

REPORT
ON
FAMINE AND SCARCITY
IN THE
CENTRAL PROVINCES AND BERAR
DURING THE YEAR
1920-21

29 MAR 2010

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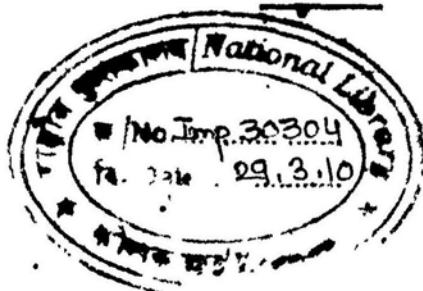
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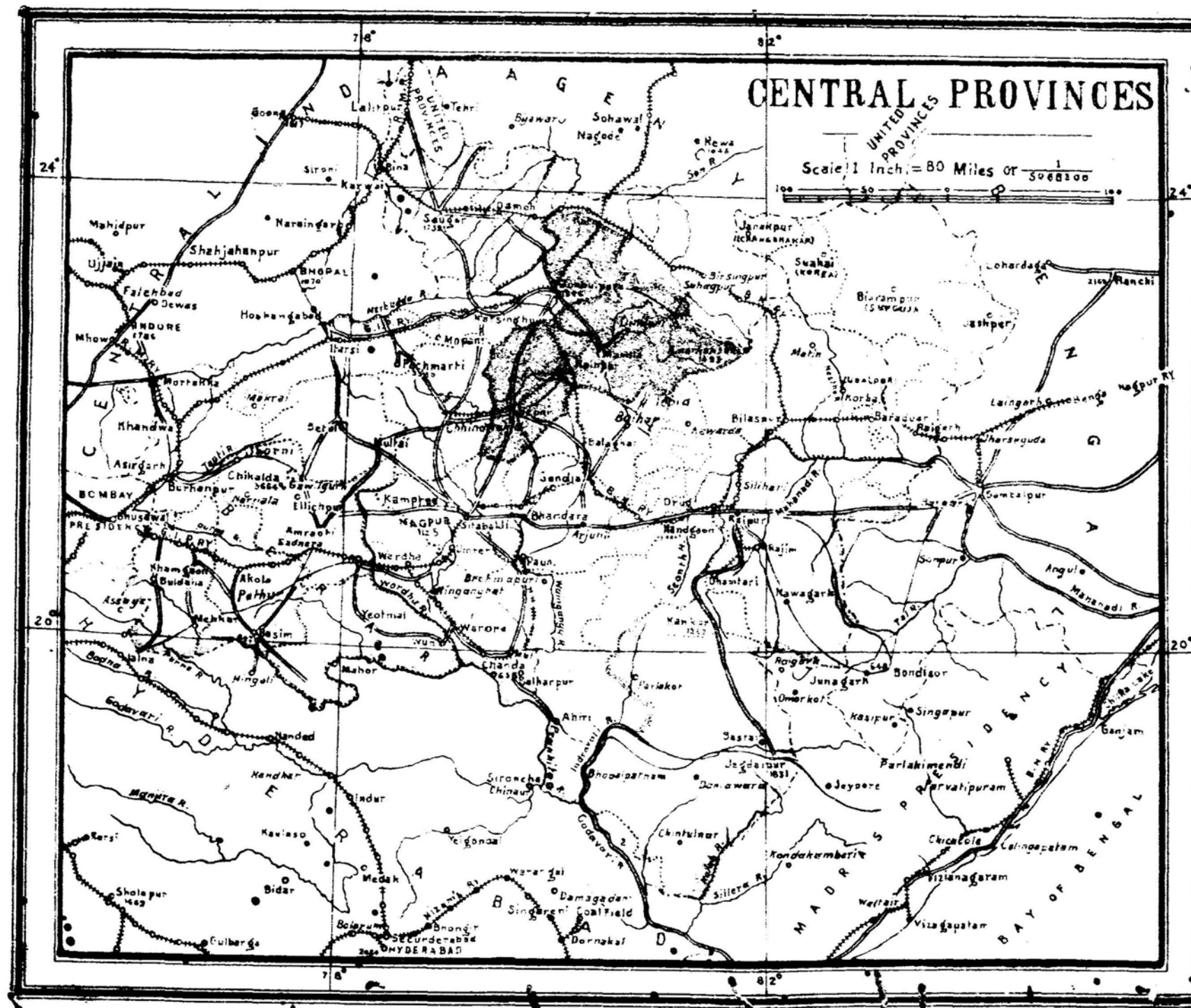


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REPORT ON FAMINE AND SCARCITY

IN THE

CENTRAL PROVINCES AND BERAR

during the year 1920-21

AND ON THE

OPERATIONS FOR THE PREVENTION AND RELIEF OF DISTRESS

INTRODUCTORY.

This report deals only with those features of the crop failure of 1920-21 and the consequent relief measures, which are of interest from the provincial point of view. The Divisional Reports and the District Reports of those districts in which the crop failure was severe have been printed separately, and for more detailed information reference is invited to them. The statistical statements appended to the report compare the conditions, nature, amount and cost of relief in 1920-21 with those in 1899-1900, with the object of determining whether in any considerable area of the province the conditions were so far similar in the two years as to warrant the conclusion that the measures taken in 1920-21 would be successful in the most severe visitation of famine which experience indicates as possible. The determination of this matter is financially important as the annual contribution to the Famine Insurance Fund is based largely on the cost of relief in 1899-1900.

2 Summary of recent agricultural history and of the causes of crop failures of 1920-21.—The agricultural and economic history of the province since the famine of 1899 has been indicated in the Famine and Scarcity reports for the years 1907-08 and 1918-19, and it is only necessary here to recapitulate in the barest outline. The period 1900-1907 was one of slow but sure recovery in agriculture from the calamities of the years ending with the famine of 1899-1900 and also of rapid commercial progress. The year 1907-08, though one of partial crop failure, caused only a temporary set-back, and the progress of the preceding years was still more rapid in the succeeding ten years. The population, which in 1901 had fallen since 1891 by 8 per cent, had risen in 1911 by no less than 16 per cent over the 1901 figure. Every year had witnessed an increase in the area occupied for cultivation and every year saw a larger development in the mining and other industrial activities of the province. The high prices obtained by agriculturists for their produce during the war had left cultivators in a position of great prosperity, while with the increasing demand for employment in the manganese and coal mines, the lac and cement industries, and cotton gins in Berar, labour was able to command an unprecedented standard of wages.

In spite of the fact that the agricultural seasons immediately prior to 1918 were not years of more than average outturn, the scarcity of that year found the cultivating and labouring classes in a better position than ever before to withstand the crop failure. A kharif crop of less than half the normal and a rabi area decreased by 30 per cent would alone have been sufficient to embarrass seriously the poorer classes: and this effect was enhanced by two additional disasters. The first was the great epidemic of influenza which resulted in a loss of more than 900,000 lives (6·6 per cent of the population) and during the three months when it was at its height raised the death-rate to an average of 23·07 per thousand against the decennial average for those months of 3·55 per thousand. The second factor was the depletion of reserve food-stocks during the last year of the war, which had raised prices to unknown levels, and the inability of the railways, owing to shortage of rolling stock,

to distribute freely such food-stocks as were available. In that year, 12,800 square miles with a population of $1\frac{1}{2}$ millions were affected by famine and an area of 38,000 square miles with a population of 5 millions by scarcity. Fortunately, the season following the scarcity of 1918-19 was well above the average. The rainfall was more than normal and was well distributed. In the more important kharif areas the outturn of the staple crops considerably exceeded the normal, while the wheat outturn for the whole province was 98 per cent of the normal crop. The same figure represents the total average outturn of all crops, kharif and rabi, taken together for the province.

3. Failure of 1920-21.—The crop failure of 1920-21 was, like its predecessors in 1907-08 and 1918-19, due to the abrupt cessation of the rain in the middle of September 1920. The monsoon of 1920 broke somewhat late in the last week of June. The rainfall was light but well distributed and sufficient, and by the end of July all crop prospects were good, except in four districts. An opportune break then occurred and was followed by good showers in August except in the Chanda, Akola and Amraoti districts where practically no rain fell. In Mandla the rainfall had been excessive, standing crops were damaged, and a large area had to be resown. Light rain continued to fall in the first week of September and was succeeded by moderately heavy showers all over the province in the second week. More rain, however, was urgently required in several districts, especially in the rice-country and in Berar. Elsewhere, standing crops were at this period in fair condition and prospects were not unfavourable. From this time onwards, however, the rain came to an abrupt stop, and except for a few light showers in certain districts, no further rain was received anywhere from October 1920 to the latter half of January 1921. The result, as on all previous occasions, was a severe failure of the kharif harvest. The monsoon rainfall was 28.42 inches against the average of 43.17 inches.

The prolonged drought, coupled with the excessive heat, hardened the soil and caused a great contraction of the area sown with spring crops. The total rabi area sown was 30 per cent less than in 1917-18. The want of moisture in the soil which was responsible for the decrease in sowing, coupled with the absence of all rain till late in January, prevented satisfactory germination on light soils and a general failure of the rabi harvest resulted. The combined outturn of both harvests over the whole province amounted to only 42 per cent of the normal crop against 55 per cent in the two scarcity years 1907-08 and 1918-19. The Jubbulpore and Berar divisions suffered most. In Seoni and Mandla the combined outturn of all crops did not exceed 25 per cent of the normal, while in Saugor alone of the districts of the Jubbulpore division the combined outturn exceeded 55 per cent of the normal. In three districts of Berar the outturn was between 26 and 27 per cent of the normal and in the fourth district only reached 40 per cent. Other divisions were more favoured, but only in comparison with the worst afflicted tracts. In the Nerbudda division, the outturn was 47 per cent of the normal in Chhindwara and 37 per cent in Betul; in the Nagpur division, it was 38 per cent in Bhandara and 42 per cent in Balaghat; while in the Chhattisgarh division, the outturn in Drug was only 37 per cent of the normal and in Raipur, the most favoured district in the division, did not exceed 52 per cent. In only three districts of the province did the outturn reach more than 60 per cent of the normal. The crop failure was more serious than any which has occurred since 1899-1900.

4. Areas and classes affected.—The first districts to be affected were Mandla and Seoni in the Jubbulpore division and Bilaspur and Drug in Chhattisgarh. Scarcity was declared in the whole of the first two districts and in parts of the latter two from the beginning of December. It was declared very shortly afterwards in the same month in the greater part of the Jubbulpore district, part of the Damoh district and in the Amraoti, Akola and Buldana districts of Berar. By the third week of February it had become necessary to declare a state of famine in the whole of Mandla, Seoni and the greater part of Jubbulpore, where the situation was again complicated by a rush of

immigrants from the Rewah State. The Nagpur division was less affected, but the Sironcha tahsil of the Chanda district was declared to be in a state of scarcity in January 1921, and a similar declaration was eventually made in parts of Balaghat, in the Deolapar tract of the Nagpur district and part of the Arvi tahsil of Wardha district. In the Nerbudda division it was only in the two plateau districts that scarcity conditions prevailed. In March and April scarcity conditions spread over the Raipur district, thus involving the whole Chhattisgarh division. Most of the Feudatory States were also affected. In April the Melghat taluq of Amraoti, hitherto excluded, was brought under scarcity operations.

Over the province as a whole nearly 12,000 square miles, with a population of nearly $1\frac{1}{2}$ millions, were declared to be under famine and 35,000 square miles, with a population of over $4\frac{1}{2}$ millions, under scarcity. In 1899-1900 the whole province came under famine.

As always, the classes most affected were the labourers and smaller tenants. The petty artisans in towns, especially the handloom weaver class, were also hard hit. The more substantial tenants and petty landlords found the liberal suspensions of land revenue and the loans advanced by government under the Agriculturists' Loans Act sufficient to tide them over the crisis.

5. Comparison of degree of crop failure in 1899-1900 and 1920-21.—

The rainfall and crop outturn statistics in tables I and III show that, except in certain limited areas, the climatic conditions were more unfavourable in 1899-1900 than in 1920-21 and the crop failure was more severe. In the former year, the failure of the monsoon after August was much more complete and the shortage began earlier. In Betul, the most unfortunate district in that year, only 2 inches of monsoon rain fell after the end of July. Turning to the crop outturn it will be seen that the crops of 1920-21 were considerably better than those of the former year, except in the Seoni and Mandla districts, where the failure of 1899-1900 was not so complete as elsewhere and was indeed surpassed by that of 1896-97. Unfortunately crop outturns in Berar for 1899-1900 are not available, but the local officers conclude from examination of reports and records of that time that, bad as the crop was in 1920-21, it was slightly worse in 1899-1900. On the other hand, whereas it was commonly believed that the stocks of *juari* in the grain pits at the beginning of the famine of 1899 were sufficient for three years' consumption, the granaries were nearly empty in 1920. In making comparisons between the methods and results of the two years, allowance must be made for the difference in degree of distress.

6. System of relief adopted, its origin and development.—

Before describing in greater detail the various forms of relief utilized, it will be of interest to give an outline of the system followed, tracing its development from that inaugurated by Sir Reginald Craddock in 1907 and showing how it differs from that prescribed by the Famine Code. In 1907-08 Sir Reginald Craddock, with the approval of the Government of India, initiated what he described as the "prophylactic" system of relief, which aimed at preventing, by timely extension of employment on ordinary terms, deterioration consequent on unemployment and so avoiding the elaborate arrangements necessary to deal with a demoralised and debilitated population. The method was to extend the ordinary programme of road and irrigation works executed by contract agency, as soon as probability of scarcity was discerned, and to rely on them to supplement diminished private employment, turning to other and more elaborate forms of relief only if it became evident that contractors were rejecting labour or underpaying it to an extent which threatened to defeat the object with which the extended programme of works had been adopted. It was an essential part of the system that there should be no direct interference between the contractor and his labourers. In the event it was found unnecessary to convert any of the contract works into famine works under the Code; but in the Jubbulpore division, these works had to be supplemented by village works, partly to provide for inefficient labour rejected by contractors and partly to serve areas remote from contract works. Gratuitous relief was freely given, as it was recognized that the contractors'

wage would not suffice to support workers' dependents, and the number of persons gratuitously relieved exceeded, at some seasons very largely, the number of workers. The Local Government claimed that the system had "thoroughly proved its suitability for adoption in a year when distress, rather than acute famine, was feared." Both in 1918-19 and in the period now under report, the Local Government followed Sir Reginald Craddock's example in dispensing with the large relief works managed on the elaborate system adopted in 1899-1900 and prescribed by the Famine Code, but in some important respects, the method followed differed radically from that of 1907-08. In 1918-19, it was soon realized that, at the prices prevalent, labourers could not earn a living wage on contract works, unless the contractors' rates were substantially raised, and as it was thought inadvisable to pay increased contract rates which might afterwards be difficult to reduce, it was decided to manage works departmentally, paying a wage calculated to be sufficient to support the workers, but not their dependents. One effect of this method was that the number of persons on gratuitous relief greatly exceeded that on works throughout the period of scarcity. During the scarcity now under report the system of 1918-19 was further developed with the object of assimilating the conditions of labour more nearly to those of ordinary times when the worker supports his own dependents, and thus reducing the element of pauperization which must always be present when gratuitous relief is given. With this object the wage basis was altered and the wage was fixed at a figure which would enable workers to provide for their dependents. The concentration of large numbers of relief workers in one place was not permitted, and where distress was most severe, relief was provided by large numbers of small works: this feature of the arrangements was particularly advantageous in the poorest parts of the areas affected, such as Mandla and the Lakhradon tahsil of Seoni, where a good many small tenants came on the works. There was no maximum or minimum wage, and the risk of underpayment owing to inability to perform a full task was provided against by the establishment of infirm gangs, from the members of which something less than a full task was required, and by the fixation of a reduced task for new-comers on metal-breaking works. The weak point of this system is that it increases dependence on the deterrent effect of the task for the exclusion of people not in need of State relief. When relief is provided by means of a few large works serving considerable tracts of country, those in need have to travel considerable distances to find work and to live in some discomfort on the site of the work. This "distance test" was a valuable automatic gauge of the need for relief. With numerous small works in place of a few large ones it is possible to impose an automatic test only by providing work, such as metal-breaking, of a distasteful kind. The fixation of a correct task therefore becomes of special importance, and it may be that in future scarcities, selection, at least from villages close to the work and on works where earth-work is the main form of labour, will have to be attempted. The lack of a searching automatic test is particularly embarrassing when private employment begins to be available towards the end of the scarcity period. It becomes necessary then to reinstitute the distance test, by reducing the number of works, and to stiffen the task and reduce the wage without reference to the apparent capabilities of the workers or the subsistence wage, and finally to close the works on a given date without waiting for these measures to drive away the last of the workers.

In consequence of the alteration in the wage basis, the amount of gratuitous relief was proportionately much less than in any previous scarcity, the numbers relieved in this way being very much smaller than those on works, except in the months of July, August, September and October 1921, when the able-bodied were being gradually diverted from the works to their ordinary avocations.

This system of relief differs in several important features from that prescribed by the Famine Code. The Code requires the satisfaction of a very severe test of unemployment before any relief work is established, and provides for the concentration of large bodies of workers in one place under purely artificial conditions of labour, including maximum and minimum wages, payment for days of rest and the relief of dependents in kitchens on the works. The system

followed in the past year is preferable, because it avoids the risk of deterioration before relief commences; the pauper element is, as nearly as possible, eliminated; the risk from epidemics is less; it is possible to maintain the works after the break of the monsoon, thus avoiding the necessity for relieving gratuitously during that season large numbers of able-bodied people; and the incidental expenditure on establishment, hutting and water-supply is much reduced. These advantages more than balance the greater risk that relief may be given in larger measure than required—a risk which will constantly diminish with experience.

For the forest tracts relief was provided by the construction and improvement of forest tracks and the construction of wells and tanks under the supervision of the officers of the Forest Department. Weavers were relieved, as usual, by the purchase of cloth from selected weavers at a price calculated to provide a living wage. The indirect means of relief to which the Local Government has always resorted were largely used. These included the suspension of the land revenue, grant of taccavi loans, the free extraction of certain forest produce from Government forests, and arrangements for the supply of fodder for cattle and for provisioning a few land-locked areas.

The general plan of operations was settled after discussion at divisional and district conferences over which His Excellency the Governor presided in the early cold weather.

7. Course of the demand for relief.—The progress of relief operations showing the rise and decline of demand for relief is summarized in the table below :—

		Number of persons		Number of village watchmen included among those gratuitously relieved.
		On P. W. D. special works and the excess over the normal on ordinary works in tracts affected by famine or scarcity.	On gratuitous relief.	
November	1920	...	Not available.	...
December	"	21,615	60	...
January	1921	59,113	6,376	205
February	"	74,100	15,400	3,205
March	"	73,181	27,448	4,843
April	"	122,277	41,056	10,322
May	"	124,084	48,748	10,832
June	"	65,590	52,576	11,433
July	"	48,482	53,512	11,481
August	"	24,343	43,065	6,927
September	"	9,408	17,468	6,623
October	"	...	5,497	4,202

The table shows that the relief increased fairly rapidly from the month of January 1921, reaching its maximum in the case of works in the month of May, and in the case of gratuitous relief in July. The large increase in the month of April was due to the completion of the rabi harvest and the mahua-picking, after which private employment became much more scarce. With the opening of the monsoon, the numbers on the works dwindled rapidly, and once the kharif harvest was assured, the necessity for the prolongation of relief measures rapidly disappeared. In most districts it was found possible to close down gratuitous relief and the greater part of the special works by the end of July or the middle of August. In the Jubbulpore division, however, it was necessary to continue operations till the end of September, and till the middle of October in the Mandla district. No measures of relief of any kind, with the exception of the weaver relief operations which continued in Nagpur till December 1921, were necessary after the end of October.

8. Gratuitous relief.—Perhaps the greatest contrast between the famine of 1899-1900 and that of 1920-21 is to be found in the scale on which it was necessary to grant gratuitous relief. In July 1900 the maximum number of persons in receipt of this form of relief reached the enormous figure of 19½ lakhs. In 1921 the highest number was 53½ thousands in the same month, and this figure includes 11,500 kotwals whose position necessitated this form of relief: with this exception, it was granted only to the aged, the infirm and children. This vast difference was due partly to the greater distress in 1899-1900 and partly to the changes in the system of relief already referred to. Under the Code system the break of the monsoon was the signal for the return of workers to their villages to avoid the discomfort and danger of exposure to the weather: and to relieve them until employment was available, large numbers of public kitchens were opened. One of the most important results of the system now followed is to reduce gratuitous relief to a minimum. The early provision of employment prevents the physical deterioration of the able-bodied, the payment of a wage sufficient for the support of dependents keeps the children of able-bodied parents off the gratuitous relief lists, and the formation of weakly gangs with a light task gives no excuse for the gratuitous relief of those who, though not incapable, are scarcely able-bodied; and lastly, the provision of work in a large number of small camps avoids the necessity of closing works in the rains and transferring large numbers of able-bodied people to gratuitous relief. The numbers were relatively high in the Chhattisgarh division where emigrants to the Bengal coal fields and the iron works left their dependents behind them to be cared for by village charity. The numbers were considerably increased in the Jubbulpore division by the weakening effects of relapsing fever, by the immigration of paupers from the Rewah State and by the failure of private charity. In Berar, on the other hand, where private charity was conspicuous, gratuitous relief was given by government on a very small scale. In the Buldana district indeed it was found possible to dispense entirely with the grant of any gratuitous relief at the cost of government. In Amraoti and Akola too very little public money was spent on that form of relief, and that only in a limited area of poor country. In 1900, when, as already stated, the crops were only slightly worse, and the granaries were full of the stored produce of former years, the maximum number on gratuitous relief was 216,918. Last year the highest number of persons in any month coming under this form of relief was less than 1 per cent of the population of the tracts affected. The largest number of persons gratuitously relieved in any district was 7,841 in Mandla in the month of July 1921. This represents about 2 per cent of the population of the affected area. In 1900, when the crops were somewhat better, the maximum number gratuitously relieved in the same district was 32,143.

Attention was invited in the scarcity report of 1918 to the deterioration which occurred among workers in Jubbulpore during the months of December and January, necessitating the opening of kitchen relief. In the current scarcity, with the timely opening of departmental works, this deterioration and the consequent ineffective charges of kitchen relief were avoided. Only one government kitchen was found necessary and this was chiefly to provide for the needs of immigrants from the Rewah State. It was opened at Katni on the 13th February 1921 and closed on the 27th of the same month, after providing for an average of 70 children a day at a total cost of less than Rs. 300.

As in 1918, one further item in the general arrangements to combat scarcity was the provision of reserve stocks of grain in land-locked or out-of-the-way tracts in order to provide a reserve for, or to steady the prices of, local stocks during the rains when import was likely to cease. Such stocks were laid down in the Barhi tract of the Murwara tahsil in Jubbulpore, in the Niwas and Dindori tahsils of the Mandla district, in the Sironcha tahsil of Chanda, and in parts of the Raipur and Drug districts. In the Jubbulpore district the work was done by contract, an advance of Rs. 20,000 being given for the purpose, the whole of which has been recovered. In Mandla the operations, which were also done by contract, resulted in a loss of about Rs. 3,000 on transactions amounting to Rs. 2,33,000, the loss being due to extra carting expenses during the

cholera epidemic and to the return of the excess stocks of 3,700 maunds to Jubbulpore at the close of the scarcity. The cost is small in view of the results achieved.

Little recourse was had to the subsidizing of cheap grain shops. Contrary to the experience of 1918, the railways were able to cope satisfactorily with the problems of import and export, and with a regular supply of food-grain available, prices, though very high, were generally steady. It was not till August 1921 that the shortness of wheat stocks, especially in the north of India, began to make itself felt and prices rose to more stringent levels. At this time a few cheap grain shops were opened, chiefly in the larger towns for the benefit of the poorer classes. These shops were for the most part financed by local or private funds. In Jubbulpore, the Municipality set aside a sum of Rs. 10,000, to which were added a few private subscriptions, for the subsidizing of a grain shop, but owing to the general disorganisation due to the outbreak of plague, the shops opened were not much patronised. In Nagpur the Cheap Grain Shop Committee, which possessed a balance of Rs. 35,000 from the year 1918, again began operations for the relief of the poorer classes, admission being made by selection by the Weaver Relief Committee or by ward members of the Municipality. By the date of the submission of the district report the shop had sold Rs. 20,000 worth of grain at a net loss of Rs. 4,000. Shops were also opened in Saugor and Narsinghpur chiefly with the object of steadying prices, and in Chhindwara and Bilaspur in the ordinary course of relief measures.

9. Private charity.—The efforts of Government to relieve distress were supplemented in the Central Provinces proper by private charity to a smaller extent than in 1918-19. The main reason must be sought in the short interval which had intervened since the crop failure of 1918 and the consequent reduction of the available resources. But a powerful contributory cause was the anti-Government agitation of the non-co-operation party. All district reports agree that these agitators conspicuously failed to grasp the opportunity of winning popular support for their cause by coming to the assistance of the people in their distress; and although only a few isolated instances of dissuasion of people from the acceptance of government relief came to notice, the intensive campaign of vilification of the government and all its works, which was carried on during the first six months of 1921, discouraged private charity and so added to the burden of the executive and the people. Nevertheless, though small in comparison with the efforts of 1918-19, private charity was not entirely wanting and in several districts "Famine Relief" societies were organized under non-official management.

In Berar, on the other hand, the response of private charity was magnificent. In the Buldana district Rs. 16,732 were collected by public subscriptions and in addition many paupers were placed in charge of well-to-do people who guaranteed to support them. In Amraoti over Rs. 20,000 were subscribed in the Daryapur taluq where 2,000 paupers were provided for and nearly Rs. 15,000 was collected in each of the Amraoti and Ellichpur taluqs. In particular, may be mentioned the liberal assistance of Rao Sahib D. C. Deshmukh of Januna who fed 200 paupers daily for six months and of Mr. Rajaram Tukaram Patel of Khirala who placed a sum of Rs. 5,000 at the disposal of Government for distribution in the shape of cloth. The special thanks of Government are due to these and to other philanthropic gentlemen, too numerous for individual mention, for their generous assistance to the poor.

As in 1918-19, so also in the current year, the Board of Management of the Indian People's Famine Trust came to the assistance of the province with a generous donation of Rs. 50,000 which was expended on the purchase of cloth for the poor. The maintenance of the extremely high prices which had been prevalent since 1918 had made it more difficult than in previous failures for the poor to supply themselves with clothing during the distress, and the contraction of private charity with the expansion of the area of distress left the people more dependent than before on assistance from outside. The very grateful thanks of Government and the people are due to the Board of Management of the Trust for

their generous assistance. The grant in each case was supplemented by local collections, and the total amount was, with the exception of Rs. 500 in the Narsinghpur district, spent upon the provision of clothing for the very poor and destitute. In Narsinghpur district a small sum of Rs. 500 was granted for the relief of a single village which had lost everything owing to a disastrous fire.

10. Public Works.—The main features of the system of work relief are described in paragraph 6. The experience of the first two months provided the Chief Engineer with the necessary material for a circular of instructions which issued in January. A second edition, containing some improvements and additions, was issued in March. Work was undertaken on two systems, *viz.*, departmentally and on contract. On departmental works a piece-work system was followed, under which the rate was so fixed that workers who did a fair day's task could earn sufficient to support themselves and their dependents. This involved the fixation by the Superintending Engineer of a task estimated to provide a fair day's work, and by the Deputy Commissioner of a wage representing a subsistence wage for the workers and their dependents which could be earned by completing the fair task set by the Superintending Engineer. The wage was so fixed as to enable a man and woman to buy 46 chataks of grain, the quantity required according to the Famine Code for the subsistence of a man and his wife and three children under 10. maximum and minimum wages were not fixed. A specially low task was required of new-comers to metal works and infirm persons. As the skill of the workers increased and the health of those in weakly gangs improved a further refinement was introduced in certain camps by the fixation of an intermediate task. This task was applied to persons who, though capable of doing more than was expected from the members of the weakly gangs, were not capable of doing the full task. No official orders on the subject were issued, but the adoption of this task and the formation of separate intermediate gangs was found useful in many cases. Under the contract system the rate for the unit of work was fixed on the basis of a task and wage determined as for departmental works with the addition of 8 annas per unit of work for the profit of the contractor. In order to ensure that he did not sweat his labour he was required to keep a register showing the amount paid to each group or gang of workers, and these were constantly checked by inspecting officers. The contractors were thus rather in the position of work-agents than of free contractors, and the only substantial difference between the two systems lay in the agency for measurement and payment. This description of the contract system, however, does not apply to irrigation works where contractors were free to make their own arrangements with their labour.

In deciding which system should be adopted, the chief factor taken into consideration was the rate of normal wages in comparison with the subsistence wage. Where the former was low and closely approximated to the latter, it was clear that the adoption of the contract system would lead to the enhancement of contract rates which appeared undesirable in view of probable difficulties in reducing rates when scarcity disappeared and normal times returned. On the other hand, where normal wages were high in relation to a subsistence wage, as in Berar, it is possible to continue longer on the contract basis than elsewhere. As regards irrigation works, however, it was laid down that the contract system was more suitable; the substitution of departmental work would have involved interference with contracts and the main work of famine labour on irrigation works is earth work on which a full wage can be earned without great difficulty by the ordinary agriculturist. In accordance with these principles the contract system was applied chiefly to irrigation works and to metal-breaking in Berar, while in other parts departmental works were the rule, any contract works already in progress being converted.

11. Public Works Department Road Works.—The chief works undertaken were the breaking and collection of metal with the addition of a certain amount of road bank construction and a smaller amount of metal consolidation. In the Mandla district the carriage of metal by hand carts was effected on a large scale. In this district bullock carts are very scarce and the introduction of hand carts enabled a quantity of over 4,000,000 cubic feet of metal

to be brought to the road side at rates which did not exceed schedule rates. There is little doubt that hand carts, for such work, could be profitably utilised in other districts. Famine labour can be suitably employed on drawing them, and the task can easily be fixed to suit local conditions. Wherever possible, however, reliance was placed on the breaking of metal owing to the deterrent character of the work. Work was provided at 306 centres on which Rs 30½ lakhs were spent—Rs. 28 lakhs on works specially opened to meet distress and the remainder on works already in progress expanded to provide additional employment. Comparing the gross expenditure with the normal rates, it is found that out of Rs. 30½ lakhs, Rs. 21½ lakhs represent the value of work done at normal rates, while the remainder was the excess due to the inefficiency of famine labour, the higher wage required to meet the rise of prices and the additional cost of the departmental system. This excess is 43 per cent, but if miscellaneous charges, such as those for extra establishment, for sanitary arrangements and water supply, be excluded, the excess over the normal falls to 23 per cent. In this respect the following table, showing by Circles the standard tasks set for metal-breaking, and the excess of gross and net cost over the normal, is interesting:—

Name of Circle.	Standard task.	Percentage of excess of gross cost over normal cost.	Percentage of excess of net cost over normal cost.
1	2	3	4
FIRST CIRCLE.			
Nagpur ... } Bhandara ... } Chhattisgarh ... }	12 cubic feet to 17½ cubic feet per pair.	22'40	6'50
SECOND CIRCLE			
Jubbulpore Division ... } Nerbudda Division ... }	7½ cubic feet to 10 cubic feet per pair.	56'60	35'60
THIRD CIRCLE.			
Berar Division ... } Chanda ... }	10 cubic feet to 14 cubic feet per pair.	23'40	5'90

The tasks prescribed by the Famine Code for a man and woman together are 7½ cubic feet for hard stone and 10½ cubic feet for soft. The difference in cost between Public Works divisions is no less noticeable than between Circles. In Balaghat, Nagpur and Bilaspur the scarcity works were completed at rates slightly below the estimated normal cost. In Raipur, Drug and Chhindwara, the excess varied from 137 per cent to 45 per cent above the normal figures. Similar variations are also to be found between sub-divisions, indicating that even where tasks and wage rates were the same, the cost of work was largely affected by efficiency of organisation. Where distress was most acute and the number of workers largest, work was unavoidably more expensive than elsewhere, because the expenditure on supervising staff and on such matters as medical relief and water supply must be proportionately heavier; and the proportion of persons in the weakly gangs is much greater and the average efficiency of the labour employed is therefore far less than in districts where the distress is less marked. It must be remembered that no person who was capable of doing any work was refused admission and consequently many inefficient were employed. In the Seoni district a severe epidemic of relapsing fever prevailed some months before scarcity conditions were established. This had left its mark on the health and stamina of the poorer classes and necessarily involved placing many persons in the district in weakly gangs and in giving them a less task. For these reasons one would expect to find that work was more expensive in the Second Circle than elsewhere. Another important cause of the higher cost of metal in that circle is that a very large proportion of the labour was aboriginal, and the Deputy Commissioners, apprehending from the recorded experiences of former famines that the Gonds might not readily come on metal-breaking relief works, desired at the

outset that a very easy task should be fixed for all new-comers until the popularity of the works was assured. In some districts in the Second Circle the tasks might, in the opinion of the Chief Engineer, have been raised further than was eventually done but, in deference to the Civil officers, tasks somewhat lower than the officers of the Public Works Department considered suitable were allowed to continue. To a considerable extent the percentage of the excess over the normal cost is a barometer reflecting the acuteness of distress in each area. The total number of units relieved was 13,666,280, giving a cost of 3 annas 9 pies per unit. The large proportion of women amongst the workers was everywhere noticeable. A comparison of the cost of relief per unit with that of 1899-1900 will be found in paragraph 31.

Early in June 1921 instructions were issued regarding the closing of works. At this stage the problem is so to regulate relief measures that they may not interfere with the establishment of normal conditions and that they may be closed down as soon as private employment makes them superfluous. The first step taken was to emphasize the deterrent features in the relief works by increasing the task set and curtailing the number of works available, so that labourers attending them had further distances to travel from their homes. At the same time careful enquiries as to the amount of private employment available and constant inspection of the condition and numbers on works enabled Deputy Commissioners to gauge the necessity for the continuance of relief. When works attracted little except local labour, *i. e.*, labour which can attend without leaving its home, it was generally considered time to close altogether.

These principles, however, are applicable chiefly to metal-breaking works, and special instructions were found necessary in the case of consolidation. The latter is not a good form of famine relief, as the labour cannot be so accurately tasked, future liabilities for maintenance are increased and the work must of necessity be of a scattered nature, but to obtain full value for money spent on metal-breaking or constructing new road banks, it is necessary to spread and consolidate the metal; indeed, if this is not done on new road banks, they are speedily washed away by the rain and the money spent is wholly wasted. Consolidation was therefore permitted under certain conditions, the first and most essential of which was that the Deputy Commissioner should be satisfied that the provision of work was essential for the purpose of relief. It was ordered that in every tract, where relief workers were employed on consolidation, a part of the relief labour should be employed on metal-breaking to serve as a gauge of the need for relief. In addition it was laid down that work should be confined as a rule to roads which would be useless if consolidation were not done or where the consolidation did not amount to the raising of a road in class, that no road should be raised to a class higher than that shown in the road scheme, and that no work should be undertaken for which a sanctioned estimate did not exist. Consolidation, at the expense of relief funds, which involved the raising of a road in class, was permitted only when relief was required, and the whole of the material provided for in the estimate had been collected. As a result of these measures the province gets good value for the money spent: large stocks of reserve metal have been accumulated, many miles of road have been raised in class and a considerable length newly constructed and left in a condition in which the roads can be utilized.

On most road works, the workers usually performed something less than the normal task and consequently earned something less than the normal subsistence wage fixed by the Deputy Commissioner. It is impossible to say with certainty to what extent laziness and to what extent the conditions under which the work had to be done was responsible for this. The fact that the bulk of the workers had to walk from two to six miles to and from the work naturally reduced the possible output. On the other hand, the fact that the actual task performed varied greatly in different districts, would indicate that where the fixed task was lowest, it should have been possible for the workers to give a full task. But here again, differences in the hardness of the stone and in the class of the workers affect the subject. On the whole, it may perhaps be inferred that the tasks were somewhat more than could be performed in these conditions and that, as something less than the subsistence wage was sufficient to prevent deterioration in the workers, the wage basis was too high. On the other hand, if the task had been lowered, those who lived on the work or in villages close to

it, would have earned too much and, if the wage basis had been reduced, those who had to walk to the work, too little. The arrangements represented a fair practical compromise. But the mass of information now to hand as to tasks actually performed and wages actually paid in the several divisions will be examined with a view to determining tasks and wages for use in the future and providing a better basis for fixation than was available in this scarcity. On the whole the cost of the work done compared with that at normal rates, cannot but be considered to be most satisfactory in the conditions that prevailed. In special cases in which it appears that the relatively high cost of work in certain divisions or sub-divisions is not justified by the conditions in those areas, the matter will be further enquired into.

12. Public Works Department Irrigation Works.—A number of the irrigation works commenced in 1918 for the relief of distress were still unfinished, and it was found necessary to open only three small new works in Damoh to meet a sudden tightening of conditions in that district in June. But the increase in the labour supply resulting from the scarcity enabled the irrigation officers to spend on works in progress much larger sums than would otherwise have been possible and these works were an important means of relief in the Jubbulpore, Damoh, Drug and Raipur districts.

13. District Boards and Council Works.—For some years past the District Boards of Berar have been maintaining some roads as the agents of Government, receiving grants from provincial revenues for the purpose. The greater part of the works relief in Berar was given on quarries which serve these transferred roads, and all these works were managed by the Boards. The sum thus spent in Berar was Rs. 2,16,000, the expenditure on works managed by the Public Works Department being Rs. 1,58,000. In addition, the Boards spent from local funds on their own roads Rs. 1,25,000. They were thus the principal agency for the administration of works relief in Berar. The Amraoti Board organized its works exceptionally well and managed them very cheaply. The Board is to be congratulated on its success. The Buldana Board did fairly well, but its works were more expensive than those of the Public Works Department. The Akola works were particularly expensive and the reason for this is now the subject of enquiry. No provincial roads have been transferred to the District Councils for maintenance in the Central Provinces, but grants from provincial revenues were made to the Councils for works on such of their own roads as lay in tracts requiring relief. These totalled Rs. 2,28,152, of which half was spent in the Nagpur, Seoni and Drug districts. In addition, the Nagpur District Council spent a considerable sum and some other districts small sums from their own balances. The Nagpur, Seoni and Drug Councils showed themselves particularly ready to assist. In Nagpur the Council managed four works, of which two were financed from provincial revenues and two from local funds. In Seoni 31 per cent of the units relieved on works were on works managed by the Council and in Drug the number of persons relieved on the works managed by the Council at one time reached 2,959. The Jubbulpore Council, which had a balance of Rs. 90,000, raised so many objections and excuses when urged to take its part in relief that it did not get to work till the end of April, and then only on a very small scale.

14. Forest Works.—In the remoter forest tracts where the population is still so unsophisticated as to be shy of the stricter conditions of labour on Public Works Department works, the principal means adopted for the relief of distress was the construction of forest roads under the management of forest officers. A small proportion of the funds granted was utilized for the improvement of the water supply and a certain amount was spent as a relief measure on climber cutting and improvement fellings. The total expenditure on these works amounted to Rs. 2½ lakhs. Much of this work was directly or indirectly of a remunerative character. In the present undeveloped state of forest communications any expenditure on new roads is almost always directly productive and a good deal of the expenditure will be recovered through the increased sale of forest produce, rendered possible by the opening up of communications. Partly, however, in order to provide employment it was necessary to take up works which, though undoubtedly useful from the point of view of forest exploitation, did not stand highest on the forest programme.

15. Weaver Relief.—As in 1918-19, special measures were found necessary to relieve the weavers particularly in Nagpur, Bhandara, Chanda and Amraoti districts. The distress of this class was accentuated by the fact that the scarcity coincided with a *singhas* year in which no Hindu marriages could be performed. This materially reduced the demand for cloth which was already low on account of the poverty of the cultivators. The ticket purchase system was adopted as before. In Nagpur the highest number of weavers relieved at any one time was 8,366 and the product of 1,698 looms was purchased by Government. The total expenditure on the purchase of cloth was Rs. 7 lakhs and this relief continued after all other kinds of relief had ceased. It was administered by a Committee of which the President and the Secretary were Mr. Chhotelal Verma, Extra-Assistant Commissioner, and Rai Sahib Nanhuram Singh, Tahsildar, respectively. These gentlemen and their colleagues rendered valuable service. In Bhandara some 600 weavers were relieved and Rs. 80,000 worth of cloth was purchased. The Deputy Commissioner mentions the services of Mr. Pundalik Pandurang Dalal who was Chairman of the Committee which administered this relief. In Anjangaon and Ellichpur in the Amraoti district, the largest number on relief was 187 and an allotment of Rs. 7,000 was made, the whole of which will probably be recovered. Some relief was also found necessary in Chanda town where a shop was opened and 112 families of weavers were relieved. Over Rs. 12,000 was spent by Government, and at the close of scarcity, the sale of the purchased stock realized a small profit.

16. Kotwar Relief—As in all previous scarcities the kotwars or village watchmen were among the first to feel distress. The failure of crops made it impossible for tenants to pay their dues in kind, while the unprecedentedly high prices of food-grains rendered their cash remuneration inadequate for their maintenance. In villages where the suspension of land revenue amounted to one-half or more of the total demand, monthly cash doles of Rs. 2 were made to each kotwar, where three-quarters or more of the land revenue was suspended the dole was fixed at Rs. 3, but in districts where famine was declared, it was found necessary to bring all the kotwars upon the full relief scale. The largest number of kotwars relieved at one time was 11,483 against 5,000 in 1918-19. This relief was found to be necessary in all districts, even though scarcity had not been declared, and with prices continuing even after the scarcity has closed and a good harvest has been reaped, to exceed those prior to 1918 by 50 or 60 per cent, the question of the permanent revision of kotwars' remuneration has been taken up by Government.

17. Suspensions of Rents and Revenue.—As usual, the earliest step taken in the relief operations was a careful enquiry into crop outturns with a view to the suspension or remission of rents and revenue. When determining the degree of relief required, careful consideration is always given to the previous economic history of the tract affected, and in view of the fact that only one year had intervened since the last scarcity, nearly all villages were classed for purposes of relief on the B or more generous scale. The following table shows the demand and suspensions of revenue by divisions on account of the kharif instalment :—

Division.			Demand (in thousands of rupees)	Suspension (in thousands of rupees).	Percentage
Jubbulpore	...	...	10.77	4.47	41
Nerbudda	...	...	11.76	2.51	21
Nagpur	...	...	22.80	5.73	26
Chhattisgarh	...	...	10.71	4.37	40
Berar	...	..	79.49	62.87	79

All the districts of the Jubbulpore division had suffered severely in the previous failure, and all except Saugor were extremely hard hit by the current

scarcity. The suspensions granted were therefore on a liberal scale, reaching the high proportion of 75 per cent of the demand in Mandla. In the Nerbudda division suspensions granted were considerable only in the two plateau districts. In the Nagpur division only the Bhandara and Balaghat districts were so seriously affected as to necessitate large suspensions. In Chhattisgarh the failure of the rice crop required large suspensions. In Berar, the Central Provinces scale of relief was again applied as in 1918-19, but cesses were not suspended as the District Boards are largely dependent upon this income for their total revenue, and without this source of income many Boards would have been reduced to bankruptcy.

Suspensions and remissions of the rabi instalment were as follows :—

Division.	Demand (in thousand of rupees)	Suspension (in thousands of rupees)	Percentage
Jubbulpore	20.06	7.21	35
Nerbudda	18.05	5.37	29
Nagpur	15.68	3.98	25
Chhattisgarh	9.75	7.03	72
Berar	8.12	3.53	43

The general contraction of the rabi area sown and the widespread failure of the crop rendered liberal suspensions necessary in almost all affected districts. 90 per cent of the demand was suspended in Mandla. In Hoshangabad, where no suspension of the kharif kist was necessary, 36 per cent of the rabi kist was suspended. In the Chhattisgarh division the severe contraction of the rabi area and the low outturn rendered it necessary to grant extensive relief. In Berar the rabi area is comparatively unimportant. Suspensions were found necessary in three districts and considerable amounts of arrears of suspended revenue from the previous scarcity had also to be remitted.

In all out of a total demand of Rs. 206 lakhs, a sum of nearly Rs. 107 lakhs was suspended and over Rs. 3½ lakhs of arrears were remitted. Of the suspensions, Rs. 40½ lakhs out of a demand of nearly Rs. 119 lakhs or 34 per cent fell in the Central Provinces proper and nearly Rs. 66½ lakhs out of demand of just over Rs. 87½ lakhs or 76 per cent fell in Berar. A comparison with the corresponding figures of 1899-1900 is interesting. In that year in the Central Provinces the demand was just over Rs. 84½ lakhs out of which Rs. 67½ lakhs or 68 per cent was suspended; while in Berar out of a demand of something like Rs. 83½ lakhs nothing was suspended at all. The Amraoti district report testifies to the gratitude, not unmixed with amazement, with which the policy of the current year was received in that district. Of the value of suspensions in dealing with scarcity there can be no question. This measure of relief enables the average cultivator to tide over the bad season while the amount suspended is in ordinary course recovered without turning to the money-lender or with the next season's demand. The system is therefore one of true economy. In the case of the famine now under review the kharif harvest of the succeeding year has been excellent, and out of the total suspension it is estimated that Rs. 70 lakhs had been collected before the 31st March 1922, while the remainder should be recovered in the course of the financial year 1922-23.

18. Loans and Advances.—Concurrently with the grant of liberal suspensions, large sums were advanced under the Agriculturists' Loans Act for the purchase of seed and cattle and under the Land Improvement Loans Act for works of agricultural improvement. The original allotment made on the ordinary scale under the two loans Acts for the financial year 1920-21 was Rs. 9½ lakhs, to

which were added extra allotments of over Rs. 26 lakhs when the failure of crops became apparent. In 1921-22 the allotment made was Rs. 70 lakhs, all but a small amount of which was actually disbursed. The total sum given out amounted to no less than Rs. 106 lakhs compared with Rs. 43 lakhs in 1899-1900 and Rs. 81½ lakhs in 1918-19. Comparing the prices in 1900, when the price of grain may be taken to have stood at about 10 seers per rupee, with the 4½ seers prices prevailing in the year under report, the difference in value of the amounts disbursed in the current year and in 1899 is not so large as it appears. In 1918 money was advanced under the Land Improvement Loans Act in the Jubbulpore district on an undertaking that half the loan would be remitted if the money were spent on the works for which it was advanced. It was found that much of this money was misapplied and the experiment was not repeated. Of the several divisions, Jubbulpore received Rs. 23½ lakhs, Berar Rs. 19½ lakhs, Chhattisgarh Rs. 32 lakhs, Nagpur Rs. 18½ lakhs and Nerbudda Rs. 12½ lakhs. Out of the total sum distributed, Rs. 73½ lakhs were granted under the Agriculturists' Loans Act and Rs. 32½ under the Land Improvement Loans Act. No statistics are available of the amount of labour employed with this money, but it must have been very large, and these land improvement loans were an important feature of the measures taken to provide employment.

19. Forest Concessions.—The opening of Government forests in affected areas to the free extraction of fruits and other edible produce, besides head-loads of grass, bamboo and fuel, was one of the earliest measures of relief instituted. This concession makes a very considerable addition to the food supply of the poor, and the boon is much appreciated, especially by the jungle tribes. For the relief of cattle several measures were taken: the rates for cart-loads of cut grass were reduced, the collection of grazing dues was suspended, and some areas ordinarily closed to grazing were thrown open. In Berar, where 'anjan' (*hardwickia*) leaves are used for fodder, free extraction was permitted. The total value of the concessions amounted to over Rs. 3 lakhs. In addition, the greater part of the land revenue from forest villages was suspended or remitted. These concessions were much appreciated and no doubt reduced the demand for other forms of relief in the forest, besides improving the condition of cattle. The Deputy Commissioner, Mandla, testifies, as do many other district officers, to the value of these concessions, but he reports that the concessions in respect of the extraction of grass, fuel and bamboos were seriously abused, partly owing to political propaganda. Villagers removed teak poles and green bamboos in such large quantities as to glut the local markets and reduce prices to an unremunerative figure. The result was that the Government forests were considerably damaged, and the only persons who benefited were a small number of dishonest dealers who bought up these ill-gotten spoils at very low prices. This is the first time a wholesale abuse of this concession has been reported, but it may be that, now that the jungle tribes are more sophisticated, such incidents will recur. It may be hoped that it will prove possible to check them without withdrawing the concessions entirely. Another untoward result of the opening of the forests was the burning of large areas usually, if not in all cases, through carelessness.

20. Imports and Exports.—The total imports of food-grains into the province from other parts of India during the year October 1920 to September 1921 were 10,844,325 maunds or more than five times the exports which amounted to 2,161,226 maunds. The table below which shows in thousands of maunds the corresponding figures for 1899-1900 and 1918-19 is interesting as illustrating the degree of distress prevailing in each year :—

Year.	Imports.	Exports.
1899-1900	... 13,336	1,357
1918-19	... 4,843	2,654
1920-21	... 10,844	2,161

- Of the total imports, the Berar block where the import of food-grain always exceeds the exports, absorbs nearly half, while the Nagpur and Jubbulpore blocks account for two thirds of the remainder. The Chhattisgarh block on the other hand shows a net excess of exports over imports of about 50,000 maunds.

A picture of the needs of each separate part of the province is shown by the following table which exhibits the total imports and exports of each trade block from all sources both from within and without the province:—

Trade block.	Imports (in thousands of maunds).			Exports (in thousands of maunds).		
	From outside the province.	From inside the province.	Total.	To places outside the province.	To places inside the province.	Total.
Jubbulpore	1,553	136	1,689	979	556	1,535
Nerbudda	569	61	630	580	680	1,260
Nimar	709	193	902	193	36	229
Nagpur	2,235	1,084	3,319	39	464	503
Chhattisgarh	267	25	292	316	1,297	1,413
Berar	5,052	1,041	6,093	47	47	94
Satpura	460	420	880	7	49	86

It will be seen that Jubbulpore was able to export almost as much as it imported, that the Nerbudda valley districts had an abundant surplus, and that Chhattisgarh, though unable to send away as much as in 1918-19, must have had a crop considerably above what was estimated. The heavy excess of imports over exports in the Satpura block confirms the severity of the failure in the Mandla, Seoni and Chhindwara districts.

21. Prices.—The commencement of the scarcity was marked by only an insignificant rise of prices in place of the 50 to 60 per cent rise which occurred at the beginning of the cold weather of 1899. The course of prices of food-grains during the year was most striking, and it is a remarkable fact that for a considerable part of the period of distress in most districts the prices of food-grains ruled cheaper than the average of the preceding year, while the highest price was reached in the late rains of 1921, just when a bumper early kharif harvest was coming in and prospects were generally most favourable. The fact was that, after the scarcity of 1918, prices had risen to such a level that the one good season which had intervened was not sufficient to reduce them appreciably, nor was one further failure sufficient to enhance them more. In fact the harvests of 1919 and 1920 almost balanced each other, leaving the supply of stocks much at the same level as in 1918. Briefly, the situation was that in October 1920, with the prospect of a widespread failure of crops, prices stood at a very high level. From December, however, till April 1921 prices gradually fell, until at the end of March 1921 they were at their lowest level during the year and lower than at any time since the year 1918. From April onwards they rose slowly till the end of August, when the shortage of stocks and the phenomenal rise in the price of wheat in northern India set up local prices with a rush. The advent of the lesser millet and maize harvests, however, together with the assured prospect of a bumper kharif harvest to follow, served to steady the prices, though not appreciably to lower them. Fortunately, the congestion of the railways by war material which added so greatly to the difficulties of 1918, was a thing of the past, and confidence was maintained by a steady flow of imports, of which Burma rice was the most important. Control of supplies was necessary only in Mandla and in the remoter parts of Jubbulpore, Chanda and Raipur: elsewhere interference with ordinary commercial activity was not required. In these three tracts the Deputy Commissioners arranged to lay in stocks of grain in the hot weather with the aid of contractors who agreed to sell at fixed prices. Elsewhere the supply forthcoming from ordinary trade channels was sufficient to keep the demand in a state of equilibrium. Wheat in the northern districts which was sold at $5\frac{1}{2}$ to 6 seers per rupee in September 1920 had risen to $4\frac{1}{2}$ seers by October 1921. **Juar,**

which had sold from 7 to 9 seers in Berar in August 1920, gradually rose to 5 to 5½ seers by October 1921, while it disappeared almost entirely from the markets of the northern districts. Rice, the price of which was steadied by large imports from Burma, showed less variation, the average price in Chhattisgarh being from 6 seers at the cheapest to 5 seers at the end of the year, while in the rice districts of the Nagpur division it was a seer to half a seer dearer. In order to meet the sharp increase which took place in August 1921, Government granted an allowance of Rs. 2 per mensem to all government servants drawing a salary of Rs. 25 or under, the concession being withdrawn automatically when the prices of the staple food-grains of each district fell below 6 seers to the rupee.

22. Health and Mortality.—Though there was no devastating general calamity such as the influenza epidemic which occurred in the year 1918, the mortality of the famine period under report was 23 per cent above the decennial mean of the years 1908 to 1917, being 43.66 compared with 35.58 per thousand. The direct cause of the increase must be sought mainly in the cholera epidemic which visited the province in the hot weather of 1921 and in the widespread attacks of malaria which occurred towards the end of the monsoon of 1921. But indirectly the weakening effects of the influenza epidemic of 1920 and the strain of hard times must have largely reduced the resisting powers of the people. In the beginning of the year some few cases of plague, cholera and small-pox, aided by influenza and an epidemic of relapsing fever in the northern districts, slightly raised the total mortality of the province, and although these diseases had to a large extent disappeared by January 1921, non-epidemic mortality continued above the normal. The main increase in the mortality of the province during the year under report occurred, as already indicated, during the hot weather and rains of 1921. Cholera first appeared in the month of February when 398 deaths occurred. But from that month onwards a rapid increase in the number of deaths took place, the total being 3,564 for April, 6,657 for May and 20,788 for June, of which the greater part occurred in Mandla and Chhindwara and in the districts of Chhattisgarh in which, owing to the absence of wells and failure of the previous monsoon, people were largely compelled to have recourse for drinking purposes to the stagnant water remaining in pools and nalas. The advent of the rains considerably reduced the mortality from cholera in July when 10,517 deaths were registered and the province was practically free of the epidemic by October 1921. The provincial death rate, however, owing to the severe attacks of malaria during the rains, which the reduced vitality of the people was unable to shake off, and a severe attack of plague in Jubbulpore, remained largely above the normal. The death-rate per mille in the worst affected districts is shown in the table below, which compares the mortality of the year from all causes and from all causes other than epidemics with the quinquennial average from all causes for the years 1912 to 1917:—

Districts	Death-rate per mille.*		
	From all causes.	From causes other than epidemics.	Quinquennial average for 1912-17.
Jubbulpore ...	72.36	64.56	36.57
Mandla ...	67.38	45.08	26.94
Seoni ...	63.44	46.09	31.41
Damoh ...	60.06	54.46	41.63
Chhindwara ...	51.67	45.27	32.60
Drug ...	52.75	46.10	38.68
Raipur ...	44.71	39.40	32.39
For the province as a whole—	43.66	39.05	35.58

23 Crime.—The course of crime, as illustrated by the statistics furnished, followed very closely the record of the scarcity of 1918 as may be seen by the following table.—

Period	Dacoities	Robberies.	Thefts including those committed in lurking house trespass and house-breaking		All offences affected by famine or scarcity.
			All kinds of theft.	Thefts of grain	
For scarcity period 1907-08 ..	175	386	22,791	5,958	23,352
For calendar year 1916 ..	58	267	23,851	4,628	24,176
Do. 1917 ..	83	316	28,677	5,518	29,076
For period of scarcity, viz., from October 1918 to September 1919.	209	559	45,687	12,426	46,195
For period of scarcity, viz., October 1920 to September 1921.	297	541	47,027	11,410	43,865

The number of dacoities is appreciably larger, the increase coming from the Berar division, especially the Buldana district, where there was considerably more distress than in previous scarcities. On the other hand, the total of offences relating to property was slightly less in 1918-19 in spite of the larger area over which crop failure prevailed. This is probably due to the absence in the year under report of the influenza epidemic which, as much as scarcity itself, was responsible in 1918 for a large increase in petty offences. As in 1918, it was in the Jubbulpore division in general, and in the Mandla district in particular, that outbreaks of crime against property were generally most marked, and it is noticeable that in the Mandla district these outbreaks occurred in May and June at a time when relief works were temporarily dislocated by the cholera epidemic. In Berar it is reported also that a good deal of the crime was committed by Mahars who were prevented by the agitation against the payment of *baluta* from recovering their dues. There was little organized looting of bazars, save in a few isolated instances, notably in Narsinghpur in the rains of 1921, when the rise in the price of wheat in northern India reacted on local prices. Altogether, considering the area of distress and the violent agitation carried on against government authority by the non-co-operation party, although many thefts of food were no doubt not brought to notice, the increase in crime over the normal was not as large as might have been expected and is a testimony not only to the police administration but to the steadfastness and good sense of the people during a period of severe trial.

24. Immigration.—The seasonal movements of labour, both within and from outside the province in search of employment, are to the cotton picking in Berar, to the rabi harvesting in the Nerbudda valley and the northern districts, and to the manganese or coal mines. In seasons of famine these movements are intensified, but except for a considerable rush of poverty-stricken labourers from the Rewah State and to a less degree from the Feudatory States there was little else to chronicle in the year under review. The inrush from Rewah which took place early in 1921, at first proved rather a severe strain on the resources of the Jubbulpore district, but the cement works and the railway construction in that neighbourhood were able to absorb the greater number. In Bilaspur some 4,000 Gonds from the Sirguja State came into the Mungeli and Katghora tahsils, where more than half of them are reported to have settled down especially in the Korba Zamindari.

25. Emigration.—Readiness to emigrate outside the province becomes each year more marked as the people go further and further afield in search of employment. In the year under report the migration of Chhattisgarhis to Jamshedpur and the coal-fields of Bengal was greater than before, and some 35,000 to 40,000 persons are believed to have left the Chhattisgarh district.

alone. The influx into Jamshedpur and its neighbourhood was so great as to overstock the labour market: numbers of the emigrants had to return without finding work, and some mortality resulted. In future it will be necessary to provide some means of supplying the district authorities with prompt information as to the demand for labour in the iron works and mines in order that they may check emigration in good time. On the other hand, fewer coolies migrated to Assam than might have been expected, due to the depression in the tea industry, the numbers being 10,731 compared with 31,365 in 1918-19. Of these, moreover, two-thirds were residents of adjoining Native States and not of British India.

26. Fodder and Water.—Fodder and water were scarce all over the province, but nowhere was the scarcity of water so marked as in Berar. Scarcity of water in other parts of the province spelt inconvenience, in Berar it meant deep anxiety and even distress. The year 1920-21 was the fourth in succession of short rainfall and the water level had sunk to such a degree that it is anticipated that it must be some time before it can return to the normal. Land improvement loans were freely given for digging or deepening wells, and the District Boards made large grants in aid of private expenditure for the same purpose. On works the water-supply was most jealously guarded. In the forest, dams were thrown across nalas wherever possible. In the large towns, such as Amraoti and Akola, the inhabitants only just succeeded in tiding over the hot weather.

The fodder situation was in Berar almost as bad as that in regard to water, but elsewhere fodder was generally adequate, though inconvenience and anxiety were caused by the very numerous fires which owing to the carelessness, or perhaps in some instances wilfulness of the people, led away by political agitation, were in evidence all over the province. In Berar the situation was met by the opening to grazing of all A class forests, except those cut over within three years, and by the grant of concession rates for the import of grass and kharbi. Thousands of carts from September to December brought grass from the Melghat, and all available grass in accessible areas was utilized. By the middle of October 1920 the rates for fodder in Amraoti had risen to Rs. 60 per ton and it was found possible to import grass cheaper from Nimar than from the more distant Betul or Melghat forests. Concession rates for the encouragement of imported fodder were granted on all fodder freights from Nimar to stations in Berar and subsequently on freights from Chanda and Nagpur, but the greater part of the grass imported was from Nimar. In this district in the absence of private enterprise, a contractor was appointed, who undertook to collect and bale grass and deliver it on rail at Mandwa station on the Great Indian Peninsula Railway. The Divisional Forest Officer then despatched the grass against orders booked by the Tahsildars in Berar. At first the orders were for a few hundred tons only, but once the popularity of the imported fodder was established, it was impossible to cope with the demand. Finally, some 5,000 tons were despatched, of which 1,900 tons were collected by private enterprise and the remainder by government agency. The Conservator, Berar Circle, comments strongly on the fact that the grass was despatched hand-baled and estimates that 1,800 wagons must have been employed to carry the 5,000 tons of grass railed, where 600 would have been sufficient had the grass been steam-baled. The total provincial cost on account of freight concessions was Rs. 93,279 of which the greater part was incurred in the carriage of grass from Nimar. Of this, approximately two-thirds might have been saved, while the extra cost of steam baling would have been Rs. 20,000 at Rs. 4 per ton. There would thus have been a direct saving, apart from any question of the use of the wagon facilities for other purposes. This is the first year that imported grass has been accepted with any enthusiasm in Berar, and it is certain that the lives of many cattle were saved by the imported fodder. The question of the permanent establishment of a grass depôt, with baling plant, at Mandwa is now under consideration.

27. Railways.—There is little to record under this head. No railway extension has taken place since the last scarcity in 1918, and the tracts land-locked at that time remain land-locked now. Reference has already been made

to the supply of grain provided in advance against the rains in Jubbulpore Mandla and Chanda. Elsewhere, the railways were able to supply the needs of the province without any hitch or breakdown. No control was necessary as in 1918.

28. Irrigation.—The district reports bear ample evidence of the utility of the Government irrigation works. Thus, in the Drug district the only area that did not come under scarcity was the tract protected by the Tendula canal. Under the Mahanadi canal the crops on about 50,000 acres were saved while 50,000 acres more received one watering though not sufficient to bring crops to full maturity. In Brahmapuri tahsil in Chanda the average outturn, increased by that of the crops under the Government tanks, was 50 per cent higher than that in neighbouring tahsils. In Bhandara though the tanks could not fully serve the areas commanded, it is reported that their utility was amply demonstrated. In Balaghat the eastern portion of the Waraseoni tahsil, which is protected by the Wainganga canal, was immune from the general failure which befell the rest of the district. In Damoh the ten small tanks were generally successful. In all 1,014,830 acres of rice were irrigated from all sources during the year, of which 328,562 acres were supplied by Government tanks. But it must be recollected that, while these areas undoubtedly fared better than their neighbours, still owing to the insufficiency of water in the reservoirs they did not in many cases obtain a full outturn.

Of the value of irrigation and of its popularity there can be no doubt. In spite of the failure of the Mahanadi canal to supply the full demand for water in the famine area, which necessitated the remission of irrigation revenue to the extent of over Rs. 1 lakh, a flood of applications compelled the irrigation officials in the next season to accept agreements for larger areas than they considered to be fully protected, before the completion of the Murransilli reservoir, on the understanding that if there should be any shortage of water, the new areas would be the first to suffer. The completion of the Murransilli reservoir, with which good progress was made during the year, will ensure a full supply of water to those areas which received only partial protection in the year under report.

29. Feudatory States.—Relief measures were required only in the four western States of Nandgaon, Khairagarh, Chhuikhadan and Kawardha and to a smaller degree in the south of Bastar. The same general measures were pursued as in British India, *viz.*, the suspension of rents and revenue, the grant of taccavi and forest concessions and the opening of special works where necessary. In addition, kitchen relief was given in all States. In all, the maximum number of persons on relief works in any month was 11,418 and on kitchen or other gratuitous relief 1,804. Distress in these areas rapidly disappeared after the establishment of the monsoon in 1921.

30. Expenditure on Famine Relief.—The total expenditure charged to the head "Famine Relief" from 1st October 1920 to 31st March 1922 was Rs. 44.17 lakhs, of which Rs. 25.66 lakhs were expended by the Public Works Department on works, Rs. 5,15,570 by the forest Department and by District Councils and District Boards on works financed from provincial revenues, and Rs. 13.35 lakhs by Civil Officers on gratuitous relief or other miscellaneous charges. Prior to the 1st April 1921, only such expenditure as was incurred on works opened or continued for the relief of distress in districts where famine had been declared was charged to the head "Famine Relief". Elsewhere, where scarcity only was declared, all expenditure on works was charged to the head "45—Civil Works" until the allotment provided for in the budget was exhausted, when special allotments debitable to famine relief were made. After the 31st March 1921, owing to a change of system consequent on the introduction of the reforms, all expenditure on works intended for the relief of scarcity was debited to the head "Famine Relief and Insurance", whether the district was declared to be under scarcity or under famine, unless provision for the work had been made in the Civil Works budget. So far as possible, however, all works required for the relief of scarcity or famine were excluded from that budget.

Owing to the fact that not all the expenditure incurred before the 1st April 1921, on works used for the relief of distress, was debitable to famine relief, there is a discrepancy between the amount shown by the Chief Engineer as expended on relief and that debited by the Accountant-General to famine relief in Statement IX (a). The Chief Engineer shows a total expenditure on works of Rs. 30.66 lakhs, whereas the sum debited by the Accountant-General to the famine head is Rs. 25.66 lakhs. The difference of Rs. 5 lakhs, though actually spent on works used for the relief of distress, was debitable to the Civil Works budget of 1920-21, and so has not appeared in the Accountant-General's figures in Statement IX (a).

The distribution of the Rs. 13.35 lakhs spent by Civil Officers was as follows:—

Gratuitous relief	...	...Rs. 10.45
Miscellaneous, including indirect expenditure	...	.. „ 1.65
Salaries and establishment charged to famine relief	.. „	1.25

Gratuitous relief was mostly required in the three districts in the Jubbulpore division, where famine was declared, and in Drug which suffered more than the remaining Chhattisgarh districts. The heaviest charges for establishment were in the Mandla district, where the distress was widespread over the whole district, but considerable sums were required also in Jubbulpore, Betul, Chhindwara and Raipur.

31. Cost of relief per day unit.—The incidence of the Public Works Department expenditure per unit relieved calculated on the total of expenditure debited to “45—Civil Works” as well as that debited to famine relief was Re. 0.3.9 compared with Re. 0.1.8 in 1899-1900 and that of gratuitous relief was Re. 0.1.9 compared with Re. 0.0.10 in that year. Owing to the fixation of the wage basis for workers so as to cover the cost of relieving three small children per pair of workers, neither of these comparisons is fair: since the first does not take account of the fact that the unit incidence of work relief covers the relief of dependents, and the second is an incidence for adults, whereas in 1899-1900 it was mainly an incidence for children.

To gain some idea of the comparative cost per unit, however, in 1899-1900, the incidence of all kinds of relief per unit must be compared, and in calculating the cost for 1920-21, the number of units returned should be increased by one and a half times the worker units, each of which may be taken to represent $1\frac{1}{2}$ children in addition. On this basis the incidence of all kinds of relief is Re. 0.1.7. Owing to the fact that women greatly preponderated amongst relief workers, this estimate of the number of persons benefited by work relief is probably below the mark: since it is improbable that the father of the family was able to contribute more towards the support of the children than the mother from her wage. In many cases the father was prevented from attending to work by the demands of his small holding and contributed nothing to the family budget. The all-round incidence in 1899-1900 was Re 0.1.3. That is to say, in spite of a rise of about 100 per cent in the price basis, the cost of relief per unit was, only 27 per cent more than in 1899-1900. This is probably due to the smaller proportion of men amongst the workers in 1920-21 and to the fact that the workers habitually earned less than the standard wage. Not only is it certain that the vast numbers of 1899-1900 will not again come on relief, but, in addition, the increase in the cost of relief per unit over that in 1899-1900 will not be proportionate to the rise in the price of food-grains since that year.

32. Total expenditure, direct and indirect.—The expenditure charged to the head “Famine Relief” is, however, but a portion of the sums expended or foregone by Government in indirect ways for the relief of distress during the year. Taking into account remissions and suspensions of revenue, loans, forest

concessions, etc., the actual cost during the year to Government was Rs. 2½ crores, made up as follows:—

Charged to Famine Relief	...	...Rs. 44.17
Loans and advances to cultivators	...	... „ 106.00
Loans and advances to weavers	...	... „ 8.52
Forest concessions, including revenue suspended	...	... „ 6.08
Land revenue suspended	...	... „ 106.87
Land revenue remitted	...	... „ 3.59
Total		... „ 275.23

Of this total, the loans and suspensions of land revenue are recoverable, as well as about Rs. 2½ lakhs of the forest concessions on account of suspensions of grazing dues. The net cost may be put, therefore, at about half a crore.

33 Probable demand for and cost of relief in the future.—Although in the province as a whole, the rainfall and crop outturns of 1920-21 were substantially better than in 1899-1900, in Berar, Mandla and Seoni conditions were either almost as bad as, or actually worse than those of the latter year. These tracts comprise the richest and some of the poorest parts of the province, some of the most advanced and the least sophisticated people, and it is safe to draw conclusions from experience in these areas as to the suitability of the new methods of relief in exceptionally difficult conditions and as to the cost of relief in future.

First, as to the method of relief, this worked sufficiently well to warrant the belief that with a few improvements it will not fail in the worst scarcity which experience shows may be expected. Secondly, as to the cost of relief, in Berar in 1890, the maximum number for whom relief of all sorts was required was 6,01,404, or 208 per mille of the population according to the census of 1891, and the cost of relief was Rs. 1,15,14,617. In 1920-21, the maximum number requiring relief in the three affected districts of Berar was 29,951 or only 15 per mille of the population of those districts and the cost of the relief measures was Rs. 5,63,917. The cost of the relief was one twentieth of that in 1899-1900 and the proportion of the population affected was one fifteenth of that twenty years ago. Turning to the backward and jungly tracts: in Mandla and Seoni the figures were 46,863 and 42,759 or 138 per mille and 115 per mille, respectively. In 1920-21 when the crop failure was more severe the maximum number requiring relief of all kinds was 38,375 or 98 per mille and 20,203 or 58 per mille, respectively. In Mandla, the cost of relief in 1899-1900 was comparatively small because it was given only for a few months in the hot weather and rains and the numbers were large only for two or three months. In Seoni, the cost fell from Rs. 6,59,374 in 1899-1900 to Rs. 3,37,554 in 1920-21.

The fact is that agricultural unemployment is not now so serious a matter for these provinces as it was a couple of decades ago. It is a fortunate circumstance that some of the most insecure tracts are now the centres of the manganese, coal and cement industries, and that others supply large numbers of labourers to the mines and iron works of Bihar and Orissa when agricultural employment fails. The extension of railway communication into some of the forest tracts has greatly improved the position of the jungle tribes who now find employment in providing for the needs of distant centres of population and industry. Add to this the fact that the large Government irrigation works secure against want large areas which a few years ago were a source of constant anxiety, and that the profits of agriculture have of late years increased so largely that the cultivator is no longer in the same extent dependent on the crop of the year, and it is easy to understand that the failure of a crop is no longer the dire calamity it was twenty years ago. It may be confidently expected that expenditure on the relief of famine will never again be required on the same scale as in 1899-1900 and in making provision against further famines, the figures of that calamitous year must be heavily discounted.

34. **Notice of Services.**—The scarcity occurred at a most inopportune time, when officers of the Revenue and Land Record departments, which take such a large share in the administration of relief, were already more heavily burdened than usual by the preparations for the holding of the Council elections and the census. The virulent agitation set on foot by the non-co-operators, which was at its height in the first six months of 1921, added to the anxieties of district officers and enhanced the difficulty of administering relief. It would have been small wonder if in these circumstances there had been delay in initiating the various measures and serious mistakes in carrying them out. That this did not occur reflects the greatest credit on all concerned. The previous experience of a large part of the staff and the efficiency of the system of administration contributed to the success of the operations, but these would not have sufficed without the spirit of devotion to duty which pervades the superior grades of the government services and is increasingly common in the lower grades. The operations demonstrated the value of the Commissioners as advisers to the Local Government and of these officers and the Deputy Commissioners as co-ordinating agents and liaison officers in maintaining harmonious relations between the several departments engaged in conditions which naturally offered many opportunities for friction. Where so many gave of their best, it may seem invidious to commend individuals, but His Excellency the Governor wishes to offer the thanks of the Local Government to some officers who by the accident of their official position or of the season, were specially heavily burdened and distinguished themselves in the way they met the demands made upon them.

Mr. MacDonald, who had recently been posted to Mandla, had the heaviest task in the province and executed it with conspicuous success, although handicapped by bad health during part of the time. Distress was severe in Seoni also and Mr. Rustomji Faridoonji brought his district through a critical period with the minimum of deterioration. The small cost at which the situation was met in Berar is due in the first instance to the good judgment of Mr. Turner, the Commissioner, and Messrs. Wilson, Waterston and De, the Deputy Commissioners of the three affected districts. Mr. De was particularly successful in enlisting the aid of private charity.

The report shows the important part played by the Public Works Department in the administration of relief; for the first time the relief given on works managed by the Department has exceeded, and that largely, any other form of relief. All Commissioners and Deputy Commissioners acknowledge in complimentary terms the work of the officers of this Department. Lt.-Col. Pollard Lowsley, C.M.G., C.I.E., D.S.O., as Chief Engineer was largely responsible for the regulations under which the works were managed. The services of Mr. Desmond, Superintending Engineer, Second Circle, are warmly acknowledged by the Commissioner and the Deputy Commissioners: although he was handicapped by a severe illness during part of the period of scarcity, his exceptionally wide experience of relief works enabled him to give useful advice. Mr. Dube in the First Circle was unfortunately ill and on leave during the critical period of January and February 1921, but he did his best on return from leave to ensure efficiency, though he had not then fully recovered from the effects of his illness. Mr. Joyce, Superintending Engineer, Third Circle, co-operated with the Commissioner and the Deputy Commissioners in their efforts to limit relief to what was really necessary and maintained a high standard of efficiency which is reflected in the low cost of works in Berar. The Executive Engineers and Sub-Divisional Officers of the Public Works Department, especially the latter, had perhaps more harassing work than any other officers employed on relief. They had to be out on their works in all weathers, often, as the Deputy Commissioner, Mandla, says, with nothing better than a mud hut for quarters, and the health of some of them suffered in consequence. The following had exceptionally heavy charges and acquitted themselves well:—Rai Sahib N. N. Sarkar and Messrs. Hyde, Kochar and Allaway, Executive Engineers, and R. S. Daulat Ram and Hukumchand and Messrs. Ganda Singh, Gupta, Roy and Milner, Sub-Divisional Officers in the Roads and Buildings, and Mr. G. Agarwal in the Irrigation Department. In the Mandla and Seoni districts the relief of the unsophisticated jungle tribes was a difficult and important part of the operations which

was well carried out by the Forest Divisional Officers, Mr. Townshend, Rao Bahadur Shrinivasalu Nayudu and Mr. Willford. Amongst Assistant Commissioners and Extra Assistant Commissioners in charge of heavy Sub-Divisions, the following are specially commended by Commissioners and Deputy Commissioners:—Messrs. Binney, Jayaratnam and Rau, Assistant Commissioners, and Messrs. Sinha, Abdul Rahim Khan and Laxmiprasad, Extra-Assistant Commissioners; amongst Tahsildars the names of Messrs. Isvar Sagram, Govind Prasad, Shivanandan Lall and Md. Mujmir in the Central Provinces and of Messrs. Sate, Mir Taslim Hussain, Pestonji and Shukul in Berar are brought to notice. The officers named are those who were specially successful in the organization of private charity in Berar. The good work of some District Councils and District Boards has already been mentioned in paragraph 13. The officers and employees of the Councils and Boards who deserve special mention are Mr. D. K. Mehta, Chairman, and Messrs. Dada Dwarkanath Singh and Pandit Ram'lall Tiwari, members of the Seoni Council, and the District Supervisor Mr. Beharilall; the Commissioner of Chhattisgarh mentions the excellent work of Mr. Shah, Divisional Engineer, and the Commissioner of Berar that of Rai Sahib A. G. Chatterjee, the District Engineer of Amraoti. The names of non-official gentlemen who were prominent in the management of weaver relief and for charity have already been mentioned: but nothing has been said of the services of four missionaries who assisted in the management of other branches of relief. These are the Revd. F. O. D. Roberts of the C. M. S. Mission stationed at Marpha in the remote Mawai and Baiga chak tracts of Mandla who supervised all forms of relief in that area and thereby lightened the burden and diminished the anxieties of the Deputy Commissioner, Mr. J. S. Hoyland of the Hislop College, Nagpur, who gave up his hot weather vacation to the supervision of relief in Dindori and by his strenuous example encouraged the Dindori staff at a particularly trying time when cholera was rife, Mr. Lehman of the Menonite Mission at Dhamtari, who maintained a relief kitchen on which some Rs. 3,300 of Mission funds were spent, and Dr. (Mrs) Rioch who periodically visited the relief works in the Mungeli Tahsil.
