitably went into cold storage once again; and remained for the duration of the war.

When at last the War seemed nearing its end, Pandit Jawaharlal Nehru with other leaders was released. The moment seemed again opportune to resume the work of

the Planning Committee. Meetings of that Body were held in September and November 1945, when certain more urgent questions, already included in the programme of the National Planning Committee, were given a special precedence. A Priority Committee was appointed to report upon them. Changes and developments occurring during the War had also to be taken into account; and another Committee was appointed to review the general instructions, given six years earlier to the Sub-Committees. Revised instructions were issued to them following the Report of this Sub-Committee; and the Chairmen and Secretaries of the several Sub-Committees were once again requested to revise and bring up to date such of the Reports as had already been submitted—either as final or interim—while those that had not submitted any reports at all were asked to do so at an early date.

As a result, many of the Sub-Committees which had not reported, or had made only an Interim Report, put in their Reports, or finalised them. The Parent Committee has had no chance to review them, and pass resolutions on the same. But the documents are, by themselves, of sufficient value, prepared as they are by experts in each case, to be included in this Series.

The following Table shows the condition of the Sub-Committees' work, and the stage to which the Planning Committee had reached in connection with them.

Serial No.	Name of the Sub-Committee.	Final Report		Interim Report		No Reports
		N.P.C. Resolutions	Not considered by N.P.C.	N. P. C. Resolution	Not considered by the N.P.C.	
Group I.	Agriculture & other Sources of Primary Production	Handbook Pp.		Handbook Pp.		
1.	Rural Marketing and Finance	97-99				
2.	River Training and Irrigation Part I	83-85				
	" " " " Part II	113-115				
3.	Soil Conservation and Afforestation	115-119				
4.	Land Policy and Agriculture			139-141		
5.	Animal Husbandry and Dairying	87-89				
6.	Crop Planning and Production				do.	do.
7.	Horticulture	102-103				
8.	Fisheries					
Group II	Industries or Secondary Sources of Production					
1.	Rural and Cottage Industries					
2.	Power and Fuel		do.			
3.	Chemicals					do.
4.	Mining and Metallurgy			77-79		
5.	Engineering Industries	75-77		130-133		
6.	Manufacturing Industries		do.			
7.	Industries connected with Scientific Instruments		do.			
Group III	Human Factor					
1.	Labour	89-92				
2.	Population	85-87				
Group IV	Exchange and Finance					
1.	Trade					
2.	Public Finance					
3.	Currency and Banking			122-126		
4.	Insurance			93-95		
Group V	Public Utilities			95-97		
1.	Transport					
2.	Communications	126-129				
Group VI	Social Services-Health and Housing			120-122		
1.	National Housing					
Group VII	Education					
1.	General Education			133-139		
2.	Technical Education				do.	
Group VIII	Woman's Role in Planned Economy					

To sum up, fourteen Sub-Committees had made final reports, of which ten have been considered, and Resolutions taken upon them, by the National Planning Committee. Twelve more have presented Interim Reports, of which nine have been considered by the Planning Committee, with Resolutions thereon, while three Sub-Committees have not yet presented any report on the reference made to them.

The idea that all this material, gathered together with the help of some of the best brains in India in the several departments of our national life, should be printed and published was before the Committee from the start. But the interruption caused by the war prevented its realisation. It was once again mooted in 1941; but the moment was not deemed ripe then for such action, partly because the leading spirits in almost every one of the Sub-Committees were unable to devote time and labour to bring their Reports up-to-date; and partly also because war-time restrictions or shortages had made scarcer than ever before the statistics and other facts, which particular sub-committees would need, to bring their work up-to-date. The War time needs of Government had attracted several of them to work on Government Bodies, Panels, or Committees. For all these reasons it was deemed undesirable that material of this character—valuable as it must be—should be put out in an incomplete, inchoate, obsolete form, which may reflect unfavourably upon Indian capacity for such tasks.

The last four years of the War were thus a period of suspended animation for the National Planning Committee. Even after the end of the war, it has not been feasible, for obvious reasons, for the Planning Committee to resume its work and finalise decisions. Continuous sessions of that body are indispensable for considering and taking decisions on the Sub-Committee reports presented since 1940, and putting all the material into shape, ready for publication, not to mention making its own Report; but the political situation in the country made it impossible. Other conditions, however, are somewhat more favourable than in 1938-39, when the Central Government of the country were all but openly hostile to such attempts. Lest, however, the momentary difficulties make for needless further delay, it was thought advisable by the Chairman and the undersigned that no more time should be lost in putting this material before the Public. Following this advice, it is now proposed to bring out a complete Series of the National Planning Committee's Sub-Committee Reports, which will

serve as appendices to the Parent Committee's own Report. The Plan of the proposed enterprise is briefly summarised below.

Every Sub-Committee's Report, which is in a final form and on which the National Planning Committee has itself taken resolutions, will be edited and published, with an Introduction assigning their due importance to the suggestions and recommendations contained in that particular report, its proper place in the over-all National Plan; and following it up, wherever necessary, by a kind of Epilogue, summarising the developments that have taken place during the seven years, during which the work of the Planning Committee had been in suspension.

Those Reports, again, which, though in a final form, have not yet been considered, and no resolutions taken thereon, by the Planning Committee, will also be included in the Series in the form in which they were submitted, with such Introduction and Epilogue to each as may be deemed appropriate. And the same treatment will be applied to Reports which are 'Ad Interim', whether or not the Parent Committee has expressed any opinion on the same. They will be finalised, wherever possible, in the office, with such aid as the Chairman or Secretary of the Sub-Committee may be good enough to render. Sub-Committees finally, which have not submitted any Report at all,—they are very few,—will also find their work similarly dealt with. The essence, in fine, of the scheme is that no avoidable delay will now be suffered to keep the National Planning Committee's work from the public.

Both the Introduction and the Epilogue will be supplied by the undersigned, who would naturally be grateful for such help as he may receive from the personnel of each Sub-Committee concerned. The purpose of these additions is, as already stated, to assign its true place to each such work in the overall Plan; and to bring up the material in each Report to date, wherever possible.

Not every Sub-Committee's Report is sufficiently large to make, more or less, a volume by itself, of uniform size, for this Series. In such cases two or more Reports will be combined, so as to maintain uniformity of size, get-up, and presentation of the material. The various Reports, it may be added, would not be taken in the order of the classification or grouping originally given by the Planning Commit-

tee; nor even of what may be called the intrinsic importance of each subject.

In view of the varying stages at which the several Reports are, for reasons of convenience, it has been thought advisable to take up for printing first those which are final, and on which the Planning Committee has pronounced some resolutions. Printing arrangements have been made with more than one Press, so that two or three Reports may be taken simultaneously and published as soon as possible so that the entire Series may be completed in the course of the year.

Two other Sub-Committees, not included in the list of Sub-Committees given above, were assigned special tasks of (1) preparing the basic ideas of National Planning; and (2) outlining the administrative machinery deemed appropriate for carrying out the Plan. These were unable to function for reasons already explained. The present writer has, however, in his personal capacity, and entirely on his own responsibility, published the "Principles of Planning" which attempt to outline the fundamental aims and ideals of a National Plan. This remains to be considered by the Planning Committee. Similarly, he has also attempted to sketch an administrative machinery and arrangements necessary to give effect to the Plan, when at last it is formulated, and put into execution. Notwithstanding that these two are outside the Scheme outlined in this Preface, they are mentioned to round up the general picture of the arrangements made for publication of the entire work up-to-date of the National Planning Committee and its several Sub-Committees.

The several volumes of Sub-Committee Reports, when published, will be treated as so many appendices to the Report of the parent body, the National Planning Committee. It is impossible to say when that Committee, as a whole, will be able to hold continuous sessions, review and resolve upon Sub-Committee Reports which have not yet been considered, and lay down their basic ideas and governing principles for an all over Plan, applicable to the country, including all the facts of its life, and all items making up the welfare of its people.

The disturbed conditions all over the country, and the Labour unrest that has followed the end of the War has caused unavoidable delays in printing and publishing the

several volumes in the Series, which, it is hoped, will be excused.

In the end, a word of acknowledgment is necessary to put on record the aid received by the Editor in the preparation and publication of this Series. All those who are associated in the task,—members of the Parent Committee, or as Chairmen, Secretaries or Members of the various Sub-Committees,—have laboured wholly, honorarily, and consistently striven to give the best that lay in them for the service of the country. Almost all Provincial Governments and some States,—the latter twice in some cases,—have made contributions towards the expenses of this office, which have been acknowledged and accounted for in the Handbooks of the Planning Committee, published earlier. Suitable appreciation of these will be expressed when the Parent Committee makes its own Report. At almost the end of its task, the expenditure needed to edit, compile, and otherwise prepare for the Press, the several Reports, has been financed by a Loan by Messrs. Tata Sons Ltd., which, even when repaid, will not diminish the value of the timely aid, nor the sense of gratitude felt by the undersigned.

Bombay,
1st July, 1947. }

K. T. Shah

CONTENTS

	Page
Preface	K. T. Shah 9
Introduction	K. T. Shah 17
REPORT:	
Part I. Irrigation in India: Nawab Ali Nawaz Jung Bahadur	30
Part II. River Training and Protection against Floods: Nawab Ali Nawaz Jung Bahadur	55
Part III. Water Power Exploitation: Nawab Ali Nawaz Jung Bahadur ..	69
Note on the Functions of the Irrigation Branch, P.W.D., U.P.	94
Appendix A: Statements 1 to 5	99
Part IV. Future of Waterways: G. L. Mehta	105
Resolutions passed by the N.P.C. on the Report ..	111
Questionnaire issued by the N.P.C.	117
Summary of Developments.....	K. T. Shah 119
Outline of Proposed Legislation	
Damodar Valley Authority	131
Electricity: Rationalisation of the Production and Distribution	138-148