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GOVERNMENT OF INDIA  
RECONSTRUCTION COMMITTEE OF COUNCIL

# FIRST REPORT

ON THE

# PROGRESS

OF

# RECONSTRUCTION PLANNING.

*1st March 1944.*



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**RECONSTRUCTION COMMITTEE OF COUNCIL****INTRODUCTION**

This **FIRST REPORT ON THE PROGRESS OF RECONSTRUCTION PLANNING** describes the progress which has been made at the Centre upto 1st of February 1944 and indicates some of the problems which the various Policy Committees are considering at present or would have to consider at some later stage. Similar reports will, it is hoped, be published periodically and will indicate the progress made from time to time not only at the Centre, but also in the Provinces and States.

2. The Report which has been prepared by the Reconstruction Secretariat contains a good deal of argument, discussion of policy and views on the financial and other problems involved. The object of the Report is to give information and to evoke public interest in the problems of reconstruction and it should not be regarded either as an expression of the approved policy of the Government of India or of any of its Departments.

3. Since this Report was drafted a statement has been made by the Hon'ble the Finance Member in his budget speech on the finance of Reconstruction, an extract from which is quoted below :

"It is my firm conviction that the first pre-requisite of reconstruction finance is a sound financial position, both at the Centre and in the Provinces, secured by the fullest development of their respective taxation resources. This may perhaps sound pedestrian, but in the light of our experience of war-time finance there is no reason, given the will to find money for peace on the scale on which it has been found for war, why resources should not be forthcoming to an extent which could not possibly have been envisaged in pre-war days. Many Provinces have already started exploiting their revenue sources and building up reconstruction funds, as a result of which they will embark on the post-war period with an improved revenue position and a useful cash balance. This is a hopeful start, though there is still considerable scope for extension; but the magnitude of the problem is so great that the Provinces will undoubtedly need all the financial assistance that the Centre may be in a position to give. I have recently brought under review the post-war budgetary position of the Central Government, in so far as the many uncertainties inherent in the conditions of the present and the future permit. The review indicates that, on the assumptions of a reasonably speedy rate of demobilisation after the conclusion of hostilities, the maintenance by concerted international effort of full production and employment, and a determination on the part of the Government of the day to utilise to the full the taxable capacity of the country, it might well be that, after one or two deficit years, revenue surpluses would emerge rising in the fourth or fifth year to the order of Rs. 100 crores per annum. With all-out borrowing continued in accordance with the technique developed during the war, it is by no means fantastic to visualise total resources for the purposes of reconstruction during the first effective quinquennium approximating to the Rs. 1,000 crores level; and this excludes any estimate of direct private investment. Beyond that I would prefer at this moment not to attempt to dip into the future, although it would be reasonable to assume that estimates for the subsequent five-year periods could be related to the actual results of the first quinquennium in a sort of geometric progression.

"The immediate task of investigation and planning is already well in hand, and some of the official reports and data which are now under the consideration of Government will shortly be released for the information of the public. These constitute the essential raw materials of any practicable plan of development, but equally important is the preparation of a sure foundation of sound finance capable of carrying with safety the edifice to be erected upon it. This edifice can itself be made both stronger and larger if the individual schemes of which it is composed are so designed as to be in their revenue aspect as remunerative as possible, and if high priority is accorded to such of them as can contribute directly to an increase in material wealth and prosperity and thereby reinforce the public revenues."

After explaining the new taxation proposals for 1944-45, the Hon'ble the Finance Member concluded that "this programme will assist the preparations for post-war development, by providing for the regular building up by industry of the necessary reserves, as well as by fortifying permanently the revenue resources of the State.

"In the last-named direction much still remains to be done. In particular the Provinces, on whom so large a share of the building of the future inevitably falls, will need expanded resources. We have therefore under active consideration the possibility of an estate duty on non-agricultural property, which would be levied by the Centre but of which the proceeds would be assigned to the Provinces. In spite of war-time taxation it is indisputable that enormous private fortunes have been made during the war, aggravating the great inequality which already existed. Even on a modest programme vast sums will be needed for the post-war development of the country, and there is manifest justification for a system of death duties whereby these large fortunes will be laid under contribution. We have encountered, as we expected certain initial difficulties, but we hope to overcome these and to be in a position to place a carefully prepared measure before the Legislature at a subsequent session. I have no doubt that such a measure would not only fill a gap in the fiscal armoury of India but could serve a great social end.

"That brings me to the end of my story. The last five years have witnessed changes of a significance and magnitude which few indeed could have ventured to foretell, as India has been caught up ever more irresistibly in the rapid stream of world events. Who can doubt that she is destined to play a momentous part in the years ahead, when the last great effort has been crowned with victory, and men turn again to the fruitful tasks of peace?"

T. J. HUTTON,  
Lt.-General,  
Secy. R. C. C

SECRETARIAT (N. BLOCK);  
New Delhi, the 1st March 1944.

## SECTION I—The Background.

The significance of the Post-war Reconstruction movement lies in the fact that after every great war, considerable changes take place in the mental outlook of the world and there is a genuine desire to improve conditions which prevailed before the war and which were to some extent responsible for it. History shows that almost every great war has tended to break up and sweep away the structure of an old social and political order and lay the foundations of a new one. War begets new needs and new loyalties which help to determine social and political forms during the ensuing period of peace. "War is thus never the end" says a famous historian, "but always the beginning of a new social order."

This applies particularly to the present war which is being waged on an unprecedented scale. In the first place, the area of the conflict is the largest ever known and not a single country of the world is really unaffected. Secondly, many scientific inventions have been put in practice during the last four years, and, not only have the methods of destruction improved but also the commercial arts which are capable of promoting national welfare in peacetime. Thirdly, enormous advances have been made in the field of economic and financial controls. These controls have proved that the machinery of production and distribution can be greatly improved when governments and public opinion are determined to adopt national policies and to pursue them with vigour and without the intimidation of vested interests. They have awakened the public to a consciousness that if a modern society can achieve conditions of full employment and increased national income under the stimulus of war, it should be possible to use the whole apparatus of war-time control for the advancement of the standard of living and the abolition of poverty. Fourthly, this war as no other war in history could be truly called a peoples' war. Many sections of the population have suffered tribulations and hardships to a varying extent, and the people, the working classes particularly, are now generally more internationally minded than ever before.

These characteristics of the present war have created a profound impression on the masses and the problems of post-war reconstruction are now attracting more attention than they did during any other war. The slogans of the last war were essentially political, e.g., 'the war to end war', 'the war to make democracy safe', and the thinkers of that period thought more of the political aspects of international co-operation than of the moral and social aspects. The deliberations at the Versailles Conference hardly ever emphasised social or economic problems in any specific manner, except in so far as they concerned the immediate post-war period. Similarly, the bigger problems of post-war reconstruction did not find a place in the 'Fourteen Points' put forward by President Wilson and the social and economic activities of the League of Nations were largely a side-line of the main political activity.\*

During this war, on the other hand, the emphasis has shifted from the purely political to the social and economic aspects of post-war reconstruction and the programme of reconstruction is far wider both in scope and in origin. Moreover, it has its origin not in the demand of any one section of the community for the satisfaction of a series of claims by concessions to be made by another section, but in a widespread desire to improve the living conditions of the world as a whole. This is clearly noticeable in the various statements of policy adopted and declared by the heads of States and responsible ministers. President Roosevelt's "freedom from want" defined as "a constantly increasing and widening standard of living" takes equal place with the other three fundamental freedoms, namely, freedom of speech, freedom of worship and freedom from fear. British ~~statement~~ <sup>Statesmen</sup> have on several occasions <sup>A State's</sup> ~~and~~ that the war is being fought to obtain economic security for all classes and for all nations.

**The Atlantic Charter.** At a conference in an Atlantic port in August, 1941, Mr. Churchill and President Roosevelt drew up a joint declaration laying down "certain common principles in the national policies of their respective countries

\*Towards our True Inheritance: the Reconstruction work of the I. L. O. (Montreal 1942), page 2-

on which they base their hopes for a better future for the world". These principles are embodied in the Eight Points which are:

### THE EIGHT POINTS

The President of the United States and the Prime Minister, Mr. Churchill, representing His Majesty's Government in the United Kingdom, being met together, deem it right to make known certain common principles in the national policies of their respective countries on which they base their hopes for a better future of the world.

FIRST, their countries seek no aggrandisement, territorial or other.

SECOND, they desire to see no territorial changes that do not accord with the freely expressed wishes of the peoples concerned.

THIRD, they respect the right of all peoples to choose the form of Government under which they will live; and they wish to see sovereign rights and self-government restored to those who have been forcibly deprived of them.

FOURTH, they will endeavour, with due respect for their existing obligations to further enjoyment by all States, great or small, victor or vanquished, of access, on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity.

FIFTH, they desire to bring about the fullest collaboration between all nations in the economic field, with the object of securing for all improved labour standards, economic advancement and social security.

SIXTH, after the final destruction of Nazi tyranny, they hope to see established a peace which will afford to all nations the means of dwelling in safety within the boundaries, and which will afford assurance that all the men in all the lands may live out their lives in freedom from fear and want.

SEVENTH, such a peace should enable all men to traverse the high seas and oceans without hindrance.

EIGHTH, they believe all of the nations of the world, for realistic as well as spiritual reasons, must come to the abandonment of the use of force. Since no future peace can be maintained if land, sea, or air armaments continue to be employed by nations which threaten, or may threaten, aggression outside of their frontiers, they believe, pending the establishment of a wider and permanent system of general security, that the disarmament of such nations is essential. They will likewise aid and encourage all other practicable measures which will lighten for peace-loving peoples the crushing burden of armament.

The Atlantic Charter is now the accepted statement of policy adopted by practically all the Allied and Friendly Nations in the world. The details of the principles embodied in the Charter have yet to be worked out. It will however be noted that the preamble as well as the three Points of the eight specifically mention the international aspects of economic and social collaboration after the war. The preamble declares the belief of all the Nations who are a party to the Charter that the observance of the Eight Points constitutes the keystone on which "hopes for a better future for the world" can be based. The fourth Point states that all countries of the world should have free access to the raw materials of the world. The fifth Point aims at securing for all improved labour standards, economic advancement and social security. The sixth Point again emphasises the need of creating conditions which would enable "all the men in all the lands" to live out their lives "in freedom from fear and want".

It is also significant that the Charter is not meant to apply to any particular country or group of countries, but to every state of the world whether it be "great or small, victor, or vanquished."

**Anglo-American Agreement.** The principles of the Atlantic Charter have been reiterated in the Mutual Aid Agreement of February, 1942. It has been signed by a majority of the Allied Nations, although India is not a party to it. The Agreement is bilateral between the U.S.A. Government on the one hand

and each of the signatory Allied Governments on the other. Article 7 of the Agreement reads as follows:—

"In the final determination of the benefits to be provided to the United States of America by the Government of the United Kingdom in return for aid furnished under the Act of Congress of March 11, 1941, the terms and conditions thereof shall be such as not to burden commerce between the two countries, but to promote mutually advantageous economic relations between them and the betterment of world-wide economic relations. To that end they shall include provision for agreed action by the United States of America and the United Kingdom, open to participation, by all other countries of like mind, directed to the expansion, by appropriate international and domestic measures, of production, employment, and the exchange and consumption of goods, which are the material foundations of the liberty and welfare of all peoples; to the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers; and, in general, to the attainment of all the economic objectives set forth in the Joint Declaration (Cmd. 6321) made on August, 12, 1941, by the President of the United States of America and the Prime Minister of the United Kingdom. At an early convenient date conversations shall be begun between the two Governments with a view to determining, in the light of governing economic conditions, the best means of attaining the above-stated objectives by their own agreed action and of seeking the agreed action of other like-minded Governments."

**The United Nations Conference on Food and Agriculture.** These statements of policy are now being examined in detail and international discussions on the various aspects of social, economic and financial reconstruction are in progress.

The first important conference held in this connection was the Hot Springs Conference on Food and Agriculture which was attended by the technical experts and the official representatives of fortyfour Allied and Friendly Nations covering in all more than 80 per cent, of the world's population. Being the first of a series of conferences which would be necessary at a later stage, this Conference was essentially exploratory in nature and the purpose was to facilitate an exchange of views and information on the technical and the general aspects of Agricultural and Nutritional Policies to be pursued after the war.

One of the findings of the Conference was that "there has never been enough food for the health of all people. This is justified neither by ignorance nor by the harshness of nature. Production of food must be expanded and we have now knowledge of the means by which this can be done." The Conference therefore declared its "belief that the goal of freedom from want of food, suitable and adequate for the health and strength of all people, can be achieved".

But, it was quite evident that "freedom from hunger" could be achieved only by urgent and concerted efforts to increase production and to distribute it to the best advantage of the world as a whole. The Conference found that the first cause of hunger and malnutrition was poverty and recommended that "there must be an expansion of the whole world economy to provide the purchasing power sufficient to maintain an adequate diet for all. With full employment in all countries, enlarged industrial production, the absence of exploitation, an increasing flow of trade within and between countries, an orderly management of domestic and international investment and currencies, and sustained internal and international economic equilibrium, the food which is produced can be made available to all people."

The first immediate result of the work of the Conference is the establishment of an Interim Commission whose primary function is to prepare "a specific plan for a permanent organisation in the field of food and agriculture". The Conference has thus set up a world machinery to deal with the fundamental problem of food. The work of the Conference also constitutes the first united attempt towards making effective the pledge of the Atlantic Charter for peace "that will afford an assurance that all men in all lands may live out their lives in freedom from fear and want". The Conference recommended

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that the member governments should issue a formal declaration recognising their obligation to their respective peoples and to one another, henceforth to collaborate in raising levels of nutrition and standards of living of their peoples, and to report to one another on the progress achieved. One of the functions assigned to the Interim Commission is to formulate this declaration for the consideration of member governments.

The Conference also realised that "the primary responsibility lies with each nation for seeing that its own people have the food needed for life and health; steps to this end are for national determination". It is however clear that under modern conditions, no country of the world can achieve this end merely by pursuing policies of national self-sufficiency or exclusiveness. The Conference therefore emphasised that the goal of freedom from hunger for the world as a whole can be achieved only if all the countries work together. This principle of international collaboration was accepted by the Governments represented at the Conference and a joint declaration was drawn up recognising and embodying the obligation of each government to its own people and to one another.

The significance of this declaration for India cannot be exaggerated. India is primarily an agricultural country and it is all to her advantage to pursue her agricultural and nutritional policies on the lines accepted at Hot Springs. Since agricultural production and prices are extremely sensitive to world influences, it follows that the policies which are likely to be evolved later will exert far-reaching influence on Indian economy. It is therefore to India's interests to co-operate whole-heartedly in the work of the Conference and simultaneously to pursue policies aimed at increasing the nutritional standards of her own people.

**United Nations Relief and Rehabilitation Administration.** An Agreement for United Nations Relief and Rehabilitation Administration was signed at Washington on the 9th November 1943, on behalf of forty-four Governments or Authorities representing the United Nations or Nations associated with the United Nations in the war. The Agreement establishes a world machinery for affording relief to liberated countries immediately after the termination of hostilities in such countries. The Preamble of the Agreement expresses the determination of the United and Associated Nations that "immediately upon the liberation of any area by the armed forces of the United Nations or as a consequence of retreat of the enemy the population thereof shall receive aid and relief from their sufferings, food, clothing and shelter, aid in the prevention of pestilence and in the recovery of the health of the people, and that preparation and arrangements shall be made for the return of prisoners and exiles to their homes and for assistance in the resumption of urgently needed agricultural and industrial production and the restoration of essential services".

India has signed the Agreement subject to the reservation that it shall not come into force until it has been approved by the Indian Legislature. Thirteen other Governments have signed the Agreement with a similar reservation.

The Council of UNRRA which is the policy-making body of the Administration and on which all the member governments are represented held its first session at the Atlantic City from the 10th November, to the 1st December 1943. Important decisions were reached on the policies to be followed by the Administration in regard to the organization of measures for the relief and rehabilitation of liberated areas, including the financing and procurement of supplies.

In addition to the Council, four main Committees have been set up, namely the Central Committee, the Committee on Supplies and the Regional Committees of the Council for Europe and the Far East. The Central Committee consists of the representatives of China, U.S.S.R., U.K. and U.S.A.; while the Committee on Supplies is composed of the representatives of those member governments likely to be principal suppliers of materials for relief and



rehabilitation. The two Regional Committees consist of the representatives of the member governments in the region and of certain other member governments directly concerned with the problems of relief and rehabilitation in the region. It has also been decided to set up standing technical committees to deal with agriculture, displaced persons, health, industrial rehabilitation and welfare. The standing technical committees will be authorised to appoint expert sub-committees to assist them in their work.

**Other measures of International Co-operation.** The interwar period between 1918, and 1939, was characterised in the earlier stages by violent fluctuations in exchange rates and a virtual collapse of the international monetary system, and, in the later stages by the economic depression which inflicted great hardship on almost every section of the community in all the parts of the world. It is now generally realised that the unstable conditions which prevailed during that period arose largely out of lack of international co-operation in the economic field.

The remedial measures based on international co-operation in the field of economic activity have been grouped under the following main heads in the preface to *Proposals for an International Clearing Union* put forward by the British Treasury:—

- (1) The mechanism of currency and exchange,
- (2) The framework of commercial policy regulating the conditions for exchange of goods, tariffs, preferences, subsidies, import regulations and the like.
- (3) The orderly conduct of production, distribution and price of primary products so as to protect both producers and consumers from the loss and risk for which the extravagant fluctuations of market conditions have been responsible in recent times.
- (4) Investment aid, both medium and long term, for the countries whose economic development needs assistance from outside.

Various international monetary proposals have already been put forward regarding the control of the mechanism of currency and exchange, *i.e.*, (1) above, and are being discussed by the Treasury experts of the U.K.; the U.S.A., and other countries. The main object of those proposals is to establish a multilateral system of clearing which would provide for an orderly and agreed method of determining the values of national currency units and which would aid in the restoration and development of healthy international trade after the war. The proposals of the U.K. and the U.S.A. experts have already been reprinted by the Government of India Press and are for sale to the public. The experience of the past is so disastrous and the lack of international control in the sphere of currency and exchange has been felt for such a long time that there is no doubt in the minds of currency experts about the desirability of establishing some system which would minimise the possibility of violent fluctuations in economic activity in the post-war period. The proposals now under discussion have a fair chance of being accepted in some form or the other by an overwhelming majority of the countries of the world. It is also for India to consider them in the light of her own conditions and to be prepared to take part in any international conferences which may take place.

The other proposals envisage a system of foreign trade which would not be hampered unduly by the pursuit of selfish or ignorant policies on the part of a few countries. "The orderly conduct of production and distribution of primary products" will obviously raise questions of commodity controls, buffer stocks, bulk imports and exports, etc., and these are subjects which concern India no less than any other country of the world. "Investment aid" and the policies underlying the Atlantic Charter and the Mutual Aid Agreement are closely connected with each other and the proper management of an internationally regulated investment policy might well result in the industrial and economic development of the backward countries in Asia, Africa and other continents which, it is now recognised, would be an advantage to the world as a whole.

## SECTION II—Need for Planning now.

It is true that it is still too early to estimate the precise form and magnitude of India's post-war problems and the task becomes all the more difficult because of the fact that Indian conditions must to a large extent depend on factors governing not India alone but the world as a whole. This is however no reason why preliminary planning should not take place now. The cessation of hostilities will create problems no less serious than those brought about by the war, and, it is the duty of everyone to visualise them and to be prepared by forethought for the kind of situations which are likely to arise.

As a result of war conditions economic and social development have been suspended over almost the whole field. It is essential, therefore, to take stock of the situation and decide which are the most urgent matters to proceed with once the war is over. Whether it is called Post-war Reconstruction or not, such an examination of development policy will in any case have to take place over the whole field in respect both of Central and Provincial subjects. The arguments for doing this before the war is over, and in a co-ordinated manner, are of course overwhelming.

Apart from the administrative aspect there is no doubt of the political demand from all classes of society that such an examination should take place. The Government of India would be failing in its duty if it ignored this demand and did not make every possible preparation for an enlightened post-war development policy based on the clearly expressed demand of the people of India.

**Some problems emerging directly from the war.** The economic system of the whole world is now working at top speed and various factors which are generally non-existent in peacetime are in operation. The end of the war must therefore mean considerable dislocation. In the first instance, there will be a check to recruiting and some demobilisation. Secondly, there will be a check to the flow of war orders and probably the cancellation of contracts with consequential decline in the volume of production in war industries which now cover an extremely wide range and involve large sections of the population. Thirdly, there will be considerable changes in the industrial structure which will affect the civil market as a whole, e.g., changes in capacity now used for specialised war goods, changes in technique and specifications, disposal of stocks held by the market and the Government. Fourthly, in so far as production is reduced, some measure of unemployment and reduction of earnings will manifest itself in industries now engaged on war production. Similarly, the changes in the shipping position, the opening up of markets now closed, the effects of international relief measures and the changes in international currency and price structures cannot but affect India as a whole.

**Problems arising out of the present war conditions.** Apart from the problems arising directly out of the impact of the war, there will be others which would be a legacy of the conditions prevailing during the war itself. They will be discussed at length in the following sections, but the most important of them may be mentioned here as illustrations. Prices in India are now abnormally high and it is clear that they should come down as soon as possible. But, these high prices have already created a series of new economic relationships, e.g., a peasant bringing land under cultivation which, in normal conditions, would not have been cultivated at all; new contractual obligations formed on the basis of present prices, etc. Any *sharp* and *sudden* decline in them must inevitably create a new set of problems which might prove to be extremely difficult of adjustment. One of the immediate post-war problems, would therefore be to consider how best to safeguard the interests of the cultivator against a possible inrush of cereals into India without at the same time unnecessarily subjecting the consumer to the present level of abnormal prices.

What applies to primary commodities, applies in a different form to industrial products also. The war has stimulated many industries and has been responsible for the creation of a large number of new ones. It is a matter of the

utmost importance to safeguard some of these industries; but the manner in which this should be done requires a great deal of forethought and planning. Any protection, whether in the form of tariffs or otherwise, which may be afforded to such industries raises questions of national and perhaps international importance and must involve a careful examination of the wide range of alternatives suitable for adoption.

Similarly, the wear and tear of the war has been enormous; roads have not been properly repaired; locomotives and rolling stock have not been fully overhauled; industrial machinery has not been replaced and public works and repairs have either been suspended or delayed. This applies not only to India but to the whole world. The reparation of the damage done to the physical apparatus of production in India would therefore be another important task to be performed during the early post-war period. For this India will require enormous quantities of materials, heavy plant and machinery as soon as the war is over. Its procurement, on the other hand, will present some difficulty. All the countries of the world will be competing for the limited quantities of capital goods which can be produced, and it cannot be assumed too easily that there will be available all the machinery India would require for her replacement and development purposes. It is therefore essential to draw up an order of priorities according to the preference we would like to give to any specified project of replacement or development and this presupposes some kind of orderly planning during the war itself.

**Long-term Problems of Post-war Reconstruction.** By far the most important problems of post-war reconstruction will, however, be those which are only distantly or indirectly connected with the war. As has already been explained\*, the war has given an impetus to a world movement directed towards the improvement of the conditions of living of all nations. It is the declared policy of the United Nations to strive for a world which "will afford assurance that all the men in all the lands may live out their lives in freedom from fear and want". The post-war period will, we may hope, be characterised by a desire on the part of all nations to help each other and by policies which would bring about the largest measure of international collaboration for the happiness and well-being of humanity as a whole.

It is against this background that India will have to review her pre-war policies, estimate the progress made during the last few decades and, in the light of such review, adopt broad lines of policy aimed at concerted development in all the spheres of economic and social activity. The war has created conditions peculiarly favourable for such development. In the first instance, the volume of economic activity and employment is probably greater today than it has ever been before. Secondly, in spite of the hardships caused by rising prices, India's financial position is in some respects stronger than ever before. Whereas the country has large quantities of foreign exchange in the form of sterling assets, it has within its own borders the rupee finance necessary for schemes of expansion and development. Thirdly, many big industries have expanded on a very large scale. It should be possible to consolidate the wartime expansion by the adoption of new techniques, so that it could form a healthy nucleus of the future economic growth of the country. Similarly, the high prices of agricultural products have greatly increased the money income of the cultivator. This may result in the reduction of the chronic indebtedness of the agriculturist. Fourthly, an effective machinery of governmental controls has been evolved during the last four years which is capable of being used for the permanent good of the country. It is recognised on all hands and in all countries that a large measure of governmental control in the economic sphere will be essential in the early post-war period if the dislocations and hardships caused by the last war are to be avoided. It is now for us to consider how these

controls could be modified to suit the changing conditions of the post-war period, how they could be utilised towards raising the general standard of living and how they could be converted into an effective instrument of state activity in the various spheres of life during the post-war period.

**The Financial Aspects of Reconstruction.** Reconstruction planning thus covers all problems which, so far as can be foreseen, will arise for solution at the end of the war. There is no apparent limit to the number of these problems and they will vary enormously *inter se* as regards their urgency and importance, their intrinsic value to the community and their financial significance. Some will arise as the immediate and inevitable consequence of the termination of hostilities and others mainly as schemes of post-war development designed to improve the conditions of living and to raise the standard of life. There will be others of an intermediate character like the reconditioning and expansion of industries inclusive of public utilities. Again, some will be mainly of central interest and responsibility, others will fall within the purview of Provincial and Local Governments, while yet others will primarily be a matter for private enterprise. Certain types of schemes will involve heavy expenditure, either non-recurring or recurring or both, while others will require very much less. Specific funds are already in existence from which the costs of certain schemes can be met, in whole or in part, while others must from their nature be a charge in full on public revenues or loans, either Provincial, Central or both. Then again some schemes will be either fully or partially remunerative within a limited period, while others will produce no direct return, although from a long range point of view they may ultimately increase the general economic strength of the country by (for example) securing an improvement in the general level of education, or of public health, or of agricultural practice.

With so great a diversity in the character, scope and financial features of the problems of reconstruction it is scarcely feasible to formulate general principles of reconstruction finance of anything like universal applicability. Moreover, the post-war financial and borrowing capacity of the Centre as of the Provinces will depend on a number of factors which are at present entirely unpredictable and, if only for that reason, no Government can at this stage undertake in advance heavy and indefinite financial commitments for the future.

But the fact that the financial position of all Governments must remain indeterminate for some time after the war is in itself an important reason why the financial and other implications of every scheme should be assessed as carefully as possible. It would be beyond the capacity of the wealthiest Government to undertake simultaneously all the schemes proposed and reconstruction planning must therefore largely be a matter of choice between "unlimited wants and limited resources".

What applies to social services applies with equal force to the choice between the extent of development to be aimed at as between the different subjects involved in post-war development. An all-India plan can only be based on a ~~careful~~ selection of certain approved schemes of a practical nature <sup>of</sup> which have been the subject of ~~prolonged~~ and energetic preparation beforehand and which fit together into a general scheme of all-round development.

It is essential that such schemes should be prepared now and their financial and other implications scrutinised as carefully as possible. This would enable the country to prepare well-planned and well-thought out schemes of development, the more urgent of which could be put into operation with the least possible delay as soon as financial and other opportunities offer themselves after the termination of hostilities. It is certain that in the absence of such schemes, the dislocations caused in the early post-war period will prove to be too powerful to be remedied soon and would damage the prospects of a co-ordinated development of the country.

The Departments of the Government of India have therefore been asked to address, where this has not been done already, Provincial and States Governments and obtain as soon as possible information regarding the larger reconstruction schemes contemplated by these administrations in as full detail as possible, including estimated costs and receipts and proposed financing arrangements.

It should however be realised that a considerable proportion of the finance required for reconstruction purposes will come from private sources. India now possesses a large amount of sterling balances which will furnish the foreign exchange required for the import of capital goods and machinery after the war. But, the utilisation of these balances is largely an internal problem, in view of the fact that India would have to find internally the means to buy from the Reserve Bank the foreign exchange required. Industrialists will therefore have to find the rupee credits to enable them to avail themselves of the foreign exchange in the form of sterling assets. The same applies to Provincial and State Governments. It is the duty of the commercial and industrial classes to consider now the methods by which industry in future should be financed. The only way by which this could be done is to build up reconstruction reserves during the war, so that they could be utilised for industrial expansion as soon as the war is over. This would have the additional advantage of checking the present inflationary trends and preventing a sudden contraction of currency after the war. Many of the Provinces have already been earmarking some of their current budget surpluses for post-war development.

**Machinery set up at the Centre to deal with the Problems of Reconstruction.** The Government of India are fully alive to the problems which are likely to arise during the transitional period from war to peace and the possibilities of general development during the post-war period. As early as June 1941, Reconstruction Committees were formed at the Centre to deal with the various aspects of Post-war Reconstruction and in March 1943 this machinery was overhauled and a Reconstruction Committee of the Executive Council with H. E. the Viceroy as President and the Hon'ble Sir J. P. Srivastava as Deputy President was set up together with a number of Official and Policy Committees corresponding to the previous ones. The establishment of the Committee of Council and the inter-departmental co-ordination effected under its auspices have resulted in the various Departments of the Government of India undertaking a large amount of preparatory work, including especially the collection of data so essential for any co-ordinated planning. Most of the Provincial and State Governments have also constituted Reconstruction Committees and are engaged on a preliminary examination of the problems concerning their respective spheres of activity. The Central Government is in close touch with reconstruction planning in the Provinces and States, particularly in respect of schemes which are applicable to the country as a whole or which affect more than one administrative unit.

The problems of reconstruction naturally divide up under the following main heads:—

- (i) Re-settlement and Re-employment.
- (ii) Disposals, Contracts and Government Purchases.
- (iii) Public Works and Communications.
- (iv) Trade and Industry.
- (v) Agriculture, Forestry and Fisheries.
- (vi) Social Services including Education, Public Health, Labour Welfare, etc.

A Policy Committee on each of the subjects (i), (ii), (iv) and (v) above has been formed. It is considered that the problems relating to Public Works and Communications are so wide that they can only be adequately dealt with by three separate Policy Committees which have also been formed. One of them will deal with Transport including Railways, Ports, Inland Water Transport, Roads and Road Transport. The second will deal with Posts, Telegraphs, Telephones and Air Communications including Meteorology, while the third will concern itself with Electric Power, Water Supply, Irrigation, Mining and Miscellaneous Public Works. It will be the duty of these Committees to advise the Government on any schemes which may be placed before them and to suggest ways and means of giving effect to them.

The Policy Committees will be presided over by the Hon'ble Members concerned with the subject in question and are composed of official representatives of the Central, Provincial and State Governments and non-official representatives of trade, industry, labour and other organisations, as well as members of the general public with expert knowledge or experience. Corresponding to each of these Policy Committees, there is an Official Committee on Secretary level presided over by the Secretaries of the Departments of the Government of India who are primarily concerned with the subject in question. The function of these committees is to prepare data, to co-ordinate the work and to carry out a preliminary examination of proposals. They will also prepare detailed schemes for approval by the Reconstruction Committee of Council, and, translate into executive action the decisions of the latter.

The Government of India realise that factors which increase national welfare and improve the standard of living must take a prominent place in any constructive planning of the post-war future. An Official Committee has been constituted to co-ordinate the activities of the various Departments in respect of Social Services and to ensure that the whole field is adequately covered. The importance of associating women's representatives with the planning for better Social Services is fully appreciated and it has been decided to constitute a Women's Committee on Social Services.\*

In addition to the above Committees, there is a Consultative Committee of Economists presided over by the Hon'ble the Commerce Member and, in his absence, by the Economic Adviser, to deal with the economic aspects of Reconstruction.

There is also a General Policy Committee to advise Government on major matters of policy and also on matters which do not fall within the purview of one or other of the various Policy Committees. The major questions of policy are now being sorted out for orderly discussion and the General Policy Committee will have in due course an opportunity of expressing an opinion on reconstruction policy as a whole. The General Policy Committee may also

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\*See Section IX which deals with the various Committees consisting both of officials and non-officials to examine the problems of public health, education, labour welfare, etc.

advise Government as to the relative importance of the recommendations of the various Policy Committees. Each Policy Committee will naturally rate its recommendations as of the highest importance and will claim for them the highest priority. Neither the finance nor the administration necessary for all such recommendations can possibly be available for a simultaneous advance on the scale recommended by each of these Committees. The pace will have to be regulated and the General Policy Committee may advise Government on questions of priority.

There is strictly speaking no rigid distinction between the short-term and the long-term problems of reconstruction, since the former are closely related to the latter. The idea of reconstruction planning is that it should not be piecemeal and that every scheme adopted should offer the best solution possible both to the short-term and the long-term problems and should fit in with the general scheme of all-round development. The various Official and Policy Committees are therefore intended to deal with one main group of allied subjects and it is for these Committees to decide which problems relating to their own subjects are more urgent and pressing and to make recommendations accordingly. The general order of priority in which the various schemes should be undertaken will be a matter for the Reconstruction Committee of Council to decide; and it will be for this Committee to co-ordinate the activities of the Official and Policy Committees and to lay down general policies in respect of all the problems relating to reconstruction.

**Development Officers.** The Central Government have also considered the appointment of an Industrial Commission, which could in theory prepare complete plans for industry, but feel that, in present conditions, it would be very difficult to appoint a Commission of the required authority and to find the staff for it, and that even if these difficulties could be overcome, the final report could not be expected for a period of eighteen months or two years. This question will be further considered but for the moment some simpler method must be found. They have accordingly decided to appoint Development Officers responsible to the appropriate Department of the Central Government for the preparation of an all-India plan as a basis for discussion by the appropriate Committee concerned. Each Development Officer will be given formal terms of reference telling him what he is expected to do, and will be required to work with

- (a) a panel of experts nominated by the Central Government; and
- (b) Provincial representatives competent to advise him of the wishes and intentions of the Provinces, and to inform him of the nature and approximate cost of the various Provincial projects.

He will be required to tour freely and to spend some time in each Province. The all-India plan under any one head would consist of tables exhibiting the projects proposed, distinguishing where necessary between Central and Provincial Projects, with a brief description of each project, an approximate estimate of its cost, a statement of the manner in which it is proposed to finance it, and a brief covering report. Each Development Officer would be personally responsible to his Department for his own work, but his report would state clearly what assistance he has received and from whom. The plan will be submitted through the Department concerned to the appropriate Policy Committee at the Centre on which Provincial Governments are represented. Provincial Governments will understand that the object in view is to produce quickly material suitable for consideration by the Policy Committees and by the Central Government, and that in so far as Provinces do not want Central assistance in any form for matters entirely within their own jurisdiction, the inclusion of their projects in the all-India plans will not imply interference by the Central Government except to the extent to which the use of scarce resources requires priority to be allotted.

The arrangements proposed are summarised in the following statement:—

Subject.	Policy Committee responsible.	Central Dept. responsible for appointment and work of Development Officer.	Remarks.
Electrical development.	3 (C) Public Works & Electric Power.	Labour Dept.	
Industries	4—Trade and Industry.	Industries & C.S. Dept.	
Irrigation	3 (C) Public Works & Electric Power.	Labour Dept.	
Roads & Road Transport	3 (A) Transport	War Tpt. and Posts and Air Depts.	
Agriculture	5—Agriculture	E., H. & L. Dept. To include:— (i) Agriculture. (ii) Animal husbandry. (iii) Co-operation.	

It is appreciated that the Development Officers cannot make much progress without some indication as to the general policy of the Government of India. On the basis of all the preparatory work which has now been done, it is intended that a policy directive should be drawn up stating the major points on which the Government of India thinks that detailed planning should proceed. Such directive will naturally be the subject of discussion in the appropriate Policy Committees and would be given to the Development Officers as a basis for further discussion with the Provincial and State Governments. In order to bring all these different directives into a co-ordinated whole, it will be necessary to produce at any rate a preliminary directive covering the whole field and indicating the emphasis which should be placed on the different items of development. Such a draft is under preparation and will be placed before the General Policy Committee in due course.



### SECTION III—Re-Settlement and Re-Employment of Ex-Service and other Personnel.

**Industrial Labour and Technical Personnel.** The War has created employment in all directions and apart from the large number of enlisted men, there are many others employed in Ordnance factories and factories engaged on the production of war materials and also on military works. The present volume of employment is probably the highest ever attained in India and it is obvious that the cessation of hostilities, if it does not reduce the present volume of employment, will, at any rate, necessitate a shift of personnel from one group of occupations to another. The main object of the demobilisation policy should be to avoid any unnecessary dislocation in labour conditions and this cannot be achieved unless:

(i) we have a proper statistical service relating to the increase in the volume of employment in industries primarily affected by war demands, e.g., Ordnance and Clothing factories, Engineering, Textile and other industries;

(ii) on the basis of the approximate numbers available, plans are made for technical ex-service personnel and industrial labour which (a) can be absorbed easily in peacetime occupations without extensive retraining and (b) would require a new kind of training for civil occupations; and

(iii) the existing facilities for training and recruitment of labour are utilised for their re-direction from wartime to peacetime occupations.

The Directorate of Welfare and Amenities have a card index system for each soldier which gives information likely to be required for the purpose of finding him suitable employment after the war. The card index shows, among other things, the soldier's Army trade and the class and district to which he belongs. The Labour Department have similarly introduced various statistical services which would enable them to estimate the magnitude of the problem and to prepare plans for finding alternative employment for industrial personnel now engaged in war production. It will be possible with the help of the figures now collected (and which will be maintained up-to-date) to estimate:

(i) the number of persons employed in factories under two broad categories (a) Government and local Fund factories and (b) all other factories. These figures would also show significant increases in respect of each category by Provinces;

(ii) the number of persons employed in the various sub-classes of the factories in (i) above;

(iii) the number of workmen employed in factories, railways, mines and tea plantations; and

(iv) the number of war technicians trained under the Technical Training Scheme and supplied to the Army, and civil industry.

The Industrial Questionnaire\* which has already been issued to all industries asks specifically for information which would enable the Government to estimate the number of skilled, semi-skilled and unskilled workers likely to be rendered 'surplus' to the present production requirements as a result of the cessation of war orders. The information to be obtained from the Questionnaire, the statistical services of the Labour Department and the card index for enlisted personnel will give in due course an accurate picture of the problem of shifting labour now engaged in war production to peacetime occupations.

On the basis of this information and also on the basis of suitable assumptions regarding the pace and the period of demobilisation, it is expected that the Government of India would be able to prepare plans which would aim at providing suitable employment for as many of the 'surplus' industrial and technical personnel in India as possible. It is however appreciated that the level of post-war employment will depend on the capacity of the economic system to absorb all kinds of labour.

The Army authorities have made considerable progress in evolving a scheme of Vocational Training of Indian troops in respect of industrial as well as agricultural occupations during the post-war period. There are some 300 trades in the Army in many of which vocational training can be provided and it is expected that during the period intervening between the cessation of hostilities and actual demobilisation each soldier will have the opportunity of learning a new craft which would make him a better worker in civil occupation or of improving his knowledge of the vocation he followed during or before the war. It has also been decided to continue the Technical Training Scheme (under which nearly 50,000 workers were trained up to 31st July 1943) for 18 months after the war with a view to enabling demobilised personnel to receive such further training as would fit them for civil industry. The kind of training to be given will obviously be based on the probable requirements of industries after the war.

**Technical and Urban Re-employment.** Many men from rural areas have been trained as Army technicians and it is to be expected that a considerable percentage of them will seek post-war employment in the towns. Employment for these men and for Army personnel recruited from urban areas—probably 30 per cent. of the Army—must be sought in the towns, or in technical occupations in rural areas. Large scale development of post-war road transport should absorb many of these men. Schemes for Co-operative workshops developed on a large-scale, Labour or Development Corps, a Corps of Commissioners on the lines of that so successfully organised in Britain and a Public Health Corps are being worked out by the Army authorities and should provide much employment for technicians and non-technicians in town and country.

The Labour Department have also prepared an Employment Exchange Scheme under which a number of Exchanges will be established in the larger towns and some of them have begun to function already. Each Exchange will provide a place, where information is collected and furnished to the public respecting employers who desire to engage technical personnel and such personnel who seek engagement or employment. Information obtained from persons seeking employment will be recorded and employers will be encouraged to apply to the Exchanges for any personnel they may need. Provincial Governments will be initially given some latitude in the organisation of Exchanges subject to the outlines of the general scheme. Experts would visit the Exchanges from time to time and watch the operation of the scheme for a period of one year after which the question of co-ordination and the best form of organisation would be taken up in the light of the experience gained.

**Re-employment of ex-personnel in Government Services.** The Government of India are also examining the problems involved in regard to the re-employment of ex-service personnel in Government services with reference to the various undertakings given from time to time by the Centre and the Provinces. In particular, the procedure to be adopted in selecting candidates so as to ensure a fair chance to those serving overseas as well as in India is receiving attention.

**Re-settlement on land.** An accurate estimate of the proportion of service personnel belonging to rural areas is being obtained from the Adjutant-General's Branch. It is however already known that the great majority of demobilised personnel will consist of people with an agricultural background—i.e. villagers rather than townsmen. A certain proportion of them actually own land and a much larger number are tenants, agricultural labourers or are occupied as village artisans.

The area of land which is cultivable or which could be made cultivable without heavy expenditure and which is available for allotment to ex-service men is small. There are of course large tracts in certain Provinces which might be brought under the plough by extensive schemes of forest clearance, anti-malarial operations and irrigation and drainage. In some of these the difficulties, and consequently the cost, are likely to be prohibitive; but in other cases, notably in South India, and possibly in Central India also, it might be possible

to reclaim fairly extensive areas. The Provincial Governments are making every effort to ascertain accurately their potential land resources and where they exist to prepare definite schemes for colonisation. The Governments of States where possibilities exist are also co-operating. It is not however expected that it will be found possible to find land for any considerable proportion of demobilised service men.

**Utilisation of the Military Reconstruction Fund for the permanent benefit of the enlisted classes.** The Military Reconstruction Fund which is financed by *per capita* contributions by Government is intended to be used for the permanent benefit of enlisted classes. It now amounts to about Rs. 5 crores and may exceed twice this amount if demobilisation does not actually begin for another two years. All Provinces have been addressed explaining the existence and object of the Fund and have been asked to submit schemes for approval. The primary condition attached to the use of the Fund is that the money must be spent for the permanent benefit of the enlisted classes. Moreover, it is essential that large sums of money should not be frittered away in a multiplicity of small schemes which would have no inherent element of permanency and which might leave little or no mark behind them.

It appears from the investigations already carried out that there are two subjects upon which it should be possible to spend this money with advantage and which would meet the conditions attached to the use of the Fund, namely, education in various forms including technical and female education, and the improvement of agriculture. All Provincial Governments are actively considering the best method of utilising their share of the Fund having regard to the conditions of their Province.

#### SECTION IV—Disposals, Contracts and Government Purchases.

**The nature of the Problem.** The ultimate object of war economy is to direct the available resources of the country to the production of such goods and services as are essential to the successful prosecution of the war. The whole economy of a country endeavouring to achieve this result is of necessity more or less fundamentally changed. A peace economy is based on the successful anticipation of the future wants of the population and the criterion of success is the gain by the producers of such returns (profits) as would enable them to repeat the process on a gradually expanding scale. Under normal peacetime conditions this result is achieved by the producers with the minimum of interference from the State, and, economic activity is mainly determined by the forces of unchecked demand and supply. During the war, on the other hand, such foresight regarding future wants by the producers ceases to be the major instrument of success; and demand is determined very largely by the Government and made known through its various Purchasing and Contracting Departments before the productive process begins. The Government thus becomes by far the largest single purchaser and stockholder of many of the raw materials and finished products required not only for the direct purpose of waging the war but also for distribution to the population. The controlled exigencies of war and reasons of safety further necessitate the piling up of large stocks which in some cases may exceed the normal national consumption over a number of years.

This applies to all the belligerent countries of the world and the existence of exchange and other controls and the difficulties of transportation also result in the accumulation of certain surpluses in non-belligerent countries.\*

The world economy after war will therefore be faced by two opposite forces, namely, the accumulation of large government-owned stocks of certain commodities essential for the conduct of the war and an acute shortage of certain essential plant and machinery and articles of common need.

The main object of the Disposals Policy will be to promote the utilisation of the surplus commodities in a manner which would make up as far as possible for the more serious shortages in the civil market. The problem will undoubtedly be partly national, but it will also be an international problem which can be solved only through the closest of *national* ~~international~~ co-operation during the early post-war period. The fundamental principle of the Disposals Policy in the U. K. was announced by the President of the Board of Trade in the House of Commons in February 1943 in the following terms:—

"I suggest that this time we must neither drive nor be driven by short-sighted interests into getting rid as quickly as possible by sales at any price to whoever will come forward to bid for these large stocks, which will be greater than last time, which will have been accumulated of goods desirable and necessary for post-war purposes. We must, on this occasion, have an orderly disposal which will have regard on the one hand to the interests of consumers. We must not allow profiteering at the expense of consumers, particularly in consumers' goods. On the other hand, regard must be had to the interests of producers in the proper time of these disposals in regard to stocks and current production."

This policy will also be generally followed in India and implies a continuance of control of imports having regard to current production, stocks and surpluses for disposal.

**Machinery to deal with Disposals.** Surpluses for disposal, other than actual armaments which for obvious reasons will require special treatment, will fall broadly into the following classes—land and buildings, plant and machinery, motor transport, innumerable items of general stores, and the produce of reclaimed salvage. There are obvious difficulties in making even the roughest estimate of the extent of the problem at this stage in terms of either types

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\*For example, large stocks of wheat reported to have accumulated in the major exporting countries.

or quantities likely to be thrown up, or of the stages at which they can be released by the Departments concerned. Such an estimate will be possible only in the light of the nature and extent of the post-war organisation for defence on the one hand, and on the other of the plan approved for post-war development in all its aspects. None the less it is evident that a vast problem will exist and a broad appreciation of the issues involved and of the organisation, which will ultimately be necessary for dealing with them, must be made now.

In peace time "disposals" is confined almost entirely to the disposal of military salvage for which purpose a cell is attached to the normal military purchasing organisation (the Contracts Directorate) which for the duration of the War has been amalgamated with the civil purchasing organisation (the Indian Stores Department) and placed under the control of the Supply Department. During the first years of War such disposals cells continued to be attached to each of the Chief Controllers of Purchase under the Supply Department. The first "disposals" problem which arose during war-time was that of the handling of the greatly increased volume of military salvage which has been thrown up as a result of active operations in the eastern theatres of war. This combined with the necessity for examining the problems which will arise in connection with the disposal of surpluses, the organisation necessary and the methods of such disposal, has necessitated the formation of a separate Directorate General under the Supply Department. It is contemplated that the machinery for disposals will be basically the Supply Department organization operating in reverse. The experience gained by the officers of the Department in dealing with supply problems will be of great value in the approach to the corresponding problems of disposal, and as the general load gradually changes from supply to disposal, a corresponding switch of functions within that Department is considered the best method of tackling the question initially. Whatever therefore be the ultimate fate of the organization for supply and whether or not a separate Disposals Department is later found necessary, the nucleus of the future organisation must at present be set up within the Supply Department.

For the present the functions of the Director General (Disposals) are carried out by the Director General (Supply) in addition to his own duties. A Deputy Director General (Disposals) has been appointed to co-ordinate and examine the problems which will arise and the detailed organisation necessary for dealing with them and for controlling generally the existing work of the Disposals Directorate. The latter is at present primarily concerned with the disposal of increasing quantities of salvage and in addition some items of surplus stores are already being reported. Regional organisations in charge of Deputy Directors have been set up in Calcutta and Bombay while in other areas the Directorate operates at present through the Controllers of Supplies.

The War Department will be the greatest holder of surplus stores and a section has been set up in the M. G. O.'s Branch for receiving information regarding surpluses from all Defence Services and ensuring that such are used to the best advantage to meet military requirements before reports are made to the Disposals Organisation mentioned in the previous paragraph. In the case of land and buildings, a Committee with similar functions has been set up in Q. M. G.'s Branch.

The Defence Department, which has been concerned throughout the War period with the co-ordination of policy and procedure connected with the requisition and acquisition of lands and buildings has also been made responsible for implementing post-war disposals policy in the case of such property.

The Industries and Civil Supplies Department are keenly interested both in the disposal of surplus store and in the utilization of surplus lands, buildings and plant and machinery. It is intended that this Department should be closely associated with the day to day work of disposals and it is contemplated that this should be secured through representation on a Disposals Board which

will take decisions on major disposal questions and generally guide the work of the Director General.

Industrial and commercial interests are actively interested in Government's disposal plans and it is only from such sources that Government's information regarding current demands for various classes of goods can be completed. It is intended that they should be associated with day to day disposals decisions through the medium of Advisory Committees for various important categories of goods.

#### **CONTRACTS.**

Government is at present the biggest purchaser of items of indigenous production and has been responsible for an extensive change-over from peace time methods to a war basis of production of articles many of which have no peace time value. The manner of Government's withdrawal, as the War draws to a close, from these markets, will therefore be of the greatest importance to the national economy. Government's major long-term contracts include a break-clause which will have to be operated at the appropriate time as reductions in demands are communicated to the Supply Department. The nature of the action under this clause will be a matter for individual decision in the light of such factors as Government's financial commitments in view of special raw materials already supplied and the extent of partly completed work, the speed at which a change-over to production for civil requirements can take place, and problems which may arise in connection with demobilization of labour. Meanwhile the Supply Department will undertake an examination of all such contracts with a study of the special problems which will arise on their cancellation so that prompt decisions may be possible when the question of applying the break-clause actually arises.

### SECTION V—Transport and Communications.

**Civil Aviation.** In May 1926, the Indian Air Board submitted a memorandum on the past history and future development of Civil Aviation in India. The Board observed that India is a country admirably suited for the development of aerial transport. Meteorological conditions are excellent for many months of the year and there is no reason to believe that the difficulties occasioned by the monsoon, although serious, are insurmountable. The large commercial centres are situated at considerable distances from one another enabling aerial transport to accomplish valuable savings of time. Apart from the question of internal services, it has been recognised, ever since commercial aviation became a practical proposition, that India's geographical position marks her out as an all-important link in any air route between Europe and the Far East.

After examining the past history, the Board made a number of recommendations, of which the most important were:—

(1) All landing grounds in India and their necessary equipment should be the property of the Government of India who should be responsible for the provision of wireless and meteorological facilities.

(2) The Government of India should claim in future to be consulted at all stages on the terms of any contract for an external air service touching India and to participate as a principal in any such contract.

(3) As far as internal air services are concerned, Government should accept the principle of subsidising such services in the earlier years.

The Government of India accepted these recommendations. While unable to subsidise air transport directly, their general policy has been to secure the operation of internal air services by Indian companies under Indian management, and to afford to Indians opportunities for training and employment in aviation. In the views of the Government of India, internal air services are the sole concern of India. Their policy has also been to ensure reasonable participation by India in external air services touching this country. In pursuance of this policy and within the limitations imposed by the financial condition of the country, the Government of India secured participation on the Empire Air Mail Services operating to and across India and awarded Air Mail contracts to two companies for the distribution of the Mail in India.

Post-war Civil Aviation Planning proceeds on the basis of this policy. The first part of the plan is the establishment of a system of internal air services, necessary in modern conditions for the proper development of India as a whole socially, commercially and industrially. Such a system should link the principal commercial and administrative centres of the country, serve as distributors for the worked air services and, by reciprocal arrangement, link the neighbour countries of India, namely, Burma, Ceylon and Afghanistan. Other services to serve local needs, stimulated by local or private initiative, may be successfully operated and may in time become of national importance, but in the initial period of development, in the major plans of the country they occupy a subordinate position. Having regard to these considerations the air services of the post-war period in and around India fall into the following plans:—

A. *Air Services essential for the social, commercial and industrial development of India.*

I. *International (British Commonwealth and Foreign) Air Services.*

(a) *Europe and Africa via Karachi-Calcutta to Australia and China.* (Such services may eventually be operated non-stop between Karachi and Calcutta.)

(b) *Europe and Africa via Karachi-Bombay-Colombo to the East.* Flying Boat Route.

(This is dependent on development in flying boats which may or may not come about.)

II. *Indian Trunk Air Services (including essential connections with neighbouring countries).*

Route 1.—*Karachi-Bombay-Bangalore-Colombo.*

Route 2.—*Calcutta-Allahabad-Cawnpore-Delhi-Lahore-Peshawar-Kabul.*

- Route 3.—*Delhi-Nagpur-Hyderabad-Madras.*  
 Route 4.—*Calcutta-Cuttack-Vizagapatam-Madras-Colombo.*  
 Route 5.—*Bombay-Nagpur-Calcutta.*  
 Route 6.—*Karachi-Jodhpur-Delhi.*  
 Route 7.—*Bombay-Ahmedabad-Delhi.*  
 Route 8.—*Calcutta-Akyab-Yenangyaung-Rangoon.*  
 III. *Essential links between Trunk Air Services.*  
 Route 9.—*Karachi-Quetta-Lahore.*  
 Route 10.—*Calcutta-Dacca-Sylhet-Tezpur-Dinjan.*  
 Route 11.—*Madras-Bangalore-Cochin.*

B. *Local Air Services.*

The following are a few examples of many such possible services:—

- (a) *Ahmedabad (or Bombay)-Kathiawar States.*  
 (b) *Hyderabad-Bombay.*  
 (c) *Hyderabad-Bangalore.*  
 (d) *Lahore-Srinagar.*

The degree of initiative which India must take in the establishment of international services (British Commonwealth and Foreign) will depend on the degree of co-operation which is brought about in the sphere of world air transport. This is the subject of international discussions. Whatever may be the precise form of the post-war agreement on the subject, there are clear indications that it will embody (on a reciprocal basis) some greater measure of freedom of the air than that prevailing before the war, coupled with the control and regulation of international air transport services by a world co-ordinating authority. The central geographical position which India enjoys will afford her considerable opportunities of attracting world air traffic within her borders, but no specific steps can be taken in that direction at present.

In the field of internal air services, plans have been worked out in considerable detail. They are based on the operation of mixed transport services (passengers, freight and mails) with modern passenger transport aircraft, giving the speed, reliability and comfort necessary for the establishment of air transport. Daily air services on all the main routes scheduled will provide connections enabling the traveller to reach almost any point in India within the day. The progressive development of night flying will improve that position still further. Experience of air transport shows that it cannot be established on a paying basis immediately. If it is decided to foster its development therefore the State must either accept losses on State operation or give financial assistance for a period of years to commercial operators. A careful examination has therefore been made of various possible methods of Government assistance in the earlier years, and the results will be placed before the Policy Committee. Legislation has been introduced in the current session of the Legislative Assembly to control the establishment and operation of air transport by means of a licensing system.

To enable the internal air transport system to operate and to meet the stepped up technical requirements of the modern aircraft, both on the international and internal air route, a large programme of ground organisation development is necessary. Such a programme covering larger aerodromes, runways, hangars, workshops, traffic and control buildings and re-organised aeronautical radio and meteorological services is well advanced in plan. Air Force development of aerodromes for war purposes goes a long way to meet one of the many requirements.

Among other developments expected to take place after the war is the establishment of a school for the training of air crews and all categories of technical personnel required for the manning of the Government aerodrome and radio services and the workshops of the aircraft operators.

**Railways.** In any scheme of future development, railways must play a large part; whatever the prospects of road development railways will have to move the long distance and heavy traffic of the country. The war has created



special problems. The most pressing of them will be the repair or replacement of the rolling stock and other equipment which has suffered excessive wear and tear due to war conditions. Apart from rehabilitation the establishment of a postwar locomotive industry, electrification of some of the railways, revision of rate schedules, utilisation of surplus army stores and equipment, special facilities for cold storage and absorption of the demobilised army personnel in railway services will also have to be specially investigated.

A new Member has recently been appointed to the Railway Board. He has been entrusted with the planning of post-war reconstruction on railways and will shortly have a special post-war reconstruction branch in charge of a senior officer. A great deal of preliminary investigation has already been done in regard to the manufacture of locomotives and boilers in India. A tyre (wheel) and axle plant has recently been installed and is expected to be in a position to meet post-war requirements. The restoration of the branch lines dismantled to provide track material and equipment for war purposes is being co-ordinated with the road development now programmed.

Considerable progress has also been made on planning under the following main heads:—

- (1) Annual programme for replacement of machinery in railway workshops.
- (2) Annual programme for replacement of locomotives and general service wagons.
- (3) Absorption of the demobilised army personnel in railway services.

In addition to the above, the following technical subjects are under special investigation:—

- (a) Construction of new lines in undeveloped areas.
- (b) New designs of—
 

(i) third class passenger coaches;	}	to meet post-war requirements.
(ii) wagons; and		
(iii) locomotives.		
- (c) Standardisation of types of locomotives to be built and of renewable parts of locomotives in use.
- (d) Extension of the activities of railways to other transport services—road, air, etc.
- (e) Development of staff welfare organisations to improve the welfare and efficiency of railway employees.
- (f) Regrouping of railways.
- (g) General lines of development of post-war goods, parcels and passenger traffic.

**Road Transport and Road Rail Relations.** In 1933, the Committee of Independent Experts to the International Chamber of Commerce, made the following statement on the object of transport policy, which, it will be generally agreed remains true today:—

“1. Industry, trade and the general user require cheap, efficient and rapid transportation, adapted as closely as possible to their specific needs.

2. The transformations that have taken place in the *de facto* monopoly of land transport, held until recent years by the railways, and the interdependence of the various means of communications call for a comprehensive policy in each country.

3. The principal aims of such a policy should be to co-ordinate all the means of transport in such a way as to secure for each of them the traffic for which it is best suited, and to avoid overlapping, the financial consequences of which the community would ultimately have to bear.

4. Public action becomes necessary in so far as the efficiency of the various means of transport is compromised by competition among themselves, particularly road and rail competition.

5. The function of the State is not to maintain the *status quo* or to favour one means of transport at the expense of another, but to create the requisite conditions for securing the maximum efficiency of all means of transport and to further their evolution in the interests of the general welfare of the community and of technical progress.

6. These aims can only be attained by a series of measures, the nature and scope of which will be influenced by the conditions existing in each country.

The importance of a rationalized transport policy has been thrown into relief by competition between motor and railway transport. This problem is more or less the same in all civilized countries."

Here, in India, the pace at which road transport became mechanised was unexpected and the Motor Vehicles Law contemplated and provided for no regulation of competition with the result that in a very short time the internal competition in road transport for the carriage of passengers led to rate cutting, which in turn diverted large numbers of passengers from the rail to the road. It was not until about 1931 that the full effect, on railway revenues, of the financial depression became apparent, and the possible further losses of railway revenues to the roads assumed alarming proportions and threatened to jeopardise the position of large national assets in the shape of railways. The present Motor Vehicles Act of 1939 was the first substantial step forward in the direction of creating conditions of fair competition. But the general opinion is that it does not go far enough to deal with the complicated problem. In war conditions there is traffic for every one and for this as well as other reasons, acute competition has ceased but with the now rapidly increasing deliveries of new transport vehicles for civil use and the post-war releases of army trucks, India may have on the roads a very much larger number of transport vehicles than in 1939. There will also be a very large number of demobilized soldiers who have been trained to drive and who will be needing employment. The seeds of immediate trouble inherent in such a position is obvious and if the available vehicles and man power cannot be diverted into channels profitable to the community, then there will be a relapse into road-rail anarchy from which it may take very many years to recover. The future of road transport and road-rail relations have accordingly been the subjects of special study by an expert committee who have now submitted a most valuable report.

The Committee while feeling that motor transport is not likely to be used to any appreciable extent, in the near future, for marketing staple crops, consider that it should be encouraged to assist special forms of agriculture, such as market gardening and fruit growing. They have recommended that every effort should be made to carry the benefit and service of motor transport into the heart of the countryside and to use it to a greater extent than hitherto for administrative and development purposes. So far as goods traffic is concerned, the Committee are of the opinion that the transfer to the roads of short-haul goods traffic, in which motor transport can compete economically with railways, should be encouraged and that except where long distance goods traffic by road is in the public interest, competition between road and rail should be prevented by a system of regulation, combining expert judgment of the merits of each case on the basis of public and economic need with scientific zoning. In the case of passenger traffic however, they feel that healthy competition between road and rail is desirable and have suggested that the principle of maximum amalgamation of passenger service operators to form substantial concerns on main routes, and of controlled monopolies on light traffic routes, should be the basis of policy. Subject to salutary conditions, they have recommended that there should be no restriction on the range or numbers of passenger motor transport and that minimum fares for both road and rail should be established by agreement. These recommendations are calculated to develop motor transport, particularly in rural areas. The importance of railways developing closer co-operation with road passenger transport and ultimately acquiring a commanding interest has been stressed. The Committee have also suggested a review of the position of branch line railways closed during the war as also of the question of the use of decked railway bridges and of the finance of combined road and rail bridges, from the point of view of public service. A scientific review of motor vehicles taxation has also been proposed. In order to facilitate a co-ordinated system of cheap and efficient transport, the Committee have recommended that there should be a Central Transport Budget for transport as a

whole, in which Provinces should share, for pooling of revenues and balancing of capital expenditure on both road and rail. In conclusion, the Committee have recommended that an Indian Road Board should be created to examine in greater detail the complex problems involved, to prepare for the launching of a road plan and to make an immediate beginning in the regulation and co-ordination of transport and the development of closer road-rail relations and ultimately to be responsible for the development of roads and road transport and to implement the policy of road-rail co-ordination.

The recommendations of the Committee are under consideration.

**Roads.** The importance of improved means of communications as a factor of economic and social progress cannot be exaggerated. The true income of the cultivator and hence his standard of living are largely dependent on the efficiency of communications and our picture of the future of rural India should be one in which motor transport would penetrate the remotest villages connecting them with the main transport system. Thus the villager will have at his disposal modern means of transport, readier communication with the outside world, medical attention, educational facilities and other social services to no less a degree than the town dweller.

It is well-known that roads are a Provincial subject and the responsibility for the bulk of the roads upon which rural welfare depends has been thrown on local bodies with bad results. 'Provincial' metalled roads have been developed largely as a skeleton of a system convenient to the administration and the more influential sections of the population. Rural roads, on the other hand, have been badly neglected. The tracks connecting the village with the nearest public road are not so much a thoroughfare as private lanes used or abused by the people of the village. Their legal status, the width of the land and even the ownership of the land, are in most cases imperfectly defined. These tracks often follow the boundaries of fields rather than the most direct route and the actual alignment may vary from time to time with fragmentation and consolidation of holdings. In short there has been no systematic road planning of any kind in India as a whole and it is necessary to have a comprehensive road plan for the whole country which would receive the highest priority in any reconstruction schemes to be undertaken.

The Official Committee concerned with the subject has now made a preliminary examination of the best method of approach to the preparation of a comprehensive plan of road development on an all-India basis. The suggestion (which is naturally subject to further examination in consultation with the Provincial Governments) is that with the assistance of an organisation to be set up under the Consulting Engineer to the Government of India (Roads), Provincial Governments and Indian States should undertake the preparation of a plan for post-war development on a uniform basis. For this purpose, it has been suggested that roads be divided into four classes, that is to say:

- (a) National Highways and Trails,
- (b) Provincial Highways,
- (c) District Roads,
- (d) Village Roads.

The first class, which will be the framework on which the whole road system of the country depends, will consist of main highways running through the length and breadth of the country, connecting ports, foreign highways, capitals of Provinces and larger Indian States and including strategic roads required for the defence of the country. The second will comprise all other main trunk or arterial roads of a Province or State, connecting up with the National Highways or highways of adjacent Provinces or States, district headquarters and important cities within the Province or State. The third will include roads traversing each district, serving areas of production and markets and connecting these with each other or with highways and railways. Village roads will connect villages or groups of villages with each other and to the nearest district road, main highway, railway or river ghat.

It would appear that the first class being inter-Provincial and also traversing many States should primarily be the concern of the Central Organisation. The development of the second (Provincial Highways) would have to be planned at the headquarters of each Province; thus reducing the plan for the third class, namely district roads, to a district by district survey and schemes in which a large measure of uniformity of presentation could be achieved. One of the first questions in connection with the planning of district roads would be how far the system would have to be extended to give greater accessibility to and from large villages. The main object of the plan would however be to bring every village with a population exceeding about one thousand within, say, half a mile of a public road.

As regards village roads, there are in some Provinces Union Boards, while in others there is little, if any, organised maintenance, and here the plan would vary with different circumstances. In some provinces, it may be bound up with the consolidation of holdings.

If this classification is accepted, the Central Organisation will have to play a prominent part in the planning of the National Highway System and will suggest standard forms for the compilation of the material necessary for the preparation of the district road plan. As regards the village roads, while the Provincial Department responsible for other roads will doubtless give every assistance, it would probably be necessary in several Provinces to impose this responsibility upon a special officer.

The execution of the plan as a whole will require the collection and distribution of all relevant available information and the advance planning of the plant and machinery required. This aspect of the question and the technical problems involved have recently been discussed at a Conference of the Chief Engineers of the Provincial and State Governments at which the outlines of the plan were accepted and a number of far-reaching recommendations have been made. It has now been decided to appoint a Development Officer on Roads and Road Transport who will tour the Provinces and work out detailed schemes of expansion and it is hoped that a comprehensive road plan for the whole of India will be prepared before long. It will be accompanied at each stage by an approximate estimate of the cost involved, so as to furnish a complete picture of its financial implications.

## SECTION VI—Public Works and Electric Power.

**Public Works other than Roads.** Apart from the development of roads and railways, the other public works which would require immediate attention after the war will relate largely to irrigation, electric power, town planning, slum clearance, etc. The importance of public works financed through public and Government expenditure as an instrument of stabilising the volume of employment and monetary conditions is now fully appreciated. During the post-war period, a large number of skilled and unskilled workmen will have to be shifted from war industries to peace-time occupations and the prospects of finding them suitable employment will be considerably improved by the institution of minor as well as major public works. This will also have the advantage of maintaining during the post-war period the existing high level of productivity in industries whose capacity has now been expanded to meet the increasing requirements of the defence services, such as the cement industry, iron and steel industry, brick-making, coal mining, etc. Moreover, as an anti-inflationary measure and for other causes inherent in war conditions, no important public utility concerns or public works have been undertaken during the last four years either by the Provincial or the Central Governments. As soon as the war is over, it will be necessary to undertake some of the more urgent works which have been delayed and the large technical personnel and building and other material rendered 'surplus' by the cessation of hostilities would be an invaluable asset in any programme of development that may be launched.

The total area now irrigated in all India is estimated at about 60 million acres out of a total cultivated acreage of about 320 millions, that is, less than one-fifth of the total cultivated area is irrigated in spite of the precarious nature of the monsoon. Half of this area is irrigated by canals, public or private, and the other from small works financed through private capital like wells, tanks, small streams, etc. There is still scope for further expansion and any development of irrigational facilities will be reflected in corresponding improvement in the total yield of the crops grown.

State-owned irrigation works may be classified as productive or protective. A protective work is not expected to meet the full interest charge, but is designed to guard against crop failure in a district otherwise liable to famine. A productive work, on the other hand, is one yielding, or estimated at its inception to yield, a return fixed by the Government concerned. The State-owned irrigation canals have on the whole done extremely well and the net annual return on expenditure on productive as well as protective canals taken together has been estimated at well over 5 per cent. per annum in the years preceding the outbreak of war. One of the main difficulties in the past in respect of all public works has however been the rigid financial test of 'productivity' which was applied to them and only in urgent necessity were 'protective' works encouraged. Our ideas regarding "productivity" are now undergoing revolutionary changes and it is probable that the view which will prevail in future will be that any work is 'productive' which meets the administrative and maintenance charges and which contributes directly towards the improvement of living conditions.

It is therefore necessary to make a proper survey of all the irrigation and other public works projects which it is desired to undertake soon after the war. Some of them may be financially indefensible, but their execution might help to promote national welfare on a large scale in one form or the other. On the other hand, there may be some which would give a handsome return on the capital invested, while there may be yet another group which is somewhere between the two. It will be impossible to decide which projects to undertake as a reconstruction measure until the whole picture of all the proposed projects is available and the financial and other implications of each are carefully scrutinised.

The Government of India have now considerable information on the subject of irrigation projects and a large number of these are actually receiving

some kind of State-aid as a 'Grow More Food' measure. The Labour Department have addressed all Provincial and State Governments to prepare a detailed list of proposed irrigation projects and to prepare estimates of the machinery required. These and other projects would then be considered against the background of general schemes and on their own merits to enable the Government of India to estimate the total requirements of capital goods required for the purpose and to make policy decisions in consultation with the local Governments regarding the projects to be undertaken.

**Electric Power.** It is generally agreed that the solution of the Indian economic problem lies in the rapid industrialisation of the country and a simultaneous improvement of agricultural conditions. Neither of these objectives can be attained without the provision of the cheap and abundant supplies of motive power. History shows that the economic development of every industrial country in the world has followed the exploitation of its fuel or power resources, and, it is well known that some of the earliest projects undertaken under the Russian Five Year Plan related to the development of hydro-electric power.

India is rather unfortunate in respect of her coal resources in the sense that they are localised in one or two Provinces. This involves long railway haulages with the consequent increase of costs to be borne by industries using coal or steam-generated electric power. It is significant in this connection that during pre-war years nearly half of the goods traffic on railways was in coal. Furthermore, the difficulties of transporting coal from a railway station to the remoter parts of the country are so great that its use in small rural industries is economically almost prohibitive. Similarly, India is particularly poor in mineral oil and there are at present no indications of any large deposits. India will therefore have to depend on her water resources for much of the power which is essential for the development of the country and the creation of large blocks of hydro-electric power to be supplied cheaply and evenly all over the country will be one of the main objectives of reconstruction planning. At present, India is very poorly supplied with electric power, the total energy generated being only of the order of 1/50th of that generated in the United States and about 1/9th of that of the United Kingdom. On the other hand, the potentialities of development are enormous. Technical investigations show that less than a tenth of the definitely ascertained and practicable sources of hydro-electric power have yet been exploited.

The cessation of hostilities will make it possible to resume the expansion of the electric supply industry which has been sharply restricted during the war due to the inability to import heavy plant and machinery. Normal healthy expansion would be in the neighbourhood of 10 per cent. per annum, but since the domestic uses of electricity in India have scarcely been touched we might reasonably look to a normal expansion for many years to come of about 12 per cent. per annum. Apart from this normal growth of existing utilities in supplying the increased requirements of the larger urban areas, there is the important factor of "specially promoted loads". We should be able to look forward to this with some confidence if active stimuli are applied by Government to the widespread development of electricity throughout the country. It is as well to consider what are the prospects for the utilisation of the electricity on major schemes of development. These may be divided into three main groups:—

- (a) Industrial expansion.
- (b) Rural electrification including lift irrigation and dewatering.
- (c) Electro-chemical and metallurgical production and inorganic fertilizer.

**A. Main Industrial Loads.** Of our existing industries the greatest scope for further demands on electric public utilities may be expected in Jute and Cotton textiles by electrification of mills following the scrapping of their own individual motive power installations which are now mostly worn out and obsolete. In addition there will be the establishment of new textile mills to meet the increased demands for cloth which would follow from any rise in the economic level of the rural population. The basic steel industry is not likely to impose

much further demand on electric public utilities except for the probable introduction of electric blast furnaces for pig iron production in South India where coal is expensive. There is, however, good reason to anticipate a considerable expansion of the trades ancillary to basic steel such as tube making, rolling mills, forging plants, sheet mills, etc. - The heavy engineering industry too may be expected to develop considerably in the light of the requirements for locomotive manufacture, ship building, and the production of machinery generally for factory development, *e.g.*, machine tools.

**B. Rural Development.** The introduction of electric service on a really broad scale in rural communities is likely to form a most important field for development. This development would ultimately have a profound bearing on the economics of village life and agricultural prosperity generally, but it would be unlikely to show any direct return to the utility providing such services at any rate for several years. The financing of rural electrification cannot be contemplated other than on an extremely limited scale by any self-supporting electric public utility. The advantages to be gained while substantial, are to a great extent intangible and will not be reflected in public utility revenues for many years to come. That subventions to the electric public utility from agricultural development funds would be necessary, goes without saying. Unless the utility is placed in a position by which it can offer exceptionally promotional facilities in the first few years, no appreciable results will be obtained in changing over from the present system of motive power and methods of working village industry and agriculture. The Electrical Commissioner's office is studying this problem and various proposals are under review.

It is easy to over-estimate the potential demands of rural electrification. Nevertheless, there are about 22,000 "large villages" (*i.e.*, 2,000—5,000 population) in the whole of India and if it were possible to provide electric service to meet the present motive power requirements of all of them *plus* a small addition for lighting, we might contemplate an aggregate demand for 440,000 K. W. On the rather bold assumption that it might prove practicable to provide such service to half of the "large villages" we could look forward to a new demand from this source of about 220,000 K. W. which would require about 300,000 K. W. of installed generating capacity *i.e.*, an increase of about 25 per cent. of the present all-India total. It should be noted that any really strong policy of assisted development for small village industry might easily treble these figures. The provision of driving motors, starters and wiring on some form of extended payment or loan is of course an essential corollary to any scheme for village electrification.

It is clear that any widespread development of "large village" electrification will go hand in hand with the expansion of electricity for irrigation requirements. The field for electric power in irrigation is undoubtedly substantial there are several extensive tracts suited to tube-well development, others are only suited to pumping from open wells or tanks, while there are also extensive areas the agricultural development of which could be completely transformed by electric dewatering.

**C. Electro-chemical and metallurgical production and inorganic fertilizer.** It is considered that a promising field for securing a base load of secondary power in large hydro-electric schemes may be that of large scale electro-chemical ammonia plants situated in proximity to the main power station. The fact that such industries can usually function with a supply of power for only 9 months in the year exerts a profound influence on the initial capital expenditure required in most hydro-electric projects. In most of the hill or mountain hydro-electric areas in India the question of storage of water over the driest season usually looms very large. This is of course particularly so in areas like the Western Ghats or the Nilgiris which have no streams originating in melting snows. The central Government is at the present time investigating the prospects for the establishment of factories for the fixation of atmosphere nitrogen required for the production of inorganic fertilizers on a really large scale. Such factories are peculiarly adapted to the problem under review

herein since their raw material requirements are mainly air and water both of which are found at all hydro-electric power station sites.

Electro-chemical and electro-metallurgical works are other forms of large loads which can sometimes be located near a proposed generating station to form the base load of the station.

**Summary of Prospective new load.** We may tentatively conclude that the following fields of development are likely to be outstanding in creating new demands for electric power:—

(a) Electrification of cotton and jute textile mills at present mechanically driven.

(b) New cotton textile and woollen mills.

(c) Secondary industry ancillary to basic steel production.

(d) Engineering workshops, shipyards, etc.

(e) The production of inorganic fertilizers.

(f) "Large village" electrification.

(g) Lift irrigation and dewatering.

(h) Electro-chemical industries other than fertilizers.

**Load Surveys and Financial Considerations.** All schemes for the establishment of new power stations require justification on the basis of a survey of the prospective load. Such surveys are generally made on the basis of the previous trend of load development and on the general assumption that the conventional policy will be followed *i.e.*, the provision of electric service to the community when, but not before a sufficient demand has arisen from the inhabitants. The whole basis of a load survey changes if a really extensive system of rural supplies for "Large village electrification", lift irrigation, dewatering, etc., is to be made available. It will be clear from this that the necessity for forward planning with particular reference to rural and semi-rural economic factor is of special significance in the development of electric power in any part of India outside the great centres of population. The fact that 95 per cent of the population of the country lives outside such centres is an added reason for approaching the problem of electrical development on new lines. If we are to achieve rapid progress with the implementation of most of the large hydro-electric projects in India the following conditions will require to be satisfied:—

(a) A really extensive rural reticulation system will need to be laid down far in advance of its proper loading as judged by the conventional standards at present applicable to such works. This necessarily implies the provision of substantial subventions to the authority operating the utility in the provision of the transmission and distribution network, village sub-stations, etc.

(b) A base load requiring a large block of secondary energy (*i.e.*, for 8-9 months in the year) is extremely desirable.

(c) For the first six or seven years it will usually be necessary to permit annual deficits to be charged to capital account.

(d) The financial justification for proceeding with the project must be based on the estimated result over a period of at least 10 years and this after allowing for the capitalization of early losses.

(e) Apart from specific capital subventions to enable the utility to provide electric service to agriculture under sub-economic conditions, some allowance will have to be made for the many less tangible advantages to the region involved and which may be expected to accrue from the widespread availability of electric power at low cost.

**Thermal Power Station Siting.** Turning now to steam power station development we find that large schemes are frequently put forward for "the generation of power in the coal fields" and its transmission to relatively distant industrial areas. The fact is often overlooked that the water requirements of a large steam power station are frequently so exacting as to make it generally more economic to establish the generating capacity where there is a very large supply of condensing water available rather than in the immediate vicinity of cheap coal. Here we must not overlook the fact that major industrial centres so frequently



grow up in the vicinity of large supplies of water in the shape of a harbour or a navigable river. *Per contra* most of the Indian coalfields either lie in zones where water supplies are inadequate for a really large steam power station, or where the provision of adequate supplies of condensing water entail the construction of a barrage or other large expensive civil works to control the discharge of a river which is normally unruly in its behaviour. It is worth adding the remainder that a steam power station requires almost 500 times as much water as it does coal; and while this water is not consumed and may be returned for other purposes or discharged again into the river bed, the magnitude of the condensing water problem is seldom appreciated. Not only is it therefore necessary to compare the cost of transporting coal with the cost of transmitting electrical energy to the industrial zone but the higher cost of civil works in providing adequate condensing water enters largely into the equation.

**Organization of Electric Public Utilities.** The organization of the existing electric companies has been examined in considerable detail by the Departments of the Government of India concerned. The examination has shown that there are several defects in the existing organization of the industry, which, unless they are remedied, would continue to affect healthy development. The defects which came to the forefront were due to political boundaries, lack of proper development of certain electric companies, lack of standardisation, lack of uniformity in the administration and the presentation of annual returns.

The future organization of the industry was discussed at a recent meeting of the Policy Committee No. 3 (c) (Public Works and Electric Power) and there was general agreement that a Central organization should be set up to assist and co-ordinate electrical development in India. There was also general agreement that in the future, new major power schemes should be undertaken by Government or quasi-Government owned organizations.

At a subsequent conference held in Calcutta under the auspices of the Electrical Commissioner, leading power engineers from all over India met to discuss questions of Post-War Electrical Development and the best means of assuring that this was undertaken on standard and progressive lines.

At this conference it was unanimously agreed that a Central Technical Power Board should be established immediately. This Board should consist of about seven or eight members, two of whom together with the Chairman, should be full-time members. One full-time member should be an Hydro-Electric Engineer and the other a Power Utilization Engineer of wide experience. This decision has been endorsed by the Subjects Committee of the Reconstruction Committee of Council.

The main function of this Board would be to scrutinize and co-ordinate all existing and potential power schemes with a view to developing the maximum utilisation of the natural resources of the country on the following lines:—

(i) Initiate the preparation of preliminary reports on power schemes of potential National value wherever considered necessary.

(ii) Arrange for the carrying out of a systematic hydro-electric survey throughout India on a recognised standard basis.

(iii) Endeavour to ensure that no measures are undertaken by the Governments concerned which conflict with the best possible utilisation of natural resources both for power and irrigation. The Technical Power Board would also collaborate with the Central Board of Irrigation in their mutual interests.

(iv) Review and lay down for the whole of India standard voltage and practice for generation, transmission and distribution of electricity. Where proposals are made which depart from these standards, the attention of the Governments or utilities concerned should be called to the disadvantages of non-standard apparatus.

(v) Arrange for assistance to any Provincial or State Government for technical investigations when the Governments interested make a direct request to the Board.

(vi) Initiate the establishment of a research organisation adapted to the requirements of the special conditions of electric power development in India.

(vii) Co-ordinate power and industrial development throughout India and co-operate wherever practicable in the investigation of large industrial projects with a view to siting them in the most suitable manner in relation to prospective power development schemes. In addition, to undertake when desirable an industrial power survey of a given area and a forecast of probable growth and development over a period of years.

(viii) Study the possibilities for, encourage and assist the establishment of the electrical manufacturing in India.

(ix) Take steps to provide technical training both abroad and in India for Indian engineers. At the Conference, it was also decided to establish for retention by the Government of India a panel of consulting engineers including two firms of the highest repute—one from the United Kingdom and another from North America.

**Training of Indian engineers in Public Utility Management.** An essential provision in contemplating a large expansion of the electricity supply industry in India must be the availability of personnel of adequate calibre to hold positions of senior executive responsibility. While there is no doubt about the shortage of properly trained electrical engineers with adequate experience in electric public utility work, the greatest deficiency at present is in respect of those trained in the quasi-technical side of administering and operating large electric public utilities.

In any large undertaking of this kind the senior executives, while they must necessarily have sound engineering training and experience, also require a high degree of initiative in and experience of the commercial and economic aspects of electricity supply. This side of electric utility operation covers such subjects as the framing of tariffs, policy in sales promotion, improved methods of costing, consumer analysis and several other important factors which go for the making of efficient management in a specialised industry. It will therefore be necessary even before the termination of hostilities to have trained men who would be able to take up responsible positions in the large public utility concerns which may be undertaken immediately after the cessation of hostilities. A scheme for the training of such engineers both on the technical and the administrative side is now under the active consideration of the Government of India.

**Requirements of plant and machinery to be imported from overseas for electric power development in India.** There is likely to be an extremely large demand immediately after the war for heavy power equipment to meet the rehabilitation of all devastated and occupied territories. These heavy demands for power equipment must inevitably fall mainly upon the United Kingdom and the United States. It is becoming clear that the manufacture of such plant will have to be undertaken on what virtually amounts to a priority basis for some years after the cessation of hostilities. It is therefore of the utmost importance that India should lose no opportunity in the immediate future to secure her requirements of heavy power equipment for post-war development. To this end the Provinces and States were requested some months ago to compile in suitable form information covering all the heavy power equipment probably required in their territories immediately after the war. This information was all sent to the Electrical Commissioner's Office in Calcutta where it was examined and collated. It was then placed before the Technical Power Development Conference held in Calcutta in the latter part of January where it was scrutinised by leading power engineers from various parts of India. The schedule was then amended and modified in certain respects and has since been sent to the Secretary of State for India in London with the full support of the Government of India in order to secure as soon as possible manufacturing capacity for this plant. The amount of plant represented in the schedule is considerable but it is nevertheless hoped that India

may be allotted manufacturing capacity for a considerable portion of this plant perhaps before the end of the war. The schedule of heavy plant does not of course include any equipment which could be manufactured in India for some years to come. As this plant is in the nature of a key to industrial development in India the prospects for its early manufacture are being extremely carefully watched by the Central Government.

## SECTION VII—Trade and Industry.

**Indian Trade Policy in the Post-war Period.** Certain broad principles of international commercial policy have been accepted by the majority of the Governments of the United Nations and are contained in Article 4 of the Atlantic Charters and Clause 7 of the Mutual Aid Agreement. These statements are at present only in general terms and it is probable that international discussions will take place soon as to the manner in which they should be translated into practice. It is clear from what has been said in Section I above, that the trend of world thought is towards the liberalisation of world trade in the post-war period and it will be necessary for India to consider the broad lines of her future trade policy against this background to be able to participate to her best advantage in any conferences which may take place.

The Economic Adviser to the Government of India, has prepared a memorandum on certain aspects of Indian Trade Policy in the Post-war period which was circulated to the members of Policy Committee No. 4 (Trade and Industry Policy) and the Consultative Committee of Economists which met respectively in October and November last. The memorandum gives a historical background of the forces which have determined Indian trade movements in the past and states how they may be modified by the structure of post-war world economy and by the announcements contained in the Atlantic Charter and the Mutual Aid Agreement. The questions which would have to be considered in the first instance were presented by him to the last meeting of Policy Committee No. 4 (Trade and Industry Policy) as follows:—

Firstly, what kind of world trade policy would suit India best? Would it be to India's interest to accept the principles embodied in these announcements or would it be against her interests?

Secondly, if India were on balance inclined to accept these principles, what reservations would she like to make?

Thirdly, assuming that she were to decline to associate herself either with the more liberalising tendencies of the Roosevelt-Churchill declarations or with any of the trade blocs which were a practical alternative to the acceptance of those principles, could she carry out an autonomous trade policy with no commitments of any kind to anybody.

It was generally agreed at this meeting that it was not to India's interest to pursue an isolationist policy and that a system of multilateral trading on a world basis was most desirable. India should therefore accept the principles embodied in these announcements subject to the reservations that (a) she should retain her fiscal autonomy; (b) she should be free to pursue a protectionist policy to foster industrial development if she felt it desirable to do so; and (c) the main object of her post-war commercial policy should be the industrial expansion of the country and this should not be hampered by any international agreements which India may join.

The discussion was taken a step further at the meeting of the Consultative Committee of Economists when some of the detailed issues of policy arising out of the above general conclusions came up for discussion. India has followed a policy of protection during the last twenty years or so and although industrially not so developed as the U. K. or the U. S. A., she is by no means completely backward. The efficacy of protection as an instrument of industrial development has been severely criticised by one school of thought, while the other is always agitating for an increase of protective duties. It is certain that the tariff question would come to the forefront in the international trade conferences and it is essential that India should make up her own mind about the essentials of her future tariff policy. In this connection, the Hon'ble Sir Ramaswami Mudaliar pointed out at the meeting of the Consultative Committee of Economists that it had been suggested in various circles that the U. S. A. which had been the strongest supporter of high tariffs in pre-war years would insist on their continuance in the post-war period also. But, from the discussions he has had in responsible American circles, he felt certain that America would be prepared to lower her tariffs both in her own interests as well as for the promotion of international trade.

\*As stated in Section I, page 2, India has not signed the Mutual Aid Agreement.

Tariffs are however of two kinds, namely, revenue tariffs and protective tariffs and the following practical issues came up for discussion at the meeting:—

(i) whether India should agree to an international ceiling only so far as revenue tariffs were concerned or whether such a ceiling should be accepted for protective tariffs also.

(ii) whether in view of the comparative backwardness of Indian industries and the low standard of living, India should maintain the position that her protective tariffs had always been levied after the most careful investigation and that her Tariff Boards had been more like judicial tribunals than the *ad hoc* committees of the U. S. A. or Australia and other countries which hurriedly went through the question of protective tariffs in respect of a number of industries at the same time and fixed high duties on considerations which were not always purely economic or statistical. In short, the question was whether or not India should put forward the proposal that each country should be free to levy protective tariffs provided that such tariffs had been found to be justifiable after an accurate and scientific examination, the results of which would be published and made available to all the countries;

(iii) what would be India's attitude if an over-all ceiling for all tariffs were proposed at these conferences? A proposal might be put forward at these conferences that as far as these ceilings were concerned they should be started at a particular level so as to cause the minimum amount of disturbance in the existing industrial development of any country and that they should be gradually reduced in due course to meet the changing requirements of each particular country;

(iv) another possible proposal which might be made at these conferences would be that no country should levy a unduly high protective tariff but that each Government should be free to help its industries through subsidies and other methods of direct governmental aid. Should such a proposal be put forward, it would in all probability be supported by the wealthier nations of the world and it was for the Committee to decide whether India should countenance such a proposal in view of the fact that her finances must necessarily be limited during the next few decades. Moreover, it had to be accepted that in the final analysis the results of a protective tariff or a subsidy were the same and that both of them were equally a clog on international trade. Whereas a protective tariff raised the cost of the protected article and threw an additional burden on the purchaser, a subsidy could be made only by increasing taxation and thereby throwing the burden on the tax-payers.

It is not only the question of tariffs which has to be considered. Problems of quantitative control of imports and exports are fully relevant to the discussion of trade policy and they would also probably be raised at the international conferences. There can be no doubt that the existing import and export controls would have to continue in some form or the other during the transitional period from war to peace. Quantitative restriction of imports or exports is however a potent and perhaps one of the drastic methods of protection and it is necessary in this connection to consider:—

(i) whether a policy of quantitative restriction is desirable for India;

(ii) what would be its effect on the various classes of the community if it is adopted; and

(iii) how that policy would fit in with the world trend towards multilateralism and the principle of free access to raw materials enunciated in the Atlantic Charter.

In the light of the main conclusions reached at the last meetings of Policy Committee No. 4 and Consultative Committee of Economists, a memorandum on the detailed issues of policy is under preparation by the Economic Adviser to the Government of India. It will come up for discussion at later meetings of these Committees.

**Monetary Policy.** Closely connected with the problems of trade and tariff policy are those relating to the international monetary organisation in the post-war period. The relations between monetary policy and reconstruction may appear remote when reconstruction is thought of primarily in terms of our

domestic situation, but even here the connection is close, and it is closer still when one bears in mind that India is part of the world order. Monetary institutions are part of the fabric which binds the various countries of the world together, and as the world learnt to its cost in the disturbed period after 1931, a breakdown of the world's monetary institutions has a direct bearing not only on the volume of international trade but upon internal well-being, since the volume of world trade has a close and intimate connection with the national income and the volume of employment of every single country. Agricultural countries, whose national income is liable to be gravely upset if the level of world prices undergoes violent changes, no less than industrial countries, are interested in seeing to it that after the war, the recovery of well-being shall not be impeded by avoidable weaknesses in the monetary mechanism, and such weaknesses can only be avoided by taking thought, that is, by having a right monetary policy.

For the last two years or so, the expert officials of the British and the U. S. A. Treasuries have been engaged in an almost continuous discussion on the topic of improving the organisation which is to underpin the various monetary systems of the different countries of the world.

At the last meeting of the General Policy Committee, the general outlines of these Plans were discussed and a memorandum prepared by the Economic Adviser to the Government of India was placed before the Committee. The Memorandum deals with general principles and analyses the British and American Plans in the form in which they subsisted in the autumn of 1943. These Plans have since undergone revision and no finality has yet been reached. For that reason, the General Policy Committee confined itself to the wider issues which had been raised in the various Plans, namely:—

(i) The general advantages or disadvantages of India's adhering to a monetary pact;

(ii) India's attitude in the immediate post-war period as regards adhesion to the organisation, and

(iii) a preliminary review of what our policy should be in regard to some of the more urgent of our immediate post-war problems.

**Industrial Planning.** The first essential step in any kind of planning is to obtain full information on the subject and to proceed on the basis of that information. The earlier years of the war constituted a period of constant change and adjustment for industries and little useful information regarding their war-time organisation and their post-war prospects could have been obtained to serve as a basis for future planning. But the Government of India are now anxious without any further delay to collect the required data in order to obtain a correct picture of the present structure of industrial organisation in India and to determine future lines of development. For this purpose a Questionnaire has been drawn up by the Industries and Civil Supplies Department after consultation with Policy Committee No. 4 (Trade and Industry Policy). It shows the information which is considered necessary for the purpose of industrial planning and asks for factual information regarding India's post-war requirements of plant and machinery, the possibilities of fabricating it within India itself, the approximate estimates of internal and external demands, dislocations likely to be caused during the transition period from war-time conditions to normal peace-time conditions, etc. Apart from the factual information required, it also seeks the views of industrialists and the commercial community on the various aspects of future development and the lines of policy to be adopted. Enclosed with the Questionnaire is a list of industries together with the more important products of each industry regarding which it is desired to have separate sets of information as shown under the various headings of the Questionnaire.

The Questionnaire was addressed to all industrial and commercial associations in India, as also to the Provincial and State Governments towards the end of November last and replies have been asked for in about two months' time. The importance of developing small-scale industries is fully appreciated and it will be open for these associations and the local governments to furnish information in this respect.

In the meantime it is appreciated that there is a vast mass of information on the subject of industrial organisation in the various Departments of the Government of India, especially which have come into existence during the war. A Special Officer has been appointed in the Supply Department to collect this information and to put it in a form similar to that to be obtained from the Questionnaire.

The information obtained in this manner will be collated by the Industrial Adviser attached to the Department of Industries and Civil Supplies, in a form which would facilitate planning. As, however, no one person could have an intimate and accurate knowledge of the various industries involved, there would be an advisory panel of industrialists. Specific points would be referred to committees consisting of two or more members of the panel and the Adviser, and on their advice definite proposals would be formulated. The question of constituting an Industrial Commission to survey the field is also under consideration but this survey would take place alongside the factual work which would be done by the Adviser and the panel. When the work is completed and discussed by Policy Committee No. 4 on Trade and Industry and any other appropriate committees, it would be possible to lay down the final specific policy in regard to Industrial Development. Such a policy would determine general objectives of economic development, the pace at which industrialisation should proceed, the priorities and State aid, if any, to be given to particular industries, and in particular the location of each project with reference to raw materials, transport and the needs of individual areas.

The Indian Trade Commissioners abroad have also been asked to investigate the prospects of India's post-war trade with foreign countries and to furnish periodical reports on the subject which are being received.

**Acquisition of capital goods.** As has been stated earlier, it is essential to obtain as soon as possible some estimate of India's post-war requirements of heavy plant and machinery. It is probable that unless orders are placed early and under a scheme of priorities sponsored by Government, it would be almost impossible to secure the required capital goods within a reasonable period after the end of the war. The Industries and Civil Supplies Department have therefore without waiting for other information, asked industries to furnish information regarding their requirements of capital goods as soon as possible. A Press Note to this effect has already been issued and as soon as the industrial requirements have been compiled, it is intended that the estimates so obtained and those obtained by Labour Dept. in respect of Public Works should be scrutinised by government in order to determine which of the machinery required could be fabricated within India and what system of priorities should be adopted in placing orders abroad.

**Organization of Scientific and Industrial Research.** The Government of India fully appreciate the important part to be played by scientific and industrial research in the economic development of the country. The Council of Scientific and Industrial Research, the greater part of whose income is derived from a Government grant although the Council is an independent body, has already done admirable work within the limits of the funds allotted to it (supplemented by hitherto disappointingly small assistance from industrialists). The Council has for some time had in view an ambitious programme for the establishment of national research laboratories in different parts of India, but lack of funds and war conditions have stood in the way of its realization. The Government of India have now agreed to the Council drawing up plans for the establishment of these laboratories on the assumption that grants from Government of a total of Rs. 1 crore over a period of a few years will be forthcoming towards capital expenditure. The programme contemplates the establishment of—

- a National Physical Laboratory
- a National Chemical Laboratory
- a National Metallurgical Laboratory
- a Fuel Research Station, and
- a Glass Research Institute.

It is generally recognized that it is impossible to establish the first three institutions until after the war, but work is to commence immediately on the Fuel and Glass Research institutes; funds for the establishment of these two projects and for preliminary work in connection with the first three will be provided by Government during 1944-45. The Tata Trust have agreed to donate a sum of Rs. 20 lakhs towards the cost of the Chemical and Metallurgical Laboratories and it is hoped that other industrialists will emulate this fine example.

The Council has also recently appointed a Committee of Scientists and Industrialists to survey all existing facilities for research in India, to recommend measures for the promotion of research by research organizations and private firms, and to suggest steps for the furtherance of industrial and scientific research after the war.



## SECTION VIII—Agriculture.

The problems of Indian agriculture were comprehensively reviewed in 1928-29 by the Royal Commission on Agriculture and the decade preceding the outbreak of the war saw the adoption of many of its recommendations by the Central and the Provincial Governments which, taken as a whole, have resulted in a substantial development of the organisations which are designed to serve the needs of agriculturists in India. The establishment of the Imperial Council of Agricultural Research, the re-organisation of the Imperial Institutes of Agricultural and Veterinary sciences, the formation of the department of agricultural marketing, the setting up of an Institute for research on Dairy problems are all instances in point. Similarly the provincial governments had throughout the decade evinced a keen desire to develop what are popularly known as "nation building departments" of which the Agricultural Department in its broadest sense is the most important. This desire was not only implemented to the extent possible with the resources available with the Governments but it has also been accompanied by a considerable volume of activity in the legislative field bearing on problems of agricultural improvement such as the reform of tenancy laws, the amelioration of rural indebtedness and the provision of cheap credit. The main task in that decade, however, was to maintain somehow the level of agricultural production in a period which was marked by a catastrophic fall in the price levels of agricultural commodities. The economic conditions were unfavourable for the success of any large scale measures for the improvement of agricultural production and distribution.

Indian agriculture was barely recovering from the adversities of the preceding decade when the war broke out. With few exceptions, war conditions have, on the whole, brought about a "boom" in the price levels of agricultural commodities which has created conditions favourable for their production generally. But at the same time glaring light has been thrown on the weaknesses of the structure of agricultural production in the country. Notwithstanding the most promising prospects of adequate economic return, Indian agriculture, particularly that sector which is concerned with the production of food grains, has been unable to meet the demands made on it. In spite of the strong stimulus of favourable prices, the net increase in the area sown in the last 3 years has been, comparatively speaking, insignificant and there are reasons to believe that the output per acre has also not increased to any considerable extent. Consequently the aggregate output from the total area sown has not been sufficient to meet in full the country's growing requirements in respect of food. These two elements in the situation seem to suggest that the limits of the area capable of cultivation by private enterprise alone have been very nearly reached and secondly that with the resources available to the un-aided effort of peasant agriculture in the country the efficiency of agricultural production cannot be raised to any considerable extent. These two possibilities viewed against the background of increasing pressure of population on land and on food supplies may seem to hold out a dismal picture of the future. Yet the picture need not be as gloomy as it appears to be if concerted and well-planned measures are adopted for general development in the future. India is believed to possess more than 111 million acres of land classified as culturable waste, a substantial portion of which is believed to be capable of cultivation though at a higher cost and at a considerable capital expenditure over reclamation. The total production of the country depends not only on the total amount of the land available but also on the yields per unit of land. In respect of yields the present levels obtained in India compare most unfavourably with those in other important countries as the following table would show:—

<i>Rice</i>		<i>Wheat</i>		<i>Cotton</i>	
Average for 1931-32 to 1935-36		Average for 1924-33		Average for 1937-38	
	<i>lbs.</i>		<i>lbs.</i>		<i>lbs.</i>
	<i>per acre</i>		<i>per acre</i>		<i>per acre</i>
Japan	2,053	Europe	1,148	Egypt	531
Italy	2,963	U.S.A.	846	Anglo-Egyptian Sudan	277
U.S.A.	1,413	Canada	972	U.S.A.	264
Egypt	3,709	Argentina	780	India	89
India	829	Australia	714		
		India	636		

The low yields obtained in India appear to suggest possibilities of considerable improvement in this direction.

The need of long-term planning on a large scale and the necessity of the State taking a hand in the conservation of all possible resources for employing them in securing greater efficiency of production cannot be doubted. But planning on such a wide field requires the formulation of a general policy for the country as a whole. The agricultural policy for a country of the size of India, if conceived on a comprehensive scale, will have numerous facets and is bound to concern itself with and react on practically all phases of the life of the people of the country. In one phase it will be concerned with economic questions of far-reaching importance such as the question of stabilizing the price of agricultural commodities at economic levels, the question of crop planning and the various controls necessary to render it effective; in another it will have to take into account questions of financial policy on matters such as the development of the means of irrigation, rural communications and highways, the introduction of large scale afforestation and reclamation schemes, schemes for the control of erosion, schemes for the more general utilisation of seeds of improved varieties, the provision of facilities for rural finance, the development of crop advisory and protective services, the development of manurial resources, and so on; in another aspect it will have to consider lines of advance in respect of questions bearing on the reform of tenancy laws, organisation of village agencies such as Panchayats, Co-operative Societies, etc., problems of man power in relation to the needs of general and technical administration of the plans.

Again there is the aspect on which the Royal Commission on Agriculture in India laid special emphasis, the environment and psychology of the cultivator. To quote the Commission:—

“Throughout our Report we have endeavoured to make plain our conviction that no substantial improvement in agriculture can be effected unless the cultivator has the will to achieve a better standard of living and the capacity, in terms of mental equipment and of physical health, to take advantage of the opportunities which science, wise laws and good administration may place at his disposal. Of all the factors making for prosperous agriculture by far the most important is the outlook of the peasant himself.”

It is not proposed to give an exhaustive list of the questions which will have to come up for review and consideration in the formulation of a national agricultural policy, but it will be readily observed that they carry large implications.

The formulation of a broad policy need not necessarily imply that every provincial and State Government must adopt identical measures. Such a course, even if it were possible, would not be desirable. What is needed, however, is the formulation of plans for every region which will fit into the broad outlines of the general policy. Questions bearing on the general policy will be considered by the Government of India in consultation with non-official opinion and provincial governments and when they have been decided the latter will be requested to prepare plans fitting into the broad outlines of the general policy. All the regional plans taken together with suitable adjustment where necessary will form the basis of the master plan for the country as a whole.

**Relation between India's Food Resources and Requirements.** As in all things so in the matter of agricultural development the means must be adjusted to the ends in view. What are the ends which agricultural reconstruction in India should keep in view? The first and the foremost aim must be to provide adequate nutrition for India's growing population. In respect of the nutritional requirements of the country, the Indian delegation to the Hot Springs Conference prepared a memorandum in which the following conclusions were stated:—

“India is self-sufficient as regards her food supply in the sense that both imports and exports of food in normal times are small in relation to total indigenous food production. But she is not self-sufficient in the sense that the population is abundantly or satisfactorily fed. In order to make the national diet more satisfactory from the standpoint of nutrition, far-reaching changes in production and consumption are necessary. The direction of these changes is illustrated in the following table. The first column of the table shows a diet, in terms of ounces per adult man or consumption unit daily, which is reasonably

balanced and satisfactory in its contents of necessary food constituents. The energy value of the diet is 2,600 calories, the item 'meat, fish and eggs' being regarded as an alternative to milk. The second column indicates approximately the quantities per adult man of the various foods at present produced. The difference between columns 1 and 2 shows roughly the changes in the production of the various main group of food supplies necessary in order to bring the national diet to the desired level of adequacy."

Table.

	Ounces per day per adult (or consumption unit)		Total quantities in million tons.	
	Required for a balanced diet	Available	Required	Available
Cereals	16	18.5	48.0	55.5
Pulses	3	2.5	9.0	7.5
Sugar	2	1.8	6.0	5.3
Vegetables	6	3.0	18.0	9.0
Fruits	2	2.0	6.0	6.0
Fats and oils	1.5	0.6	4.5	1.9
Whole milk*	8	1.5	32.0	6.3
	Per capita			
Butter milk	...	3.0	...	12.5
Meat, fish and egg.	2.3	0.5	6.0 to 9.0	1.5

\*The figures for available milk are based on existing information about the uses to which the milk supply is put. All the figures in the table should be regarded as illustrative rather than absolute. The table shows in a general way the existing trend of consumption and how this needs modification.

The conclusions of the Indian delegation to the Hot Springs Conference do not represent the considered views of the Government of India on the question of what targets in respect of nutrition should be accepted. They, however, afford a basis for further discussion.

Another aim must be the production of the raw material required by the industries of the country. In respect of some goods manufactured from the raw materials produced in India, there is the prospect of developing a remunerative market. In respect of other goods such as textiles, it must be constantly kept in view that the primary aim should be to find an ever expanding market within the country. As the level of agricultural incomes rises the effective demand for cloth and other goods of a similar nature will rise and plans for the future must take into account the production of adequate raw material to enable Indian industry to meet the rising tempo of such demands.

To some extent India's agriculture must also be called upon to produce commodities for which there is an effective demand in foreign markets. The export of such material will be required in order to enable the country to import essential capital and consumption goods needed by the country.

In respect of the three aims explained above, it will be necessary to proceed with planning on the basis of definite targets.

**Technological Possibilities of Development.** Just as it is necessary to adjust means to ends, it is equally obligatory that the ends which should be kept in view must be such as are capable of actual attainment. In other words in formulating the targets of production it will be necessary to keep in view the technological possibilities of agricultural production in the country. A clear appreciation of these possibilities will provide the basis on which the future plans of agricultural production should be based. In the course of a review specially compiled to serve as the basis for reconstruction planning in this respect, Dr. William Burns, D.Sc., C.I.E., late Agricultural Commissioner with the Government of India has taken each of the principal crops in turn and after considering the average outturn obtained at present, has tried to assess the technological possibilities of these crops in the future in the light of the yields per acre, which research so far has shown to be possible through such means as using improved varieties of seed, the application of manure and protection from

pests and diseases. He gives, in most cases, his opinion as to the extent to which the present average yield of these crops can be raised if all known methods of improvement are put into operation.

His conclusions are:—

*Rice.* The average outturn of paddy per acre during the last five years was 1,109 lbs. (or 738 lbs. rice). Dr. Burns considers that, at a conservative estimate, these yields can be increased by 30 per cent., *viz.*, 5 per cent. by using improved varieties, 20 per cent. by increasing manure, 5 per cent. by protecting from pests and diseases. There should even be no difficulty in increasing the present average outturn by 50 per cent., *viz.*, 10 per cent. by variety and 40 per cent. by manuring.

30 per cent. of 739 lbs. of rice would mean an average outturn of 959 lbs. per acre for all India. He concludes by saying that India should aim at an average of 1,000 lbs. of rice per acre.

*Wheat.* For the last 30 years, the average outturn of wheat in India is calculated to be 707 lbs. per acre and, during the last 10 years, 640 lbs. per acre. Dr. Burns considers that, if only improved varieties are sown, manures applied in the light of results obtained and diseases controlled, it should be possible to aim at an average yield of 1,200 lbs. per acre for irrigated wheat and 600 lbs. for *barani*. The standard yields in the Punjab are 967 lbs. for irrigated wheat and 572 lbs. for unirrigated with an all-over yield of 738 lbs. whereas in the United Provinces, they are 1200, 800 and 786 lbs., respectively.

*Jowar.* Average yields at present obtained are: irrigated 1,200 to 1,500 lbs. per acre, *barani* 100 to 700 lbs. per acre. Dr. Burns considers that an improvement of 20 per cent. is possible.

The all-India average for the last 26 years is 484 lbs. per acre.

*Bajra.* Dr. Burns places the average all-India yield at about 320 lbs. per acre. He considers it possible, by adopting dry farming methods, to increase the yield by 25 per cent., *i.e.*, to 400 lbs. per acre.

*Maize.* Dr. Burns thinks that the present average yield of 800 lbs. per acre can be increased by 25 per cent. to 1,000 lbs. per acre.

By adopting the method of "*Hybrid Vigour*", an increased yield of 35 per cent. has been obtained in commercial production in the U. S. A.

*Gram.* Yields very variable, according to whether irrigated or not.

Dr. Burns concludes that, *provided disease-resistant varieties are found*, the yield may be raised from an average of 500 lbs. per acre to 600 lbs. per acre.

*Pulses.* Little experimental work has been done on these crops so far. Dr. Burns draws no conclusions, except the need for experimentation.

*Linseed.* So far, there is no improved variety yet in production. No suggestions as regards possibilities are made.

*Brassicæ Oilseeds.* The average yield during the last 31 years was 373 lbs. per acre. Dr. Burns concludes that a total improvement of 25 per cent. in yield may be achieved (10 per cent. by manuring, 15 per cent. improved varieties).

*Groundnuts.* Dr. Burns estimates the average yield in India as about 900 lbs. per acre and he thinks it possible to raise the yield to 1,000 lbs. per acre and to improve the oil content by 3 per cent.

*Castor.* The all-India average yield for the last 17 years is 259 lbs. per acre. Dr. Burns thinks that, by using improved varieties, the yield can be increased by 10 per cent. and the oil-content by 3 per cent.

*Sugarcane.* Already over 75 per cent. of the total area under sugarcane in India is grown under improved varieties, but the average is only about 15 tons of sugarcane per acre. Yields of 30 tons are common and even 50 tons can be obtained. Dr. Burns thinks it possible to produce yields of 30 to 55 tons per acre, according to the part of India.

*Cotton.* The all-India average yield of lint during the last 30 years is placed at 90 lbs. per acre. Dr. Burns, while stating that this yield may be increased by improved varieties, manuring, etc., does not lay down any target, as he considers the matter is one of national and international policy. He thinks that

the production in 1940-41 may be taken as the maximum production of cotton for peace-time conditions with a constant endeavour to produce more long-staple and less short-staple.

*Jute.* About 75 per cent. of the total area of the Olitorius group is considered to be under improved varieties and 33 per cent. of the Capsularies group. Dr. Burns thinks that, by the exclusive cultivation of improved varieties and using manures, the present average of about 16 maunds per acre could be increased to 20 maunds per acre and, as a consequence that the 9 million bales obtained from 3,300,000 acres last year could be obtained from 2½ million acres, thus freeing about three-quarter of a million acres for food crops.

*Fibres.* Apart from cotton and jute, not much attention has been paid so far to fibres. The main other fibres are sann-hemp, Deccan hemp, coir and agaves.

Considerable improvement in the quality of sann-hemp is possible by improving the method of retting.

Dr. Burns does not think that India should attempt to compete in sisal hemp (*Agave sisalana*) with the African supplies after the war. He thinks the establishment of a Fibre Research Station is necessary to study the agricultural, commercial and technological possibilities of fibres.

*Tobacco.* He estimates that about 100 million lbs. of cigarette tobacco were produced in India in 1940-41 on an acreage of 110,000. He contemplates an ultimate area of cigarette tobacco of 200,000 acres and a production of 150 million lbs. of flue-cured tobacco.

*Fruit.* Owing to the absence of any separate statistics of fruit areas or the yields, or any knowledge of the present output, demand, etc., Dr. Burns is unable to fix targets, but he considers that the possibilities are enormous, provided India's fruit products can compete with foreign products and also that the quality of the fresh fruit put on the market is improved.

*Vegetables.* Owing to the absence of separate statistics, it seems impossible to fix targets.

*Potatoes.* Here again, statistics are lacking, but if disease-free seed can be produced, fungal diseases be eliminated and improved methods of storage be adopted, he considers that, on the existing acreage, the production can be doubled.

Dr. Burns's report also surveys the livestock resources of India and the suggestions for improvement have been made under the following heads:—

- (a) Feeding;
- (b) Breeding;
- (c) Management; and
- (d) Diseases control.

It is estimated that by paying attention to all the four aspects the following increase in milk output could be obtained under each head:—

Feeding	30 per cent
Breeding	15 per cent
Management	15 per cent
Disease control	15 per cent
<b>Total</b>	<b>75 per cent</b>

The details contained in the report are under departmental examination. The report itself is being released for publication.

## II. Forestry.

Sir Herbert Howard, Inspector General of Forests has prepared a note dealing with questions bearing on the post-war forest policy of the country. He describes the main objects of post-war forest policy as:—

(i) (a) the restoration of the present reserved forests to their original production and the continuation of the former policy of producing the maximum sustained yield of which the soil is capable and of the species most in demand;

(b) the prevention of run-off, floods and erosion generally. Naturally this concerns areas outside the reserved forests but one of the most important aspects is the control of the headwaters of streams many of which are inside reserved forests;

(c) the introduction of new forests properly distributed throughout India (this especially applies to North India) to supply the agricultural villager with fuel and small agricultural timber. These must be supplied more or less at the villager's door-step.

(ii) *The rehabilitation of existing reserved forests* This is a routine matter of forests management. It implies the revisions of old working-plans and the drawing up of some new plans after the war. The forests have not been affected by war fellings to any great extent from their protection point of view though fellings have been in excess of the normal yield. Even this aspect is not as serious as might be expected. Taking India as a whole, the excess fellings are not likely to amount to more than 3 years' yield, but the significant facts are that this excess yield on the total has been taken from the best and most valuable trees and in the most accessible places and that some provinces have felled more in advance than others. Even so, the worst that need be contemplated is a reduction in yield of 30 or 40 per cent. for about 10 years.

(iii) *The prevention of run-off floods and erosion* is best attained by correctly managed forest covering. As, however, it is obviously impossible for the whole country to be managed as forest, it implies correct land management. For whatever system is adopted in a particular place—whether it be forestry, agriculture or pasture—the first step—will be to classify the land and indicate what land must be managed with special reference to floods and erosion control. Land allotted to this category must always be so managed that the protective function comes first. It may be added that the correct management from the point of view of floods and erosion is usually the best management from other points of view as well, that is to say, forest managed correctly for timber production does in fact exercise the best flood and erosion control; an area correctly managed produces the best crops and is usually more effective for flood and erosion control than one incorrectly managed; an area managed to produce the best pasture is also usually most effective under that particular form of land management for flood and erosion control.

(iv) *Agricultural forests.* The solution of this problem is the crux of the post-war forest problem in India. It will incidentally solve much of the problem under (a) and (b) above. Accurate figures are not available, but very approximately, out of the 800,000 square miles of British India, 400,000 square miles consist of cultivated area and current fallow, 144,000 square miles are culturable waste, another 144,000 square miles are classified as unfit for cultivation and 112,000 square miles as forests. This forest area only represents some 14 per cent. of the total area which is by accepted standard far too low. The proportion might well be nearer 20 or 25 per cent. But out of the 288,000 square miles of the so-called cultivable waste and uncultivable waste, it should not be impossible to find at least another 100,000 square miles fit to grow these "agricultural" forests properly distributed for the villagers' supply. This would solve that part of the problem and the effect will be far-reaching. Lack of fuel causes villagers to burn cowdung instead of fuel. There are probably 300 million head of cattle in India producing perhaps 400 million tons of cowdung per year. If this cowdung were all used for its legitimate purpose of manure for the fields instead of being burnt, it would increase food production sufficiently to alter the whole agricultural economy of the country. How much of the cowdung is being burnt nobody knows, but it is almost certainly somewhere between 125 million and 250 million tons. How much this would increase the total food production is a problem for agricultural experts, but it would certainly adequately manure some 15 to 30 per cent. of the whole cultivation in India. Moreover cowdung is a cheap form of manure available for every agriculturist, provided it is not burnt. Nor need this be a vision of the distant future. What the agriculturist wants is quick growing trees to provide fuel,

charcoal, small house building timber and timber for ploughs. Such forests can be grown in on short rotation of 15 to 20 years and would provide their first return of fuel from thinnings within 5 years of formation. Nor is there technically any difficulty in finding the tree or growing it in areas with more than about 20 inches average rainfall per year. There are, however, many treeless areas with a rainfall much below this. Where irrigation exists there is again no technical difficulty in growing these small agricultural forests. Where no irrigation exists the problem is more difficult of solution, but down to an average rainfall of about 12 inches and even on practically pure sand the correct species of forest trees can be grown to supply the simple wants of the villager. Much of this low rainfall area occurs west of a line running from Lahore to Rohtak through Ajmer to Nawanagar and east of a line running roughly from Lyallpur through Bikaner about 50 miles west of Jodhpur and down to a point about 100 miles south-east of Karachi. The introduction of village forests over the optimum proportion of these areas would not only solve their immediate fuel and small timber problem but would have a great effect on the general climate, the general pasture and fertility of the soil. The surface evaporation at Jodhpur is about  $7\frac{1}{2}$  feet per year and with a proper proportion of forests this evaporation would be very largely reduced. Nor would it decrease the available fodder and grazing grounds. Grazing, and above all the grazing of goats, would certainly need regulation, but this type of agricultural forest would produce far more grazing than the areas produce at present (probably 3 times as much) and at the same time in many of the areas the trees themselves would provide fodder.

Sir Herbert Howard's report is being released for publication.

### III. Fisheries.

Dr. Bains Prasad, Director of the Zoological Survey of India, was asked to prepare a report dealing with questions bearing on the problems of post-war development of the fishery resources of India. The report outlines the various stages of development to be planned annually in the first five years programme of development. The more important features of this preliminary five-year plan are:—

- (i) First year, establishment of a central organisation to guide research and to prepare plans for the development of fisheries;
- (ii) Second year, preparation of detailed reports on the possibility and the best method of exploiting Indian sea, river and lake fisheries;
- (iii) Third year, establishment of demonstration farms, training of teachers and demonstrators and research on marketing, cold storage, preservation, craft best suited to operate in the various fisheries, etc.;
- (iv) Fourth year, establishment of small model fish factories;
- (v) Review of the first four years' work, co-ordination of inter-provincial activities, enactment of legislation, if necessary, to protect fisheries from excessive or improper exploitation, provision of patrolling boats and construction of fish-passes in rivers, streams and canals.

The report is under departmental examination but is being released for publication.

### SECTION IX—Social Services.

The Government of India are fully alive to the importance of developing the Social Services of India and have instituted a number of committees to make a factual survey of the conditions prevailing in the various fields of public social activity and to make recommendations regarding their reorganisation and expansion. The work of these committees has made good progress and it is expected that the broad policy regarding the development of social services will be decided and administrative and financial details filled in, after consultation with the Provincial and States Governments concerned, before the cessation of hostilities.

*Education.* So far as Education is concerned, the problem of Post-war Reconstruction, though it will no doubt be found, in practice to present special difficulties of its own, is probably simpler in some respects than that of the other Social Services. While it goes without saying that any system of public instruction, suited to the needs of the Indian people, must be framed with special regard to their history and traditions as well as the particular conditions under which they live, there is a large measure of agreement among modern nations which are or aspire to be civilised democracies as to what the minimum content of an efficient system of public instruction should be. Whatever, therefore, the modifications that may be required to meet local conditions, it may be assumed that India will not be able to hold her own in the post-war world unless she is able to give to her people, and to the rising generation in particular, a training for life and for livelihood comparable with that which other great nations are providing for theirs. The minimum facilities, therefore, which post-war plans should aim at providing, can be defined within reasonably accurate limits, and in this respect they are less likely to be influenced by developments external to India than in the case of other services—particularly in the industrial and economic spheres. The immediate task has also been rendered easier by the fact that the Central Advisory Board of Education, which has been asked to prepare a post-war plan and has just completed its labours, has been studying intensively during the last 6 or 7 years the reforms which are necessary in most of the branches of education to place India on a comparative equality with other civilised countries.

The main branches of a system of Public Instruction, which is likely to satisfy the needs of post-war India, have been outlined by the Board as follows:—

(1) Universal, compulsory and free education for all boys and girls from the age of 5 or 6 until 14, in order to ensure literacy and the minimum preparation for citizenship.

(2) A reasonable provision of education before the compulsory age for school attendance in the form of nursery schools and classes. This is important mainly in the interests of health, particularly in areas where housing conditions are unsatisfactory.

(3) An efficient school medical service, which will see that children are made healthy and kept healthy. This means treatment as well as inspection and the provision of proper nourishment in necessitous cases. It is a waste of time and money to try to teach a child who is underfed or conscious in other ways of serious physical discomfort. Health also postulates the provision of hygienic buildings in suitable surroundings, the right kind of furniture and equipment and ample facilities for physical training and games.

(4) Secondary or high school education for those children who show the capacity for benefiting by it. Probably to satisfy this requirement provision should be made ultimately in high schools of various types for 20—25 per cent. of the boys and girls in each age-group. Variety both in types of school and in the curricula of individual schools is essential to suit the varying tastes and aptitudes of the individual pupils on the one hand and the requirements of their future occupations on the other. In addition, so that no boy or girl of outstanding ability may be debarred by poverty from further education,



financial assistance in the form of free places, scholarships and stipends must be forthcoming.

(5) University education, including post-graduate and research facilities for picked students. It is difficult to fix a quantitative standard here but probably places equivalent to 10 per cent. of the high school population would be the ultimate goal. Until, however, a selective system of High Schools on a national basis has been firmly established, a smaller provision would meet all reasonable needs.

(6) Technical, commercial and art education. The amount, type and location of this will necessarily be determined to a large extent by the requirements of industry and commerce.

(7) Adult education, both vocational and non-vocational of all kinds and standards, to meet the needs of those who were denied adequate opportunities in their earlier years or recognise the importance of supplementing what they then received.

(8) Special schools for children suffering from mental or physical handicaps.

(9) Recreational facilities of all kinds, to satisfy the craving for corporate activity and to counteract the drabness of the conditions in which so large a part of the Indian people otherwise spend their lives. It is difficult to think of a country where a well-organised Youth Movement would be more remunerative than it would be in India.

(10) Employment Bureaux to guide school and college leavers into profitable employment and so far as possible to adjust the output of the schools to the capacity of the labour market.

(11) Arrangements for training the vast army of teachers which a system of this kind will require.

(12) An administrative system which will place initiative and authority in the hands of those who understand and care about education.

How far the present system of education in India is from complying with these minimum requirements may be seen from a few simple facts. 85 per cent. of the present population is illiterate. Of the children who actually enter the doors of a school, less than 1 in 4 remain long enough to reach the earliest stage (class IV) at which permanent literacy is likely to be attained. Since the average pay of a primary teacher in Government Schools in India is about Rs. 27 p. m. and in private schools is actually much lower—in one of the largest Provinces the average is below Rs. 10 p. m.—it can hardly be said that the teaching service in India is likely to attract at the moment the sort of people who ought to be in charge of the nation's most valuable asset, namely, its children, during its most malleable stage. In the higher stages of education there is practically no selection, the main criterion for admission to high schools being ability to pay fees rather than intellectual promise, and apart from the passing of an admittedly easy matriculation, the same largely applies to University education. The provision of technical, commercial and art education is entirely inadequate to meet the anticipated requirements of a more highly industrialised India. In regard to the other main branches referred to, the present provision is either non-existent or in such an embryonic stage that it can hardly be said to touch the fringe of the problem.

The plan prepared by the Central Advisory Board covers all the branches of education set out above. It prescribes universal compulsory and free education for all boys and girls from 6 to 14. It contemplates the provision of 10 lakhs of places in nursery schools and classes for children below the age of 6. It sets out the basis upon which an efficient school medical service should be provided. In high schools, it aims at the provision of schools of varied types suited to the aptitudes of the pupils, which will cater for at least a fifth of the boys and girls in each age-group. It also emphasises the necessity of providing liberal financial assistance in the form of free places, scholarships and stipends so that no boy or girl of outstanding ability may be debarred by poverty from further education. In consequence of the number of boys and girls of outstanding ability which a national system based on equality of opportunity is sure to throw up, it aims at

a very large increase in the provision of education at its higher stages, whether in universities or in technical institutions of university level. It also foresees the necessity for enlarging and making more practical the present provision for technical, commercial and art instruction at all levels in order to provide India with the research workers, executives and skilled craftsmen which the expansion of her industrial, economic and agricultural resources will inevitably demand. It also does not neglect the purely cultural and recreational side of education as it attaches particular importance to the provision of the widest facilities for encouraging boys and girls, men and women, to fulfil themselves as individuals and to make a profitable use of their leisure.

Finally it makes suggestions for removing the obstacles in the existing administrative system which have militated against its success in the past and may be expected to put still graver obstacles in the way of any comprehensive development. It is not possible here to do more than indicate the main lines of the structure which the Central Advisory Board have in mind. As they themselves have made abundantly clear, it will be for Provincial and State Governments to work out in detail the best way of applying in their own areas the general principles which have been laid down by the Board. Reference may, however, be made to certain fundamental aspects of education not specifically mentioned in the outline of the scheme which has been given above. The Board emphasise in the report that the training of character must at all stages of education be regarded as not less important than the training of intellect and that physical, mental and moral instruction must proceed side by side. They have also stressed the importance of accelerating the provision of educational facilities for girls and women in view of the extent to which their claims have been ignored in the past, in fact they have stated their conviction that whatever may be provided for boys and men, not less should be provided for girls and women.

The Board have estimated that the system they have in mind, when in full operation, will cost Rs. 312 crores gross or Rs. 277 crores net per annum divided as under:—

	Estimated gross annual expenditure.	Estimated income from sources other than public funds.	Estimated net expenditure to be met from public funds.
	Rs. in lakhs	Rs. in lakhs	Rs. in lakhs
1. Basic (Primary & Middle) . . . . .	20,000	...	20,000
2. Pre-Primary Education. . . . .	320	...	320
3. High School Education. . . . .	7,900	2,900	5,000
4. University Education. . . . .	960	290	670
5. Technical, Commercial and Art Education. . . . .	1,000	200	800
6. Adult Education. . . . .	300	...	300
7. Training of Teachers. . . . .	620	170	450
8. School Medical Service.* . . . .	...	...	...
9. Education of Handicapped* . . . . .	...	...	...
10. Recreational and Social facilities. . . . .	100	...	100
11. Employment Bureaux† . . . . .	60	...	60
12. Administration.‡ . . . .	...	...	...
<b>Total</b>	<b>31,260</b>	<b>3,560</b>	<b>27,700</b>

\* An amount equal to 10 per cent. of the gross expenditure at the appropriate stages has been provided to meet the cost of the School Medical Service and Education of the Handicapped.

† Special provision has been made for this service in the beginning ultimately it should be absorbed in Administration.

‡ Provision to cover the cost of Administration has been included at all stages. It is assumed that this will approximate to 5 per cent. of the gross expenditure.

Approximate incidence of increased cost of education involved by the adoption of the Board's proposals is as follows:—

	Rs.
5th year . . . . .	1,000 lakhs.
10th " . . . . .	2,380 "
15th " . . . . .	3,740 "
20th " . . . . .	6,145 "
25th " . . . . .	10,600 "
30th " . . . . .	16,500 "
35th " . . . . .	25,000 "
40th " . . . . .	31,200 "

It is assumed in the above table and throughout the Board's report that capital expenditure on school sites and buildings will be met out of loan in future. Provision has accordingly been made for interest and sinking fund charges only.

Warning, however, is given that these are approximate figures based on pre-war standards, both in regard to cost of living and population, and that they are liable to very substantial variations in view of the changes in social and economic conditions which are likely to take place during the period which must elapse before the scheme can be brought into full operation.

It was stated at the beginning of this section that while educational development might be simpler to plan than in the case of other services, it would present special practical difficulties of its own. One of these will be apparent from what has already been said, and that is the enormous lee-way which has to be made up. An equally difficult problem from the point of view of the planner is the fact that educational development does not lend itself to short term planning. The whole carrying out of any plan of educational development depends on the supply of teachers required being available. It takes time to recruit and train teachers—in some cases the period of training may extend to 4 or 5 years—and the result is that the teachers trained in the course of one 5-year plan will have to be provided with employment during the next. Furthermore, a modern system of education to achieve its full success, or indeed to be successful at all, requires that its various branches should be closely linked up with one another. It is little use to provide education for all children unless they are required to remain long enough at school to receive the minimum training which will make them good citizens and good workers. It is not less evident that those with the requisite capacity should be selected for further training in order that they may provide the community with the leaders in all walks of life which it will require. It has already been explained why various ancillary services are necessary to make the whole system sound and complete. This, therefore, means that the system must be introduced as a hole in an area large enough to provide in economic unit with sufficient variety in the various types of educational institutions required. Since it would clearly be neither equitable nor expedient to provide education for some children and not others, it will be necessary to satisfy public opinion that a complete plan has been prepared by which their claims for educational opportunity will be met sooner or later. Warnings have been given elsewhere in this report as to the impracticability of one Government committing its successors to the implications, financial and otherwise, of a long term policy, but it is difficult to see how this can be avoided in the case of education. When a start has once been made, it is imperative to proceed to the logical conclusion. The social services, however, in this respect are on a somewhat different plane from economic and industrial development, for it is difficult to conceive that any democracy of the future will be satisfied with a smaller provision in this respect than present opinion regards as necessary.

**The Health Survey and Development Committee.** It would be a truism to say that there is a vast scope for the improvement of public health conditions in India. The Government of India appreciate that a high level of health for the individual and for the community can be attained only through measures designed to cure disease, to prevent sickness and to promote positive health. They have therefore appointed the Health Survey and Development Committee under the Chairmanship of Sir Joseph Bore which held its first meeting in

New Delhi on the 26th—28th October 1943. The following extracts from the message sent by His Excellency the Viceroy to the Committee gives an indication of the problems which the Committee will have to examine.

"In the most highly organised countries of the world a large scale system of social services guards the health of the community. The Maternity and Child Welfare Service, the school clinic, and the sickness insurance plan—all backed by well-equipped hospitals and highly qualified medical men—prevent and cure disease in the individual. Through local authorities, and under the various statutes governing work in factories, provision is made for environmental hygiene. There are schemes of slum clearance and rehousing. The supply of water and food are competently supervised, and control is maintained over domestic and industrial wastes. I need not prolong the list; but I must add that behind the Social Services there is, in the advanced countries to which I refer, a powerful network, of research organisations.

"In India we have traversed only a small part of the road towards National Health. I acknowledge the devoted work done, often in conditions of great difficulty, in this field; nor do I forget the poverty of India—that heavy disability which lies upon all agricultural countries whose populations are large and whose individual holdings of land are small. But I have no doubt that given guidance from a Committee such as this, and a determination to attack the problem, we can do much more than has hitherto been thought possible.

"It is not for me to attempt to guide you in your deliberations, but I may perhaps outline some of the questions which have occurred to me during the past two years. In our cities we have slums which are a disgrace to a civilised country. Much has been done by some of the Improvement Trusts—particularly in Calcutta—to remove the worst of the slum dwellings and to introduce light and air. But have we yet faced the gigantic task of rehousing the slum dwellers in such a way and under such supervision that they will not relapse into their original condition? The financial implications of any rehousing scheme in which the displaced population cannot afford to pay something like an economic rent are very great, and I am aware of all the difficulties. But is it not time for us at least to face the problem and to see what can be done about it?

"Again, although in some of our cities we have excellent water supply and sanitary systems, in others little has yet been done to produce hygienic conditions.

"Then, there is malaria, the universal scourge, which probably causes more ill-health and inefficiency than any other one factor in the health field. Have we yet made sufficient use of the admirable work of the Malaria Institute? Could insecticides be made from Indian-grown materials on a scale and at a cost which would render their nation-wide use possible? Could not more be done to provide protective materials—such as mosquito netting and mosquito wire—and could not these things be made on a larger scale in India? The average family may be unable to afford them, but their use could undoubtedly be extended.

"We certainly need more maternity and child welfare centres, more school clinics, and more qualified medical men both for preventive and for curative medicine. What prospects are there of improving the medical and health services in the village? Can medical men be attracted to the villages as private practitioners? Why is there so much difficulty in establishing an adequate nursing service?

"Two other points which occur to me are the possibility of improving the production of home-grown drugs, and the need for the development of research organisations in addition to those we already have.

"I have stated these questions not because I believe that they cover the whole ground, but because they show how the defects in the present organisation strike a layman who has not in the past been directly connected in his work with the medical and public health administration of the country. Your task will be to cover the ground as adequately as you can, and I have no doubt that in doing so you will not neglect the experience gained and the results achieved in other countries—especially those whose economy is comparable to that of India."

As a result of the work of the first meeting of the Committee, it was decided to set up five advisory Committees to deal with the subjects of public health, medical relief, industrial health, medical research and professional education respectively. All the Advisory Committees met once last year and some of them held their second meetings in January 1944; and the main Committee at its second meeting, in January 1944, reviewed the work of the Advisory Committees. Questionnaires have also been issued to Provincial Governments and various institutions and individuals interested in the different public health problems and the information thus collected will be supplemented during the tours in the Provinces which the Advisory Committees will undertake.

I. **The Public Health Advisory Committee** will deal with the following subjects:—The state of public health in India, environmental hygiene, nutrition, chief diseases, internal and international quarantine, maternity and child welfare and health and physical education.

The composition of the Committee is as follows:—

Rai Bahadur Dr. A. C. Banerjea.

Lt.-Colonel C. A. Bozman.

Dr. A. H. Butt.

Lieut.-Colonel E. Cotter.

Dr. J. B. Grant.

Dr. B. C. Das Gupta.

Sir Frederick James.

Honourable Mr. P. N. Sapro.

Mr. B. Shiva Rao.

Mrs. Shuffi Tyabji.

Honourable Dr. Wadhvani.

The Committee has already started examining the question of urban and rural housing, nutrition, maternity and child welfare, water supply and the training of public health engineers and the development of special facilities for the prevention of malaria, leprosy, tuberculosis, etc., and has interviewed several experts in these lines. It will also deal with quarantine, internal and international, school-health, physical education and health education.

II. **The Medical Relief Committee** will deal with medical relief in urban and rural areas, organisation of hospitals and dispensaries, after-care for patients discharged from hospital, provision of diagnostic facilities, mental hygiene, prevention of mental diseases, provision for mental patients and mental defectives, drug addiction, control of the trade in medicines, production and standardisation of drugs and biological products, etc.

The Committee is composed of the following:—

Dr. R. B. Chandrachud.

Dr. D. J. R. Dadabhoy.

Major-General J. B. Hance.

Sir Henry Holland.

Pandit L. K. Maitra.

Major-General W. C. Paton.

Dr. B. C. Roy.

Lt.-Colonel B. Z. Shah.

This Committee is now examining the problem of the formation of a co-ordinated plan or preventive and curative health services for the country as a whole and with special reference to the rural population.

III. **The Industrial Health Committee** will be concerned with all the problems affecting the health of the industrial population such as administration of health services, occupational diseases, accidents, environmental hygiene in the factory, housing, nutrition, welfare work, sickness and maternity benefits, planned regional zoning of industry, drug and drink habits and industrial health research.

The composition of the Committee is as follows:—

Lt.-Colonel E. Cotter.

Major General J. B. Hance.

Sir Frederick James.

**Q. 204** Joshi.

Dr. B. C. Roy.

Mr. B. Shiva Rao.

Honourable Mr. P. N. Sapsra.

Sir Shri Ram.

This Committee has appointed a Sub-Committee to prepare a minimum health target for the industrial population and is now engaged on the examination of labour legislation and its administration with particular reference to public health.

IV. **The Medical Research Committee** will deal with the problems relating to the existing organisation of medical research facilities, and facilities in respect of research into social and administrative problems from the point of view of public health organisation.

The composition of the Committee is as follows:—

Dr. W. R. Aykroyd.

Lt.-Colonel Sir Ram Nath Chopra.

Lt.-Colonel E. Cotter.

Major-General J. B. Hance.

Pandit L. K. Maitra.

Dr. B. Vishwa Nath.

Dr. C. G. Pandit.

Dr. V. N. Patwardhan.

Major-General Sir John Taylor.

The Committee is now engaged on formulating a scheme for the establishment of a National Medical Research Council and of a Central Research Institute. The incidental problems which the Committee is also examining are those relating to the procurement and organisation of research workers, co-ordination of existing research institutions and the organisation of special researches into specialised problems such as malaria, nutrition, etc. The Committee has already interviewed several experts in these lines.

V. **The Medical Education Committee** will examine the whole problem of professional education, which includes pre-medical scientific education, the under-graduate training of doctors, the training of public health officers, the provision of refresher courses and post-graduate training in different subjects, the training of other health personnels such as dentists, pharmacists, nurses, sanitary inspectors, health visitors, midwives, etc., and registration of medical men and other health personnel.

The composition of the Committee is as follows:—

Dr. J. B. Grant.

Dr. M. A. Hamid.

Major-General J. B. Hance.

Dr. M. S. Lazarus.

Diwan Bahadur Dr. A. L. Mudaliar.

Dr. U. B. Narayanrao.

Dr. B. Vishwa Nath.

Dr. B. C. Roy.

**Labour Legislation and Welfare.** The Government of India in the Department of Labour have under consideration several important schemes designed to promote the welfare of the working population.

All important proposals relating to labour are now being regularly considered in the Tripartite organisation set up in 1942 and consisting of a Labour Conference and a Standing Labour Committee. On both these bodies, the Central Government, Provincial Governments and the more important States and the Chamber of Princes are represented. Employers and workers have also an equal representation on them. The organisation follows broadly the model of the International Labour Organisation.

At the fifth meeting of the Labour Conference held in September 1943, one of the important items on the agenda was "Social Security". It was recommended by the Conference that the Government of India should set up a machinery for investigating into various labour questions so that a Planning committee which may be set up later, can prepare practical schemes, for the social

security of labour in India. In pursuance of this recommendation and in order that information may be collected, bearing upon various aspects of social security so as to enable the Planning committee subsequently to be set up to draw up a programme of social security for labour in India, the Government of India have appointed a Committee of Enquiry to be known as Labour Investigation Committee. The Committee is composed of:—

(1) Mr. D. V. Rege (Chairman)

Members

(2) Mr. S. R. Deshpande.

(3) Dr. Ahmad Mukhtar.

(4) Mr. B. P. Adarkar (Member and Secretary).

The Government of India have already appointed a special officer to prepare a draft Sickness Insurance Scheme for certain classes of skilled and technical labour which is now being examined by a panel of actuaries and which it is hoped will form the basis for future Sickness Insurance legislation. On other questions, such as, old age and unemployment, very little statistical material is at present available and a thorough preliminary investigation is essential before any advance can be made. It is expected that the Labour Investigation Committee will be able to collect more information on these subjects and that the factual survey on which they are at present engaged will furnish the basis of future planning. This investigation will also be useful for considering Minimum Wage legislation. The question of the form the machinery for wage fixation should take has already been considered in some detail by the Standing Labour Committee in January 1944.

Besides the special investigation work which the Labour Investigation Committee will undertake, Labour Department are taking steps to improve generally labour statistics in India.

The working of the Employment Exchanges and their probable effect on the general conditions of employment have already been mentioned in Section III.