THE RYOTWARI LANDHOLDERS IN MADRAS

R. S. VAIDYANATHA AYYAR, B.A.

A MEMORANDUM ON
THE RYOTWARI LANDHOLDERS IN MADRAS

BY

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Author of 'The Sumerian Origin of Manu's Land and Trade Laws'

WITH A FOREWORD

BY

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FOREWORD.

I have been asked to write a Foreword to this Memorandum on the Ryotwari Landholders in Madras—written by one whose title to be heard can admit of no question.

Mr. Vaidyanatha Aiyar has had active and practical experience as an officer of the Government in the working of both the land revenue and the irrigation systems in operation in our province and his knowledge of the general and economic conditions of the people of the province and, in particular, of landholders is wide and profound. In attempting to set out what in his opinion would be a fair method of approach to this great problem, Mr. Vaidyanatha Aiyar has striven throughout to look at it from both points of view, namely, that of the Government and of the tillers of the soil; and I have no doubt that from this standpoint his Memorandum will merit the careful and anxious consideration of both.

The problem of land revenue is about the biggest problem—economic as well as financial—that is facing the Government to-day and that is bound to confront the Governments and administrations of subsequent years with growing intensity and insistence. It would be no part of wisdom for the Government to shut their eyes to the root of the problem and hope for the best. Nor would it help the ryots merely to continue to emphasise the growing magnitude of their economic suffering, for few there exist who will deny the same. I think it would also be the part of wisdom for the ryots and their leaders and representatives, to face the problem of how to find a solution to this vital question, namely, how to make, on the one hand, the present burden of land revenue levied by the Government bearable by the ryot and

on the other, how to enable the Government to give this relief in a practical and effective manner and on a basis, fair and equitable to all.

I have not been able to examine the concrete proposals which Mr. Vaidyanatha Aiyar has made in any detail in the short time before me. I do feel that I should study them carefully and in detail with the help of the valuable collection of information as well as of statistics which he has set out therein; and I would commend all concerned to do likewise.

Among the important concrete proposals that he has made, however, there are certain general principles with which I may say at once that I cordially agree. Mr. Vaidyanatha Aiyar has of course proceeded to set out his remedies on the footing that periodical revision of settlement should continue—at least on the main principles on which they are now conducted. He has only suggested means by which the present procedure in regard to the levy of re-settlements may be simplified and made more equitable and how wet and dry rates and irrigation revenue now levied ought to be revised and reduced. That no doubt is a large question of policy on which the general trend of public opinion in this province has demanded drastic alteration. But even on the principles accepted by the Government, Mr. Aiyar rightly thinks the case for relief of the agriculturists is not only clearly made out, but the means of doing so are also in the hands of the Government, if they would only consistently apply correct principles in dealing with the classification of lands and irrigation sources, the levy of dry and wet rates and of water rates on lands whether commanded by old or new projects.

Among those proposals, the one I feel particularly attracted to is that in which he has set out a scheme for the simplification and a more equitable incidence of irrigation revenue in this province. He has truly pointed:—

"In the whole of India the assessment for land and the charge for water are consolidated into what is called the wet assessment only in the Madras Presidency and in portions of Bombay and Sind. In all other provinces, the assessment on land is kept distinct from the charge for water. In other words, all Government lands are assessed at dry rates and a separate charge is made for irrigation with Government water. In those provinces, the revenue due to irrigation, which is exclusively the water rate revenue with perhaps here and there a few small items of allied revenues, is readily ascertained and taken credit for by the P.W.D. Irrigation Department and is also very rarely enhanced periodically at fixed intervals. In Bombay, there is not much scope for any large extension of irrigation from newly constructed costly projects and no great difficulty is felt in separating the charge for water from the wet assessment on the comparatively small area of wet lands in that Presidency. I am not aware of the actual conditions of the Sukkur Barrage recently constructed on the Indus river in Sind.

But here in Madras, the system is somewhat peculiar and more difficult. The classification of lands as wet prevails over the whole Presidency and carries with it a permanent legal right to irrigation. The system was not newly introduced here, but is one which the British Government inherited from the old Hindu and Muhammadan Governments. The British Government had, therefore, to make the best use of the system as they found it and, in spite of great difficulty, managed to separate the water charge from the consolidated wet assessment fieldwar under each source of irrigation. Suppose a wet field is assessed at Rs. 10; its corresponding dry rate, say Rs. 2-8-0, is excluded as the assessment for land and the remainder, Rs. 7-8-0, is taken as revenue due to irrigation. To the irrigation revenue so calculated were added the second crop charge on single crop wet lands, the water rate on dry lands and a few other small items, thus making up the total revenue due to irrigation under each irrigation work. In the case of productive works of Class I constructed by the Government with the aid of borrowed capital and for which separate capital and revenue accounts are maintained, the

> Irrigation Department exclude the revenue due to 'old irrigation' on lands irrigated prior to the advent of the project and take credit only for the revenue due to 'new irrigation' on lands brought under irrigation after the introduction of the project."

That is the general plan upon which the Government have proceeded in the maintenance of capital and revenue accounts, but there are a number of anomalies that are connected with irrigation projects worked on wet basis and dry basis and that arise out of differential and standard water rates, the reclassification of irrigation sources and the like. But to all alike the principle of percentage enhancement of the rates levied has been applied in a manner which has not only produced absurd results in the accounts maintained by the Government, but also produced inequalities and injustice on account of periodical enhancements. If the principle is accepted that Government's irrigation revenue is a commercial proposition, namely, that it is a return to the Government on the works maintained by them and should, therefore, cover their maintenance charges as well as a fair return on the capital invested by them for the operation and maintenance of these works, it follows that the irrigation part of the land revenue should be strictly separated from whatever is levied for the use and occupation of land, that the classification of 'wet' and 'dry' will have to be reconsidered and that in any case the money return on the capital fixed by the water rates cannot and ought not to be susceptible of periodical enhancements on the ground that the price of the produce raised has risen, or other economic improvements have taken place.

If the Government, therefore, will realise the fact that the relief that has to be given to the agriculturist is urgent and must be based upon some equitable and just method—I am assuming of course that any such process may involve a surrender of revenue of a substantial amount which will have to be met otherwise—

the method of separating irrigation revenue and putting it on a really commercial and correct footing, seems to me one well worthy of consideration not only by the present, but by coming Governments who have to deal with the problem of relieving the burden of the agriculturists in South India.

Fortunately, the suggestion is not devoid of authority, because the Indian Taxation Enquiry Committee were exactly of this view. They said:

> "It seems to be clear, especially in view of the recent developments of the land revenue systems, that however possible the charge for water should be separated from the charge for the land. The minimum charge, except in the case of protective works, or where a special concession is given to a particular area, or class of cultivators, should be the cost of supplying water, that is to say, the cost of the maintenance of irrigation work *plus* interest on capital cost. The maximum should be a figure so fixed as to take for the Government the whole of the increase in the return from the land except such portion as will be just sufficient to induce the cultivator to take the water. The normal should be a moderate share of the value of the water to the cultivator."

I do not desire to overload this introductory note, but commend the whole of Mr. Vaidyanatha Aiyar's Memorandum to the attention of all those interested in this vital problem.

A. RANGASWAMI IYENGAR.

PREFACE.

THE Ryotwari factory with all its mechanical engines for the production of Government revenues from land and water has been working ceaselessly with so much vigour and force for over a century that the supply of fuel in the country has begun to show signs of depletion, indeed, to such an extent that the Government are now forced to seek for additional supplies by artificial means. With the advent of the general economic depression throughout the country, more especially in this province, in 1929 and of the Mettur project in the Tanjore district in 1932, the situation is growing from bad to worse and has now come very nearly to the stage where both the Government and the people should take stock of the situation and pull together in sincere co-operation with each other to find the ways and means of re-organising the factory, in order to avoid a serious conflict between the engine-drivers and the coal suppliers. To this end, I have ventured to make a rapid survey of the situation in this province during the last three decades and to indicate the position where both the Government and the people now stand on the cross road and whither they are drifting.

For my part, I candidly admit that this Memorandum does not disclose anything which the intelligentsia of the province do not know. It only presents the picture of the grinding work now done in the factory in broad outline and in one view. May be, I have struck a note of pessimism with a slight touch of feeling for the present state of things; but it is entirely due to the fact that both the Government and the people travel in the same boat in these difficult times, that the one

cannot do without the other and that a cleavage between the two will do more harm than good.

The Government seem to sympathise with the people, but find themselves, in such a difficult situation that they cannot translate their sympathy into action. They are obviously inclined to adopt a policy of drift till the advent of the new reforms in a year or two. But then they will only be leaving a big legacy of agrarian trouble to the Ministers in embryo under the new constitution. I shall, therefore, feel amply rewarded if both the Government and the people devise the means to reorganise the system without further delay, so as to place the land and irrigation revenues on a just and equitable footing and thereby ensure the happiness and contentment of the people.

Before concluding, I must express my grateful obligations to M.R.Ry. A. Rangaswami Ayyangar Avl., B.A., B.L., the talented Editor of "The Hindu" for the very thoughtful and instructive Foreword he has kindly written at my special request, to M.R.Ry. T. R. Venkatrama Sastrigal Avl., B.A., B.L., C.I.E., for the help he has rendered in the publication of the book and to M.R.Ry. R. Narayanaswami Ayyar Avl., B.A., B.L., the Proprietor of the Madras Law Journal Press, for the thoroughness and promptitude with which he finished the printing work within a week.

269, West Road,
Negapatam,
14—11—1933.

R. S. VAIDYANATHA AYYAR.

TABLE OF CONTENTS.

APPENDIX.

Ryotwari Landholders in Madras

[WHERE THEY STAND AND WHITHER THEY ARE DRIFTING]

We often hear, of late, rumbling noises of unrest and discontent among ryotwari landholders in this Presidency, which seem to spread beneath the surface also to other parts of India. However much we may be inclined to ignore it as due to the mischievous activities of political agitators, a close, careful, intelligent and impartial study of the Land Revenue and Irrigation policy will doubtless open the eyes of all thoughtful men to where the landholders now stand and whither they are drifting, in the ever-recurring cycles of enhancement of assessments made once in thirty years solely on the basis of the so-called rise in prices. The wheels of the Settlement Department are just completing their rotation in the third circuit round the several districts and will, within a short time, enter upon the fourth circuit. The need for seeking remedies to check the growth of discontent arises more in the interests of the Government than in those of the people, because the former are bound to, and will surely, uphold their traditions of benevolence and moderation in enhancing land tax. In this investigation, I shall simply state the facts and figures I have been able to collect from the Government and other publications accessible to all persons and their implications in so far as they lead to valid conclusions and leave the readers to draw their own inferences. This is, of course, a subject in which any man can drive his coach and six into the meshes of agricultural facts and statistics according to his own personal equation and there is, therefore, greater need for studying both sides to the question before arriving at definite conclusions.

SECTION I.

Loss of Fertility due to exhaustion of soils

The Delta tracts of the Godavari, the Kistna and the Cauvery and the Periyar tract are generally believed to be 'Paradise regained' on earth in the south of India. Judged by the enormous capital outlay spent by the Government on these irrigation works and by the standard of comforts and amenities of civilization enjoyed by the people in these tracts, this may be true to all appearance. But on a closer examination, it will appear that there is something wrong beneath the surface. It is a well-known fact that plant foods in soils are exhausted by the continuous cultivation of the same crop for centuries together and that unless suitable manures are applied to replace the deficiencies in the soils, the result will be loss of fertility and diminution of yield. This process of deterioration of fertility had been going on in the Presidency for a long time and, indeed, to such an extent that the Government themselves felt the need to ascertain how far this loss of fertility had proceeded, what reserves of plant foods were available and whether the soils were producing the maximum crops of which they are capable, under proper management. As detailed soil surveys throughout the Presidency were obviously impossible, the Government limited the operations to the Delta tracts of the Godavari, Kistna, Guntur and Tanjore districts and the Periyar tract in the Madura district.

Before proceeding to describe the results of such soil surveys, it is necessary to explain a few broad facts about the fertility of the soils and their manurial requirements. The fertility of a soil does not depend entirely upon the natural manurial ingredients available in the soil, but also upon many other factors, such as, climate, seasons, temperature, rainfall, irrigation, drainage, etc. As observed by Prof. A. D. Hall, Director of Rothamsted Station and the author of 'The Soil',

"the food, the water, the temperature, the living organisms in the soil are all variables, affected by cultivation, climate, themselves also variable; they all act and react upon one another and upon the crops". He further adds, "nor can we" "see our way to any radical acceleration of the turn over of the agricultural operations that shall be economical; the seasons and vital processes of the living organisms are stubborn facts unshapable as yet by man with all his novel powers." Nevertheless, after making extensive and varied experiments in several countries, the Agricultural Chemists have in a way determined the soil requirements of various crops in different conditions and places. In the case of paddy in South India, the normal proportions of the available plant foods have been fixed as follows:—

Nitrogen, ·06 per cent., Phosphoric acid, ·01 per cent., and Potash, ·005 per cent.

Magnesia and Lime—the proportion of magnesia should not exceed that of lime.

Of these, Nitrogen and Phosphoric acid are the most important and necessary plant foods of the paddy crop; an excess of potash causes salinity, while an excess of magnesia over lime produces a toxic influence which diminishes the crop. The amount of magnesia and lime, however, is not so important in paddy soils as in dry soils.

On the basis of these data, the Agricultural Chemist to the Government and his Assistants conducted the soil surveys in the above tracts, which, as everybody knows, do not present any abnormal variations in climate, temperature, seasons, rainfall, irrigation, etc. There may be, and are, some local variations in agricultural practices, but they do not materially affect the turn over of the agricultural operations. The soil surveys so made have revealed very striking and unexpected results.

In the Tanjore delta, about half the soils contain less than ·04 per cent. of Nitrogen and practically the whole of the remaining delta soils contain less than ·06 per cent. This shows that the delta as a whole suffers badly from a lack of

the most important plant food. With the possible exceptions of a small area near the Coleroon river and two small isolated areas in the Mayavaram and Thiruthuraipundi taluks the whole delta is also deficient in Phosphoric acid. The delta is well supplied with potash, but an excess of it in many parts causes salinity. The soils of the northern and eastern portions of the delta show an excess of magnesia over lime, which has the effect of diminishing the crop.

Similarly in Guntur, three--fourths of the delta are badly in need of Nitrogen and half the area is deficient in Phosphoric acid. In Kistna and Godavari, about half of each delta is deficient either in Nitrogen, or Phosphoric acid, or both; while in the Periyar tract, though there is a sufficient supply of Nitrogen, the lack of Phosphoric acid is most striking in three-fourths of the area. These accounts of soil surveys are noteworthy not so much for what they reveal as for what the authors have left unsaid out of extreme caution.

These surveys made at the instance of the Government and by their own experts have proved conclusively that enormous losses are taking place in crop production owing to the exhausted condition of the soils from causes beyond the control of the ryots. It is very easy to preach to the ryots the necessity for the application of artificial manures, but when the soil exhaustion prevails over several districts, if not over the whole Presidency, no useful purpose will be served by such expert advice. About 75 per cent. of the landholders in the Presidency are persons paying an assessment of Rs. 10 and less, while another 22 per cent. of them pay assessments ranging from Rs. 10 to 50. This large body of small landholders cannot obviously go beyond dung-pits and rubbish depots for manure. Even in the case of the remaining 3 per cent. of the landholders, it is extremely doubtful whether they can afford to purchase chemical manures at considerable cost to cover their entire holdings from year to year.

If the soil surveys had been extended to other districts, the complete story of the Madras soils would have been told long ago. Even as it is now partially revealed, it is strikingly

depressing. There are, doubtless, large areas of lands of more than average, or of even exceptional, fertility in many districts, but they do not alter the general position of the large body of landholders. Isolated cases of abnormally high or low fertility are out of account in this investigation. The problems will be discussed with reference to the general conditions applicable to the bulk of the landholders.

SECTION II.

Deterioration in Crop Production.

Having shown on the testimony of the Government Agricultural Chemists that the soils in the several deltas are already subject to loss of fertility, I shall now proceed to describe the inevitable result of it, *viz.*, that the crop production has not kept pace with the so-called rise in prices, or with the millions of rupees spent by the Government on irrigation works, demonstration farms and agricultural propaganda, but in fact shows distinct signs of gradual decline during the last ten years. The accompanying statement shows in one view the statistics of the cultivation of paddy and the values of the produce obtained on all the areas irrigated by the Cauveri, the Godavari, the Kistna and the Periyar as recorded in Statement E-III of the P.W.D. Administration Reports—Irrigation Branch—for a series of 36 years. Obviously they make a fair approximation to accuracy. Otherwise, the Government would not have accepted and published them during these 40 years or so.

Paddy—Area irrigated and Value of Produce—1st and 2nd crop.

Years.	Prices in seers of 80 tolas per rupee (Tanjore Dt.)	Cauveri, (Tanjore and Trichinopoly Dts.)			Godavari (Godavari and Kistna Dts.)		
		Area irrigated.	Gross value of produce.	Value of produce per acre.	Area irrigated.	Gross value of produce.	Value of produce per acre.
1	2	3	4	5	6	7	8
	Seers.	Acs.	Rs.	Rs.	Acs.	Rs.	Rs.
1895-96	14·6	9,07,265	2,34,40,263	26	5,30,599	1,08,13,115	20
97	13·2	8,96,448	2,28,04,242	27	5,88,962	1,57,56,267	27
98	10·1	8,99,171	2,93,24,006	33	6,65,885	2,27,15,663	34
99	12·5	8,93,628	2,65,18,899	30	6,85,698	1,83,75,368	27
00	9·3	7,15,208	1,36,16,790	19	6,45,804	1,59,27,700	25
1900-01	10·1	8,78,079	3,60,78,182	41	6,97,154	2,67,79,679	38
02	11·6	8,96,697	3,11,13,022	35	7,14,558	2,39,13,868	33
03	13·6	8,93,273	2,27,99,377	26	6,88,213	1,95,19,699	28
04	12·6	8,81,684	2,40,85,651	27	6,83,310	1,69,90,485	25
05	11·8	8,84,677	2,50,05,731	28	7,69,213	2,02,03,809	26
06	9·6	8,93,412	3,38,84,099	38	7,70,731	2,80,89,963	38
07	8·7	8,83,938	3,26,67,429	38	7,47,966	3,55,08,566	47
08	8·0	9,02,200	3,94,59,225	44	7,96,285	3,42,15,778	43
09	7·4	8,90,098	3,56,80,926	40	8,18,825	4,29,45,777	52
10	8·6	9,03,779	3,84,88,686	42	8,00,509	3,47,29,351	43
1910-11	9·9	9,15,504	3,19,99,088	35	7,84,509	3,30,78,854	42
12	8·5	9,10,788	3,57,26,894	39	8,66,062	3,50,02,798	40
13	7·3	9,14,997	4,30,00,060	47	8,88,711	4,60,38,752	52
14	7·4	9,06,201	4,45,60,589	49	8,82,141	5,25,44,506	60
15	8·0	8,88,745	4,10,15,547	46	8,43,120	4,54,08,087	54
16	7·6	8,91,553	4,21,19,926	47	8,98,204	4,91,59,335	55
17	7·6	8,99,637	4,89,28,425	54	8,97,849	5,13,47,312	57
18	7·6	9,08,184	5,83,05,692	61	9,12,241	6,09,75,352	67
19	5·3	7,88,817	6,08,40,947	77	9,49,420	8,86,58,940	94
20	4·4	9,21,145	10,86,79,081	118	10,13,640	1,12,866,284	111
1920-21	5·3	9,21,674	8,24,32,419	90	8,47,174	1,08,026,258	129
22	5·5	9,02,569	8,20,80,605	91	8,73,356	1,05,378,213	121
23	5·6	9,10,750	8,57,99,464	94	8,70,443	8,82,53,581	101
24	6·4	9,00,278	7,25,34,091	81	8,71,233	9,05,69,063	104
25	4·6	8,47,919	7,93,51,930	94	8,91,310	1,01,820,761	114
26	5·3	8,99,184	6,77,97,785	75	9,09,818	1,02,603,578	113
27	5·6	8,78,009	5,93,00,875	67	9,39,667	1,21,946.165	129
28	5·2	8,97,861	6,64,81,118	74	9,33,904	1,19,640,690	128
29	5·6	8,75,472	6,15,35,134	80	9,19,836	7,53,59,165	82
30	6·5	9,03,779	5,91,80,790	65	9,34,475	5,38,34,915	64
1930-31	7·9	8,97,406	4,25,13,779	47	9,12,160	5,37,65,197	59

Govt.—Zamin and Inam—Wet and Dry—Flow and Lift.

Kistna (Kistna and Guntur Dts.)			Periyar (Madura Dt.)		
Area irrigated.	Gross value of produce.	Value of produce per acre.	Area irrigated.	Gross value of produce.	Value of produce per acre.
9	10	11	12	13	14
Acs.	Rs.	Rs.	Acs.	Rs.	
4,67,574	1,00,69,861	21	..	..	..
4,64,183	1,19,18,872	23	51,784	8,37,073	16
5,10,323	1,86,87,434	36	76 142	16,44,646	22
5,56,411	1,50,80,691	27	93,924	19,55,718	21
5,52,893	1,41,94,263	26	1,09,810	18,34,078	17
5,79,109	2,60,65,977	45	1,21,245	35,35,950	29
6,10,347	2,27,48,078	37	1,33,510	34,59,611	26
6,04,271	1,93,73,174	32	1,31,018	27,69,520	21
5,71,174	1,67,02,948	29	1,32,149	28,77,130	22
6,19,336	2,12,85,814	34	1,36,576	44,85,051	26
6,28,841	2,59,38,585	41	1,39,103	46,86,800	34
6,37,491	3,13,04,009	50	1,36,104	36,14,602	34
6,56,109	3,48,48,890	53	1,46,442	52,78,839	36
6,12,473	4,09,26,394	61	1,52,145	55,20,746	36
6,76,977	3,14,73,026	46	1,44,921	56,14,273	39
6,83,469	3,17,54,242	46	1,47,116	46,53,405	32
6,72,839	3,57,20,765	52	1,43,085	53,78,591	37
6,85,721	4,17,51,057	61	1,52,637	63,71,425	42
7,01,828	4,13,73,406	59	1,53 863	93,13,695	61
6,76,909	3,71,80,733	55	1,55,752	81,04,702	52
6,91,315	3,92,35,923	57	1,58,397	82,33,821	52
7,04,694	3,92,07,343	55	1,59,086	1,13,37,192	71
7,07,208	4,96,01,830	70	1,61,263	1,52,85,216	95
6,88,778	6,15,98,660	90	1,60,366	1,92,78,648	120
6,99,483	8,26,27,284	118	1,65,428	2,64,29,682	160
7,03,357	9,75,88,825	139	1,67,766	1,88,02,552	112
7,18,429	8,74,83,588	122	1,62,557	2,00,25,661	123
7,36,666	7,47,88,925	102	1,64,287	1,95,41,421	119
7,30,802	7,48,51,377	102	1,67,712	1,95,42,758	117
7,41,882	8 69,12,682	117	1,69,588	2,44,33,756	144
7,34,390	7,37,74,760	104	1,66,680	1,92,65,280	116
7,53,383	7,83,78,103	104	1,67,595	1,92,73,425	115
7,67,512	7,37,24,954	96	1,69,950	2,14,13,701	126
7,75,268	6,56,43,198	85	1,66,719	1,98,39,561	119
7,86,818	5,98,85,053	76	1,69,093	1,69,09,300	100
7,85,185	4,87,43,938	62	1,65,012	1,36,25,309	83

At the outset, it is necessary to explain some of the salient points revealed by these statistics in broad outlines.

(1) The values of paddy shown in the above table include those derived from 2nd crop paddy. The proportions of 2nd crop paddy areas in these systems are roughly:— Cauvery 11 per cent., Godavari 24 per cent., Kistna 0·62 per cent. and Periyar 34 per cent., of the first crop areas therein. These percentages slightly vary from year to year on account of seasonal causes. If deductions are made from the values of the produce also in the same proportions, the balances will represent the values of paddy per acre on the basis of one crop throughout. Taking the figures for 1930-31, they will stand as follows:—Cauvery Rs. 42, Godavari Rs. 45, Kistna Rs. 59 and Periyar Rs. 55 for one paddy crop in all these systems.

(2) The average values of paddy per acre are strikingly low under all the four systems of irrigation; their rise and fall are also so uniform throughout all the six districts that they appear to oscillate by the same causes everywhere.

(3) The acreage values of paddy are no doubt averages for each year and for each source. Even as averages they show how the wind blows; the very fact that they are low, indicates that the areas under the lower denominations of outturns should be larger than those under the heads of normal and above normal.

(4) During the first 17 years from 1895-96 to 1911-12 the rise in the values of paddy per acre was very slow and inappreciable. If the outturns had been normal or above normal, the values of the produce should have increased considerably in proportion to the rise in prices. It seems pretty clear that the actual outturns have arrested the full vigour and momentum of the rise in prices.

(5) The 9 years from 1912-13 to 1920-21 was the period of war with the addition of one year before and one year after. During this period the whole world was plunged into a crisis and both the Government and the people in India showed feverish activity and grim determination to increase the

production of food and industrial crops to the maximum extent in order to meet the pressing requirements of this and all the allied countries. It was during this period that the Government ordered the soil surveys referred to in Section I with a view to find out the ways and means of increasing production in the province. But when they found that the soil exhaustion was almost irremediable, they granted the fullest possible concessions for extending cultivation and augmenting production wherever possible. They even regulated the prices, the sale of stocks for consumption and of reserves for transport and export. It is, therefore, no wonder that the values of the gross produce rose high during this period of struggle for existence.

(6) Then began the period of reaction from 1921-22. Though the prices still ruled high till the end of 1929 and the areas of cultivation showed but little fluctuations from year to year, the actual production is in fact generally decreasing, followed by a corresponding reduction in the acreage values of paddy uniformly in all the tracts in question.

(7) Quite apart from the rise or fall in prices in the future, it seems almost certain that the productivity of lands will soon revert to the pre-war conditions prior to 1912-13. Because under normal conditions the lack of soil ingredients and the absence of outlets for export should necessarily react upon the outturns and the values of the produce.

(8) A detailed study of these statistics by a comparison of the fluctuations in prices, the areas irrigated and the acreage values of the produce by permutation and combination will convince even the severest critic that some mysterious force is working behind as a check upon the prices, *viz.*, the low outturns everywhere.

(9) For instance, taking the ten years from 1919-20 to 1928-29, which was exactly the period when the prices were more or less high and steady, it will be seen that the fluctuations in the areas of cultivation from year to year were but small, though they showed a tendency for gradual decline. Within certain reasonable limits, the disturbing factor is the actual outturn and not necessarily the areas, since smaller areas have produced larger outturns in some years. But taking the

values of the produce by themselves, it is clear that the downward movement is somewhat precipitous as shown below:—

		Rs.			Rs.	
Cauvery ..	Maximum	10·86	crores.	Minimum	5·93	crores.
Godavari ..	„	11·96	„	„	7·53	„
Kistna ..	„	9·75	„	„	6·56	„
Periyar ..	„	2·64	„	„	1·92	„

In spite of the fact that the prices were more or less steady and the areas showed fluctuations only in four or five digits during the ten years in question, the values of the gross produce declined in the same period by crores of rupees. Is this precipitous fall covered by the small percentage deductions made for vicissitudes of seasons at resettlements, or do the low outturns come within the purview of the rules for the grant of remissions? To both these questions, the answer is obviously in the negative.

SECTION III.

Rise in Prices as the Basis of Enhancement of Assessment.

The first question that arises for consideration is whether the so-called rise in prices can by itself form the sole basis for enhancement of assessment at the resettlements. Those who have eyes to see and a taste for studying statistics can readily find an answer to this question in the figures for 36 years given in the previous Section. But as the matter affects the interests of the dumb millions of people, I shall try to make it intelligible even to the man in the street by the following illustration.

Suppose a landholder is the owner of 1000 Velis of wet lands in the Tanjore delta and that under normal conditions and proper management he should get 200 kalams of paddy per Veli from one and two crops. With a price of Rs. 2 per kalam, the outturn should yield a gross income of Rs. 4 lakhs per year. I shall illustrate the vagaries of prices by varying

the figures of cultivation, outturn and prices by permutation and combination in respect of this single holding.

Area cultivated. (Velis.)	Outturn per Veli (Kalams.)	Total Outturn. (Kalams.)	Prices per Kalam		Income from land.
			Rs.	P.	Rs.
800	200	1,60,000	2	0	3,20,000
1000	150	1,50,000	2	0	3,00,000
1000	150	1,50,000	1	8	2,25,000
800	200	1,60,000	1	4	2,00,000
1000	100	1,00,000	1	8	1,50,000
1000	200	2,00,000	1	0	2,00,000

That the rise in the price of paddy is always beneficial to the landholders is an axiom which requires no demonstration. But the total income from land to the owner depends more upon the outturn than upon the prices. Now that the outlets for the export of paddy have been practically closed on all sides and the quantity of paddy now produced in the country is twice as much as that required for local consumption, the prices must necessarily go down and the surplus produce should become valueless within a short time. Sugarcane, betels and plantains and cocoanuts cannot be cultivated as remunerative staple products throughout the country, though they may be raised for purposes of giving the lands the benefit of a rotation of crops. Cotton cannot be cultivated on all soils throughout the Presidency.

The question raised in this Section is not, however, so simple as it may appear to be at the outset. It is more a question involving economic enquiry and crop experiments on a large scale than one that can be settled by arm chair academical discussion.

SECTION IV.

The Present Universal Economic Depression.

Before proceeding to deal with the other main problems of Land Revenue and Irrigation, it seems necessary to refer briefly to the universal depression in currency, exchange, trade, commerce, prices, etc. It is a matter of common knowledge that even the most advanced countries in Europe and America occupy positions more or less in close proximity to political, economic, or financial volcanoes. In America we see thousands of banks collapsing and rising like bubbles and frantic efforts are being made with pompous advertisements in the direction of what are called 'prosperity drive' or 'recovery drive'. In Europe, Austria is very near bankruptcy; Germany is again on the war path; France is using much rose powder over her body politic and is even preparing for defence on her eastern frontier; Italy, well organised as it is under her Facist regime, is still closely watching, in breathless suspense, the pell-mell confusion in the European race course; Russia is busy with her crusade against God and with her five and ten year plans for men and is seeking new allies and friends against a possible commotion in her western frontier, or the far eastern borders. Everywhere we hear of boycott, *e.g.*, of Russian goods by England, of German goods by Russia and America, of Japanese goods by England and India, of Indian cotton by Japan and foreign cotton and paddy by India. In the name of democracy, Russia, Germany, Spain, Portugal, Greece, Bolivia, Paraguay, Cuba and China are all ruled at the cannon's mouth by Dictators who are themselves living in hourly expectation of death by bombs, revolvers and swords. As Carlyle once remarked, "Councillors of State sit plotting and playing their high chest game, whereof the pawns are men". The grip which the European nations had on the Asiatic markets has become very much loosened almost to the vanish-

ing point, with the result that the guiding principle now followed in the politics, exchange, trade and commerce of *all the nations of the world* is 'Be *selfish* to thyself; it follows then as night follows day, thou shalt not then be *true* to any man'. Pardon me for mutilating Shakespeare's golden maxim, but a little self-diagnosis by every nation will show that it is a fact. So long as this motto reigns supreme in the affairs of the world, who can say that there will not be another trade war in Europe and Asia within a decade or so? The clouds are already gathering thick in the western skies. But let this pass.

Coming nearer home, thanks to the British Government who are steering the Indian Ship of State clear of the political shoals with great diplomacy, tact and ability. But in currency, exchange, trade and commerce, India still dances pathetically to the pressure applied to electric buttons from London, Liverpool, New York, Moscow and Yokohama and will continue to do so so long as her Dynamo is located in London. India has always been the open door market for all the nations of the world in respect of their manufactured articles and goods supplied in exchange for her raw products. Of the several raw products exported from India, the most important ones are cotton, jute, ground-nut, copra, oil cakes, leather, wheat and paddy and even among them, cotton and jute alone furnished the fields for exploitation by foreign merchants. The present triangular contest between India, Japan and Lancashire in respect of cotton and manufactured piecegoods demonstrates to the world the care and solicitude shown by the Indian and the British Governments to safeguard the trade between India and England against the inroads of Japan. So far so good, though the results of the conferences at Simla and London have yet to be shaped by diplomacy rather than by the principles of generous trade. At all events, the Indian Governments may be trusted to do the right thing at the right moment in their own way, especially where the common interests of England and India are involved.

But the point I am driving at is where the producers of cotton, jute, ground-nut, copra, wheat and paddy stand in the present scheme of things in India. They form the millions of

the dumb pillars of the British Indian Empire, for whom the Tories in England and the Europeans in India wax eloquent in their sympathy. In the contest between Lancashire, Bombay and Japan, the cotton growers of India have very nearly been let down with a profusion of lip sympathy from all concerned. In Southern India, paddy yields the bulk of the agricultural wealth of the province. China, Japan, Siam, Turkey, Persia, Italy, Austria and even Holland are said to be cultivating paddy and some of them are dumping their produce into India. This being so, the outlets for the export of South Indian paddy are practically closed, though occasionally we see exports of small quantities of it to Ceylon within the last few months. It is now pretty clear that there is not much scope for any large export of paddy to other countries in the east or west, or for any appreciable rise in prices thereof. In the absence of wide outside markets and of a strong organization within India to safeguard the interests of the producers, individual merchants cannot obviously waste their money in the unprofitable export trade of paddy. And so, the weakest must go to the wall. The levy of import duties on foreign paddy, though to some extent it may serve as a check upon the fall in prices, will more effectively close the foreign markets against Indian paddy and will not materially ameliorate the condition of the South Indian cultivators. It is under such circumstances that the people of the Tanjore district are now asked to bring an additional area of about three lakhs of acres under paddy and sugarcane cultivation with the aid of water from the Mettur project. The time chosen for the introduction of this colossal project, which under normal conditions should be the most useful and beneficial one, is unfortunately not only not propitious, but even distinctly bad.

SECTION V.

How the Irrigation Revenue swells through Suction Pumps in the Resettlement Springs.

In the present disturbed state of the country in all the spheres of human activities, political, administrative, commercial and financial, it is too much to expect the Government to embark upon an economic enquiry on a large scale over the whole province and to produce sticks for the people to beat them with. A similar enquiry ordered in Godavari at the time of the Resettlement in an unguarded moment of weakness placed the Government in an awkward position from which they extricated themselves simply by a flat refusal to be guided by the conclusions of the Enquiry Committee. Even if they now condescend to hold a similar enquiry, the results will be no better than those which attended the farce in Godavari, as well as the labours of the peripatetic Banking Enquiry Committee. It is difficult to believe that the Government are not aware of the actual state of things here, or that an economic enquiry is needed at all to convince them. The only obstacles that stand in their way are the exigencies of administration and the prestige of the Government. At the same time, no Government can go on increasing land tax automatically once in 30 years up to eternity solely on the basis of the rise in prices hanging in the air, without regard to the income from land, or even in the intervals between two resettlements, as in the case of the Mettur project solely on the basis of its cost and of the more assured supplies in the Cauveri river and its old and new branches anticipated by the Engineering astrologers of the Government. The Government themselves being more in need of money than the people to meet their financial liabilities and commitments, to carry on their top heavy administration, to preserve law and order and to prepare the country for speedy self-government, they will surely brush

aside any proposal which will have the effect of curtailing their revenues, unless and until they are driven to a corner from causes beyond their control. Such causes may not seriously operate now, but when they begin to act in the near future, who knows what will happen?

A.—The method of calculating the Irrigation revenue —Peculiarity of the Madras system.

In the whole of India, the assessment for land and the charge for water are consolidated into what is called the 'wet assessment' only in the Madras Presidency and in portions of Bombay and Sindh. In all other provinces, the assessment on land is kept distinct from the charge for water. In other words, all Government lands are assessed at dry rates and a separate charge is made for irrigation with Government water. In those provinces, the revenue due to irrigation, which is exclusively the water rate revenue with perhaps here and there a few small items of allied revenue, is readily ascertained and taken credit for by the P.W.D. Irrigation Department and is also very rarely enhanced periodically at fixed intervals. In Bombay, there is not much scope for any large extension of irrigation from newly constructed costly projects and no great difficulty is felt in separating the charge for water from the wet assessment on the comparatively small area of wet lands in that Presidency. I am not aware of the actual conditions of the Sukkur Barrage recently constructed on the Indus river in Sindh.

But here in Madras, the system is somewhat peculiar and more difficult. The classification of lands as wet prevails over the whole Presidency and carries with it a permanent legal right to irrigation. The system was not newly introduced here, but is one which the British Government inherited from the old Hindu and Muhammadan Governments. The British Government had, therefore, to make the best use of the system as they found it and in spite of great difficulty, managed to separate the water charge from the consolidated wet assessment field-war under each source of irrigation. Suppose a wet field is assessed at Rs. 10. Its corresponding dry rate, say Rs. 2-8

is excluded as the assessment for land and the remainder Rs. 7-8 is taken as revenue due to irrigation. To the irrigation revenue so calculated were added the second crop charge on single crop wet lands, the water rate on dry lands and a few other small items, thus making up the total revenue due to irrigation under each irrigation work. In the case of productive works of Class I constructed by the Government with the aid of borrowed capital and for which separate capital and revenue accounts are maintained, the Irrigation Department exclude the revenue due to 'old irrigation' on lands irrigated prior to the advent of the project and take credit only for the revenue due to 'new irrigation' on lands brought under irrigation after the introduction of the project. For instance, in the Godavari delta for 1930-31,

	Rs.
The total direct and indirect revenue was ..	43,35,833
Deduct share of revenue due to old irrigation.	1,24,000
Total due to improvements ..	42,11,833
Deduct working expenses on old irrigation ..	..
Do. do. on new irrigation.	14,57,015
Net revenue due to new irrigation ..	27,54,818

B.—Irrigation projects worked on wet basis and dry basis. Their comparative financial results and advantages.

Till recently, all the irrigation projects in the Presidency with the exception, if I remember right, of portions of the Godavari and Kistna deltas, were worked on a wet basis. That is to say, the bulk of the lands newly brought under irrigation were classed as wet and charged only the appropriate wet rates. In the Godavari and Kistna deltas, large extents of newly irrigated lands were retained as dry in the accounts, but treated for purposes of irrigation as 'Bapat wet' entitled to irrigation without annual permits. Under the wet basis system, the revenue due to new irrigation is limited to the wet assessment leviable on lands of similar quality under the class already, or newly, assigned to the source and to the water rates newly prescribed for the irrigation of dry lands and second crop on

single crop wet lands under project conditions. In the earliest stages of each project, the revenue due to new irrigation so worked out represented 5 per cent. simple interest on the capital outlay spent on the work, which is the maximum return expected from Productive works.

At the next resettlement, the Government enhance all wet assessments by about 18¾ per cent. It means that so far as the area covered by 'new irrigation' is concerned, the Government charge 18¾ per cent. compound interest on the simple interest of 5 per cent. representing the revenue due to new irrigation calculated and fixed at the time of the introduction of the project. Again at the succeeding resettlement, they charge 18¾ on 23¾ per cent. levied at the previous resettlement. Thus the irrigation revenue included in the consolidated assessment on a wet basis increases in arithmetical progression by leaps and bounds under this peculiar system of charging compound interest at each resettlement. This system has come to stay in the province by the accident of the charge for water forming a component part of the wet assessment and there is no escape, or exit, from this eternal revenue producing factory, unless the system itself is changed or the resettlement enhancement abolished. Had the charge for water been kept distinct from the assessment as in the other provinces, it would not have been possible for the Government to enhance the irrigation revenue automatically at fixed intervals, nor to accumulate surplus revenues as is now done in this province. The following figures taken from the Administration Report of the P.W.D.—Irrigation Branch 1930-31 will explain these general observations more clearly.

No.	Items.	Cauveri.	Godavari	Kistna	Periyar	Lower Coleroon	Pennar canals
1	Year of commencement of operation	..	1878	1877	1897	1849	1861
2	Capital outlay, direct and indirect, up to the end of 1930—31, in lakhs.	Rs. 73·7	176·7	193·1	108·0	32·4	67·7
3	Area irrigated in 1930—31 old and new irrigation, in lakhs.	Acs 9·78	9·92	8·10	1·76	1·20	1·91
4	Gross revenue in 1930—31 old and new irrigation, in lakhs.	Rs. 42·38	43·35	42·40	10·79	6·11	9·59
5	Old irrigation revenue in 1930—31, in lakhs.	Rs. 34·00	1·24	0·71	2·04	1.55	2·56
6	New irrigation in 1930—31, in lakhs	Rs. 8·38	42·11	41·69	8·75	4.56	70·3
7	Percentage of working expenses on Item 4 in 1930—31.	25·96%	33·60%	29·23%	32·01%	42·24%	17·69%
8	Working expenses per acre irrigated on Item 3 in 1930—31.	Rs. 1·13	1·47	1·52	1·95	2·44	0·88
9	Incidence of irrigation revenue, or assessed water rate per acre irrigated in 1930—31.	Rs. 4·32	4·15	5·00	6·15	5·00	4·97
10	Percentage of net revenue on new irrigation in 1930—31.	—1·63%	15·59%	15·17%	5.24%	6·41%	8·46%
11	Accumulated surplus revenues up to end of 1930—31, in lakhs.	Rs. 431·14	1,174·25	890·76	15·30	127·17	85·78

In the above figures, the low percentage of return on the capital outlay in the Cauvery delta in 1930-31 (Item No. 10) requires special explanation. The loss was due to the grant of heavy remissions owing to damages caused by the floods of October and November, 1930. The working expenses for the year, therefore, exceeded the net revenue due to new irrigation realized in that year. The percentage of net revenue in the previous year was, however, 9·02 per cent. and the average of the net revenue realized in the triennium ending 1929-30 was 17-91 lakhs of rupees. In other respects, the figures will speak for themselves.

By working out the details of a hypothetical project on a wet basis and indicating the flow in swelling tides of the irrigation revenue through the settlement fountains, I shall show presently how the irrigation chest is filled in spite of working expenses, fluctuations in seasons, flood damages, and grant of remissions from year to year. Before studying the details, it should be remembered that the following sample of a wet basis project is not a standard one. Each project has its own variations in details with reference to actual local conditions. The sample is only a fairly typical one.

Suppose a new project is constructed in 1890 at a capital cost of Rs. 10 lakhs with a commanded area of 9,000 acres, of which—

500 acres are old wet Government lands assessed at Rs. 10 per acre.

6,000 acres of Government dry lands to be registered as single crop wet.

1,000 acres .. Do. Do. double crop wet.

500 acres of Government lands to be irrigated as dry.

500 acres of Zamin and Inam dry lands to be irrigated as dry for one crop.

500 acres of Zamin and Inam single crop wet lands to be irrigated for a second crop.

The Government dry lands are already assessed at Rs. 2-8 per acre and will be registered as wet at Rs. 10 per acre for

single crop wet lands and Rs. 15 for double crop wet lands. Dry lands will be charged water rate at Rs. 7-8 per acre for one crop and the Zamin and Inam mamul wet lands will be charged Fasaljasti at Rs. 5 per acre. In this case the project will yield a return of 5 per cent. on the capital outlay, *i.e.*, Rs. 50,000 as shown below:—

		Rs.
I.	Government S. C. wet—6,000 acs. × Rs. 7-8 (W-D) ..	45,000
II.	Government D. C. wet—1,000 acs. × Rs. 12-8 (W-D) ..	12,500
III.	Government dry lands—500 acs. × Rs. 7-8 ..	3,750
IV.	Zamin and Inam dry lands—500 acs. × Rs. 7-8 ..	3,750
V.	Zamin and Inam wet lands—500 acs. × Rs. 5 (F-J) ..	2,500
	Total gross revenue ..	67,500
	Deduct working expenses at an average rate of Rs. 1-8 per acre on 9,000 acs. ..	13,500
	Net revenue due to new irrigation ..	54,000

NOTE.—This leaves a small margin of Rs. 4,000 to cover occasional losses due to seasonal conditions.

During the succeeding resettlements, the irrigation revenue of Rs. 57,500 covered by Items I and II above will be automatically increased under the usual percentage enhancements as shown below:—

	Rs.		Rs.	Total. Rs.
Resettlement in 1900 ..	57,500	Increase ..	10,781	68,281
„ 1930 ..	68,281	„ ..	12,803	81,084
„ 1960 ..	81,084	„ ..	15,204	96,288
„ 1990 ..	96,288	„ ..	17,429	1,13,717

Thus at the beginning of the fourth resettlement after the introduction of the project, the permanent irrigation revenue (W-D) alone swells up to Rs. 1,13,717. This together with the other Items III, IV and V, not subject to enhancement at resettlement, will raise the total gross irrigation revenue at the end of a century Rs. 1,23,717. The assessment on wet lands is thus increased by 100 per cent. at the fourth resettlement. The annual working expenses no doubt cover about one-third of these increased revenues. Even so, the annual net profits

and the accumulated surpluses are considerably large. Taking the figures for the 26 working projects of Class I for 1930-31 alone, the net profits showed *minus* balances in three cases owing to abnormal causes that operated in the year; they were below 5 per cent. in 5 cases, from 5 to 10 per cent. in 8 cases, from 10 to 20 per cent. in 5 cases, from 20 to 25 per cent. in 4 cases and 90 per cent. in one case. Even the projects that showed minus balances in the year had very large accumulated surpluses to their credit.

It is now perfectly clear that a project worked out on a wet basis, even if it commences with one or two per cent. return at the outset, can be relied upon not only to yield more than 5 per cent. interest, but also to recoup the entire cost of the project within a measurable distance of time and that no project will ever become a failure unless the resettlement enhancement is abolished. But will any Government be foolish enough to kill the goose that lays golden eggs, especially when the people themselves have offered worship at the shrine of that goose for the last more than a century? Be that as it may, while the Government are drawing huge unearned increments into their irrigation chests through the suction pumps erected in the settlement fountains, the pressure applied to force the liquid flow of revenues slowly, steadily and silently, creates a vacuum in the already depleted reserves of the agriculturists below. This will be evident from the statistics and facts given in Sections I and II which show that the income from land takes a downward movement.

But the Government have themselves changed the method of gathering these eggs, though it is as yet too soon to say whether they will be golden or rotten ones. They have recently adopted the dry system as the basis for working future projects. I shall now proceed to explain the financial results of this method. For this purpose, I shall take the same hypothetical project with the same capital cost and the commanded area referred to on p. 20, *supra*. A water rate of Rs. 7-8 for the first crop wet and Rs. 3-12 for second wet crop and a Fasaljasti of Rs. 5 for second crop on Zamin and Inam wet lands will easily make the project yield at 5 per cent. return.

The assessment on the existing Government wet and dry lands should of course be ignored for the purpose of calculating the irrigation revenue.

		Rs.	Rs.
I.	Government dry-water rate on one crop ..	6,500 × 7-8	48,750
II.	Do. two crops ..	1,000 × 11-4	11,250
III.	Zamin and Inam dry do. one crop.	500 × 7-8	3,750
IV.	Mamul wet lands—Fasaljasti ..	500 × 5-0	2,500
	Gross revenue ..		66,250
	Deduct working expenses as before ..		13,500
	Net revenue due to new irrigation ..		52,750

The main feature of this dry basis system is that the net revenue fixed at the time of the introduction of the project will be subject only to fluctuations due to seasonal causes from year to year, but will not pass through the resettlement suction pumps and flow on to the Irrigation chests in increased proportions up to eternity. Under this system, the annual gains and losses will equalise themselves and produce no surplus at all. On the contrary, it is just possible that the Government may be faced with minus balances, more often than not, in many years and under several projects. If all the projects of Class I had been worked on the dry basis from the commencement, the story of the exploits of the Madras Irrigation Department would have been entirely different.

Thus, of the two systems, the wet basis system is distinctly advantageous and always profitable to the Government, while the dry basis system, if worked with equity and justice, will always ensure security and contentment to the people. But if on account of the eccentricities of genius on the part of some of the officers at the top, the cost of the same hypothetical project were increased to 50 lakhs of rupees by frequent revision of estimates—and when they do so, they have always some justification or other—the project could not be made to yield a 5 per cent. return including working expenses by any system of enhancement of assessment within the four corners of the resettlement policy and procedure, or through any loop

holes provided therein. The only other course open to the Government is to work it exclusively on a dry basis or on a jumble of both the systems and to charge water rates at Rs. 25 and Rs. 37½ for one and two crops respectively on all Government, Zamin and Inam dry lands and additional water rates at Rs. 15 and 22½ respectively on all Government, Zamin and Inam *mumul wet* lands and also raise the classification, from the 2nd to 5th classes to the 1st class, of all irrigation sources outside the project area, but supposed to derive the benefit of irrigation by confluence and contact with the project canals somewhere lower down. In fact, the Government should kick themselves out in all directions to make such a project yield just the 5 per cent. return even at its commencement. Will any surplus accumulate in such a case to meet the cost of heavy repairs when an unexpected catastrophe occurs some 5 or 10 years later involving an expenditure of about 4 or 5 lakhs of rupees? This is more or less the situation in which the Government find themselves in connection with the Mettur project. The very first experiment with a combination of the wet and dry basis systems after the lapse of half a century has already made the Government desperate and filled the minds of the people with despair. Before, however, taking the Mettur project for scrutiny, I shall deal with a few other important questions which have a direct bearing upon the subject.

SECTION VI.

Water Rates and Reclassification of Sources as the means of securing a 5 per cent. return.

A. *Commercial value of water.*

Whether the theory "End justifies the means" is morally sound or otherwise, whether it holds sway in particular spheres of human activities or not, it is somehow the working principle in matters of taxation by Government, I mean, all Governments in all countries and in all ages. It was the

principle on which our old Hindu and Muhammadan Governments acted with disastrous consequences to themselves and the country. It is now the same principle by which the budgets are balanced in all countries, especially in this period of economic depression, by increasing existing taxes, by tapping all unexplored sources of revenue and by levying import duties on foreign products. So far as the Governments are concerned, they are perfectly justified in doing so up to certain reasonable limits, since they must carry on government under the varying conditions of pressure or ease in the political, administrative, financial and commercial atmosphere. But, reason or no reason, it is often stretched too far under cover of strange theories.

One such theory often advanced by our Government, whenever they want to levy high water rates, is that they are entitled to charge water used for irrigation at its full commercial or market value. Is there such a thing as market value for water in the agricultural economy of the province or the country? If so, is it fixed, or can it be at least estimated, on the basis of demand and supply, or the quantity of water used, or the number of floodings given to the crop, or the value of the produce realised, or any other known or explainable means of valuation or estimate? What are the factors which enter into play when the so-called value of water varies within close and analogous geographical conditions, under same soils of land and sources of irrigation, but under different tenures of land? Are there separate commercial values for water in respect of wet lands whose consolidated assessments range from about Rs. 5 to Rs. 15 and that used for the irrigation of the same crop on dry lands? Have the gradations in wet assessments under the different conditions of soil, sources and tracts any the slightest connection with this mystic formula about water? Does that formula apply only to the fluctuating revenue under water rates, which forms but a small fraction of land revenue? Or above all, does the value of water depend upon the capital outlays spent by the Government on irrigation works, and if so, is there a *pro rata* distribution of water rate over the irrigated areas with reference to capital outlays?

The diversity of water rates on dry lands is indeed too bewildering to admit of any reconciliation or explanation. Diversity, there must be, to a certain extent to suit the different conditions of tracts and crops, but the variations in respect of the same crop in the same village or taluk show that they are neither scientific nor rational.

When the Government and Municipalities supply water for drinking and industrial purposes to Railways, workshops, factories and mills, they usually charge for water according to quantity at moderate rates varied or variable only by the increase in quantity. In agricultural operations, all that is done is that the supplies available in rivers, channels and tanks are equitably distributed with reference to crops. Long paddy, or short paddy, or sugarcane requires more or less the same quantity of water in Periyar, or Godavari, or Mopad Channel, or Siddhapur tank. In seasons of scarcity, though the available supplies are rationed to limited areas, full water rates are charged, while in times of floods, full rates are similarly charged, in spite of damages due to excess of water. In cases where, after two or three floodings, the crop suffers badly for want of water late in the season, no remission of water rate is allowed partially or entirely. There is thus no quantitative supply of water for irrigation, nor under such circumstances can there be a commercial value for water used for dry lands alone.

The correlation between the efficiency of the sources the capital outlays and the values of paddy per acre secured in 1930-31 will appear incongruous from the following figures for a few selected productive unproductive works.

Productive works	Capital outlay In lakhs	Acreage value of paddy	Unproductive works	Capital outlay In lakhs	Acreage value of paddy
Srivaikuntam ..	18·0	Rs. 53	Kurnool ..	234·7	Rs. 60
Tadepalli ..	1·8	93	Cuddapah canal		
Kalingarayan ..	1·8	91			
Chembarambakam ..	7·6	48	Nagavalli ..	17·0	60
Arakkankottai ..	1·4	97	Bhavanasi ..	2·7	82
Cumbam tank ..	0·9	47	Rushikulya ..	54·0	44
Nandiyar ..	0·5	70	Venkatapuram.	3·9	60
Pilandurai ..	7·0	69			

The capital outlays and the values of the produce under productive and unproductive works, first among each set and again in comparison with the two sets of works do not also offer any basis for estimating the market value of water. It is needless to labour this point further since the hollowness of the theory is too transparent to require any proof, or arguments.

B.—Rationale of the Differential Water Rates, and Standard Water Rates.

Standard Water rates.—In the midst of the diversity of water rates now prevailing in the province, the oldest rates still in force in some parts are those known as the Standard water rates at Rs. 4 per acre for the first wet crop and Rs. 2 for the second wet crop, followed by a gliding scale of rates in respect of dry systematically and occasionally irrigated crops preceding or following each other or a wet crop. The sources of irrigation were classified at Re-settlements into 5 classes according to their capacity and among them full water rates are charged in respect of irrigation from 1st and 2nd class sources and three-fourths of these rates in respect of all other sources of classes 3 to 5. These rate are moderate, reasonable and easily understood by the ryots.

Differential Water rates.—In course of time, somewhere between 1900 and 1905, the Government found that these rates were too low to meet the growing needs of administration in the Land Revenue and Irrigation Departments. They therefore devised a scheme by which they could secure more adequate returns on the capital outlays spent on irrigation works. Under this system, the difference between the dry assessment of the land irrigated and its corresponding wet assessment, or W-D, is charged for the first irrigated wet crop and half of it for the second wet crop. This system contains in itself all the elements of adjustment to varying conditions. The lands are classified into 14 classes of soils with 5 sorts under each class; soils are then grouped under several Money Tarams according to their productivity; the Money Tarams are then arranged into graduated scales varying with the classification assigned to the several sources of irrigation. The dry lands undergo the same process with the only difference that in lieu of the

graduations arising from the classification of the sources, they are graded with reference to the groups assigned to blocks of villages, which are 3 in number. The principle underlying the scheme is that in no case should the dry assessment *plus* water rate exceed the corresponding wet assessment of the land. So long as the crop is successfully cultivated by irrigation, it makes no difference whether the land is wet or dry. Nevertheless, in addition to the gradations inherent in the system, additional gliding scales are provided with reference to crops, wet and dry preceding or following each other as first or second crop. The system is no doubt scientific, rational and unquestionable. The only thing to be said against it is that these differential water rates are also subject to automatic increase at every Re-settlement *pari pasu* with the percentage enhancement of wet asessments at 3 annas per rupee and dry assessments at 2 annas per rupee. This is, of course, the fault of the system and even so, it only brings the dry assessment *plus* water rate on a level with the corresponding wet assessments as revised at Re-settlements. But it may be of interest to find out how these differential water rates compare with those under the Standard scale. For this purpose, I shall take the wet and dry rates prevailing in the existing Cauvery Delta on wet lands under first class sources and dry lands under the first group so far as they relate to one wet crop.

Differential water rates in the existing Delta.

Dry—1st Group		Wet—1st class		W—D for 1st wet crop.
Taram	Rate.	Taram	Rate.	
	Rs.		Rs.	
1 } Padugai	}	1—Special		Rs.
2 }	5-15 }			
3	4-12	2	14-4	9-8
4	3-8	3	11-14	8-6
5	3-0	4	10-10	7-10
6	2-6	5	9-8	7-2
7	1-12	6	8-4	6-8
8	1-8	7	7-2	5-10
9	1-4	8	5-15	4-11
10	1-0	9	5-4	4-4
11	0-12	10	4-12	4-0

When the Differential water rates under the First class sources automatically begin from the maximum rate of Rs. 4 prescribed under the Standard scale and rise up to more than double that maximum, it may look strange why the Government, instead of applying these rates, resort to a very high uniform rate of Rs. 10 per acre for the Delta dry lands. The answer is, however, not far to seek. The bulk of the dry lands in the Delta are obviously assessed at rates lower than Rs. 3 and cannot on that account yield more than an average water rate of Rs. 5-10 or so per acre for the Delta as a whole.

Differential Water Rates in the Project Area outside the Delta.

Most of the dry lands in the Pattukottai taluk as well as in the non-deltaic portions of Tanjore, Mannargudi and Papanasam taluks are evidently lands of second group with still lower dry rates. Under project conditions, their corresponding wet assessments in the non-deltaic wet scale should necessarily be ignored. If the differential water rates were to be applied to these tracts under project conditions, the proper course to be adopted would be to calculate W-D on the basis of the delta first class rates and dry second group rates. The resulting differences must certainly yield higher water rates than those indicated in the above table, since the latter rates are one grade lower, while the wet rates remain the same. Here again for the same reasons, the Government are not satisfied with the increased water rates that can be secured under this method. However low the existing second group dry assessments in that tract may be, the differential rates will bring all such lands on a level with the delta first class wet lands.

C.—Special Water Rates under Project Conditions.

In spite of the pumping operation from the Re-settlement springs now going on in the province and of the introduction of the differential water rate system in many of the districts, the Government could not still keep pace with the growing demands of administration on all sides. The devastation caused by the great European War and the anæmia in the body politic

that followed it have compelled the Government to hunt for resources in all possible ways. The only avenue of such revenue receipts with which we are immediately concerned is the mass production of irrigation revenue, now commenced by the Government in right earnest.

A careful comparison of the rates of water charge in the Appendices to B. S. O. No. 4 in the 1931 Edition with those in the earlier Editions of 1900, 1907, 1913 and 1920 will show the extent to which the special water rates have been enhanced bit by bit during the last thirty years. It is, however, unnecessary to trace the evolution of this process, but it will suffice for the present to indicate where that evolution now stands. In doing so, I shall indicate only the rates applicable to the first and second wet crops, omitting the lower rates in the scales for other crops—

Special Irrigation Works.	*Water rates for first wet crop.*	*second wet crop.*
I. The Godavari and Kistna Deltas—		
A—Govt. dry lands ..	Rs. 6-4	Rs. 6-4
B—Inam, Zamin, Lanka and Padugai lands and Upland Govt. dry lands irrigated by Delta water ..	Rs. 6-4	Rs. 6-4
	May be compounded for both crops at Rs. 10-3.	
II. Divi Pumping Project—		
A—Govt. dry lands ..	Rs. 6	Rs. 6—if the 1st crop is dry Rs. 3—if the 1st crop is wet
B—Inam and Zamin lands ..	Rs. 6	Rs. 6
	May be compounded for both the crops at Rs. 9-12.	
III. Other sources in Godavari and Kistna—		
A—The Kollair and the Uppatheru ..	Rs. 4	Rs. 2
B—The Muniyaneru anicut ..	„ 6-4	„ 3-2
C—Tanks and other sources in the Uplands ..	„ 5	„ 2-8

IV. The Kurnool-Cuddapah canal—		
A—Govt. dry lands ..	W-D	½ (W-D) plus ½ D
B—Whole Inams ..	Rs. 4	Rs. 2
V. The Periyar system—		
A—Govt. Minor Inam, whole Inam Zamin dry lands ..	„ 5	„ 3
B—Whole Inam and Zamin mamul wet lands— (Contract water rate on collective applications by the Proprietor or all the tenants on their joint responsibility) ..	„ 4	„ 3
VI. The Rushikulya system—		
A—Govt. dry lands ..	W-D	½ (W-D) plus ½ D
B—Whole Inam and Zamin lands ..	Rs. 4	Rs. 2
VII. The Mopad Project—		
Govt. dry lands, Minor Inam, Whole Inam and Zamin lands ..	„ 7-13	„ 3-15
VIII. Venkatapuram Tank—		
Govt. dry, Minor Inam, Whole Inam and Zamin lands ..	„ 4-3	„ 2-1
IX. Siddhapur Tank do. ..	„ 9-6	„ 4-11
X. Bavanasi Tank do. ..	„ 9-6	„ 4-11
XI. Toludur Project do. ..	„ 6-4	„ 3-2
XII. Panjapatti Tank do. ..	„ 6-4	„ 3-2
XIII. Polavaram Island Project do. ..	„ 10-8	„ 5-4

Here in fairness to the Government, it should be stated that in spite of the small enhancements in the charges for water made during the last one or two decades, the rates, even as they stand at present cannot be said to be very high except under the following five works, *viz.*, Nos. 7, 9, 10, 12 and 13. By some unaccountable tragedy of errors, the water rates have been pitched in these cases rather too high, especially in the tracts which cannot bear the burden. I shall examine these and a few other projects in a succeeding section when I deal with the method of financial and administrative management of irrigation works by the P.W.D. For the present, it will suffice to point out that the craze for enhancing water rates at all costs

and by any means possible has somehow taken a strong hold on the Government within the last five years. In Chapter I, para. 13, page 11 of the Administration Report of the P.W.D. Irrigation Branch for 1930-31, the Chief Engineer for Irrigation has sounded his trumpet call to the landholders in the following words:—

"As a result of the consideration of the several projects investigated, it became increasingly clear that under present conditions unless the water rate was increased to something like Rs. 10 to Rs. 15 per acre they were not likely to prove feasible *from a financial point of view.*" (The italics are mine.)

D.—Other Artificial Means of Augmenting Irrigation Revenue.

There are yet a few reserve fountains from which the Government can tap more money at their will and pleasure. The assessments fixed during the Re-settlements cannot be enhanced or altered for a period of 30 years. But there is a proviso in all Re-settlement notifications that the Government will be at liberty to enhance the assessments during the settlement period, if and when they construct any new irrigation works and thus improve the conditions of water supply and bring in large additional areas under irrigation. This proviso is as short as it is vague, but when once it is sought to be used, it gives a blank cheque to Government and enables them to enhance the assessments summarily at one stroke *in situ* without going through the settlement procedure, or wasting a rupee upon any investigation. A re-classification of the soils or sources according to settlement principles will entail enormous cost of time, labour and money. Even so, such methods can be adopted only at the time of the Re-settlement operations on the grounds that the existing classification of soils and sources is radically wrong, or that it at least presents glaring irregularities, inequalities and incongruities. These methods are, therefore, out of the question in the intervals between two Re-settlements. When the need for augmenting irrigation revenues becomes urgent and imperative, the one summary method by which the Government can achieve their object is to raise in a

sweep all second and third class sources to first class, or in other words to give single promotion to boys of average capacity and double promotion to the weaker boys at the bottom of the class. This system of promotion dispenses with the necessity for any examination or valuation of merits!

What is the effect of such wholesale raising of the sources of all lower classes to the highest? The following money rates for wet lands in the Cauvery delta will readily furnish the answer to the question.

CAUVERY DELTA—WET LANDS.

Classes and sorts of soils.											1st class.		2nd class.		3rd class.	
Classes.											Taram.	Rate.	Taram.	Rate.	Taram.	Rate.
1	2	3	4	5	7	8	12	13	14							
Sorts												Rs. a.		Rs. a.		Rs. a.
	1	(Special)									1	16 10				
	1	(ordinary)									2	14 4	3	11 14	4	10 10
1	2										3	11 14	4	10 10	5	9 8
2	3		1								4	10 10	5	9 8	6	8 4
3	4	1	2		1						5	9 8	6	8 4	7	7 2
4	5	2	3	1	2	1	1				6	8 4	7	7 2	8	5 15
5		3	4	2	3	2	2	1			7	7 2	8	5 15	9	5 4
		4	5	3	4	3	3	2	1		8	5 15	9	5 4	10	4 12
		5		4	5	4		3	2		9	5 4	10	4 12	11	4 0
				5		5			3		10	4 12	11	4 0	12	3 8

So long as the classes and sorts of soils remain as they are, the third taram wet lands under the second class sources and those of the fourth taram under third class sources will all be raised to the second taram under the first class; the fourth and the fifth taram lands under the second and third classes respectively will be similarly merged in the third taram under the first class source, and so on lower down. The increase in assessment thus secured by double lift in the middle of the settlement period will roughly amount to something like two to three annas in the rupeee in the case of lands under second class sources and four

to six annas in the case of lands under the third class. Here it should be remembered that the assessment on all the wet lands under the first class including those now so merged with it, will again be raised by another three annas in the rupee, or 18¾ per cent. at the next resettlement, which in the case of the Tanjore District is not far off. In the existing Cauvery delta, the Government have now decided to give the second and third class sources a single lift through the summary power reserved in the resettlement notification in order to secure a perennially increasing supply of irrigation revenue as already pointed out in the Section V-B.

Another summary method open to the Government is to register all the irrigated or irrigable dry lands of Groups I and II in the Delta as well as in the Project area as wet under the first class source. In that case, the increase in irrigation revenue will not be fluctuating, but will be steadily growing from year to year. The extent of such increase may be guaged by comparing the following existing dry rates of Groups I and II with the Delta first class wet rates shown in the above table.

TANJORE—DRY LANDS.

Classes and sorts of soils.											1st Group.		2nd Group.	
Classes.											Taram.	Rate.	Taram.	Rate.
1	2	3	4	5	7	8	12	13	14					
Sorts												Rs. A.		Rs. A.
1											1	8 4		
2	1	(Padugai)									2	5 15		
1		(Ordinary)									2	5 15	3	4 12
2	1										3	4 12	4	3 8
3	2	1									4	3 8	5	3 0
4	3	2	1								5	3 0	6	2 6
5	4	3	2		1						6	2 6	7	1 12
	5	4	3	1	2	1	1				7	1 12	8	1 8
		5	4	2	3	2	2	1			8	1 8	9	1 4
			5	3	4	3	3	2	1		9	1 4	10	1 0
				4	5	4		3	2		10	1 0	11	0 12
				5		5			3		11	0 12	12	0 8

The reason why the Government do not propose to adopt this course has already been explained in the concluding portion of Section VI-B.

SECTION VII.

Effect of the Growth of the Monopoly price of Government water on the income from land.

Thus far, I have explained the several methods, direct and indirect, straight and subtle, by which the Government have been and are still pumping out irrigation revenue. Their efforts have now culminated in levying heavy water rates on the Mettur project area at Rs. 15 per acre for the 1st wet crop and Rs. 7½ for the 2nd wet crop, *i.e.*, at rates unheard of in the annals of the British Administration during the last more than a century. How is it that the monopoly price of Government water in Madras alone has risen so high, while the values of all other commodities in the world have fallen so low that the producers, merchants, millionaires, financiers and statesmen are knocking against each other in threatening moods? Can water alone bring in a millennium, while all other factors affecting the agricultural operations, such as, soil ingredients, fertility of lands, climate, temperature, season, rainfall, drainage, etc., all remain "unshapable as yet by man"? Already the Director of Agriculture has sounded a note of warning that there is something wrong somewhere in the projects launched for wet cultivation. The Chief Engineer refers to his remarks as follows:—

"Para. 14. Paddy cultivation *versus* dry crop Cultivation.

"At this stage the Director of Agriculture who was asked to report on the suitability of the areas concerned for wet cultivation in the case of some of these projects (under investigation) has raised the general question whether it is advisable at all to go in for *wet land system of agriculture,* such as is found to obtain in the case of paddy cultivation as against *garden* cultivation which also requires to be irrigated. He has also pointed out the disadvantages of the former in that (1) it limits the crop which can be grown to mostly swamp paddy and prevents rotation of crop, (2) it limits the area which can be protected against failure of season as paddy requires considerably more water than any other crop, (3) it creates an unsteady demand for labour, (4) it necessitates transfer of cattle involving loss of manure and results in unhealthy

conditions of living in the villages, and last but not the least, (5) it is not so remunerative as other crops and is conducive to wastage of water. He has advocated the garden system of cultivation as being advantageous from every one of the points noted above and recommended the growing of ground-nuts and Cambodia cotton on a very large scale.

POSITION OF RICE IN MADRAS.

"As an additional argument he has reviewed the position of rice in Madras and pointed out that production is already in excess of requirements and that rice is more extensively grown as an irrigated crop in this Presidency than in others, that the facilities for marketing it are very poor and that there has been a considerable fall in price recently with the result that it will be better to give it up wherever possible in favour of an irrigated dry crop. In other words, projects for irrigating dry crops are advocated in lieu of those for irrigating paddy.

* * * * *

Proposal for experiments to collect statistics relating to dry crop irrigation.—"The proposals made for conducting experiments in connection with the requirements of irrigation for dry crops has been turned down by Government on the ground that the scheme is very ambitious and costly, it will take long before the results become available for use and they might not prove suitable for being applied universally and that it will be sufficient if the necessary observations are made in the agricultural farm at Coimbatore and similar farms elsewhere, as also under ryots' lands under wells. So, unless and until these points are settled, there seems to be no likelihood of any successful dry crop irrigation project being framed in this Presidency." (Administration Report—Irrigation Branch, 1930-31, pp. 11 to 13.

And so, dry crop irrigation projects cannot be thought of in this Presidency, while wet crop irrigation projects cannot be successfully worked, unless the people are prepared to sacrifice a good portion of their income from land so as to make the projects productive to Government *from a financial point*

of view. Not all the waters of the Godavari, the Kistna, the Cauveri and the Periyar have helped the people to replenish their exhausted resources. In order to substantiate this statement, I shall take the average values of paddy per acre shown in the Statement in Section II, make deductions therefrom for the indispensable items of expenditure and show where the ordinary small landholders who form 75 per cent. of that class stand.

——	Cauvery.	Godavari.	Kistna.	Periyar.
	Rs.	Rs.	Rs.	Rs.
I. Values of paddy per acre for 5 years from				
1924—25 ..	94	114	117	144
26 ..	75	113	104	116
27 ..	67	129	104	115
28 ..	74	128	96	126
29 ..	80	82	85	119
Total ..	390	566	506	620
II. Average for five years ..	78	113	101	124
III. Deduct value of produce due to 2nd crop.				
(*a*) Proportions ..	11%	24%	0·62%	34%
(*b*) Values ..	8	27	6	42
IV. Values of paddy per acre on single crop lands.	70	86	95	82
V. Deduct ..				
(*a*) Average cultivation expenses on a small holding of one acre dry and ½ acre wet.	20	25	25	25
(*b*) Average assessment and water rate on the holding.	10	10	10	10
(*c*) Value of quantity of paddy required for consumption by a family of 5 members per annum.	120	120	120	120
(*d*) Cost of clothing ..	20	20	20	20
Total ..	170	175	175	175
VI. *Minus* balances of income.	100	89	80	93
VII. Percentage of expenditure over income.	143	103 %	79%	113%

In these calculations, I have taken the averages of the 5 years from 1924-25 when the prices were high and steady; the pecentages for 2nd crop production are those given for 2nd crop areas in col. 8 of Statement E-I at page 129 of the Administration Report for 1930-31; the same proportions may apply to the produce from such areas. The values of paddy shown against Item IV are those for one paddy crop. Against Item V, I have deducted only four indispensible items of expenditure from which no man can escape and even these I have pitched very low. The figures are, no doubt, averages and approximations; but the Government and the Settlement officers always build their *Gopurams* only on the basis of such averages relating to prices, wages, cultivation expenses, land values, lease values, outturns, exports, imports, etc. If at all I have erred, I have erred on the side of the Government. I have purposely omitted all other expenses relating to education, marriages, funerals, payment of old debts, litigation, garlands, tea parties, election expenses and so on, which vary with individuals and families. The Government cannot take account of the lavish expenditure made by the people in thousands of ways according to their own standards of necessity and convenience and their whims and fancies. Even on the basis of the barest needs of human existence, just to meet the demands of the State and to keep their body and soul together, the landholders stand immersed in bankruptcy. Is any economic enquiry needed to prove the agricultural indebtedness of the landholders? Does not the Tower of Pisa already show signs of angular inclination over the heads of the people? Will not any further addition of weight to the superstructure make the foundations treacherous? These are matters which require the benign consideration of the Government.

SECTION VIII.

THE CAUSE AND NEED FOR INCREASED IRRIGATION REVENUES AND WATER RATES.

A.—Administrative Management.

No one, not even the man in the moon, will deny or minimise the highly useful work done by the Irrigation officers for the good of the country. The prosperity of the landholders, quite apart from the freaks of Nature, depends very largely upon the good work done by them. The early batch of Engineers who designed and constructed the Godavari, the Kistna, the Cauvery, the Periyar, the Kurnool-Cuddapah canal and the Rushikulya systems from about 1847 to 1897 were many of them Royal Engineers of a superior order. Similarly, the Members of the Executive Council and the Board of Revenue were also officers of outstanding ability, wisdom and forethought. They were the two finest and strongest bulls yoked to the same plough. But things have considerably changed from about the dawn of the present century. Without entering into the inner history of the later day projects in this Presidency, a mere perusal of the brief facts recorded in the successive Administration Reports and a little local knowledge of the practical results achieved in districts and villages within the last three decades will reveal at once that the modern distractions of political and public life and the stress of work due to the enormous growth of red-tapism in all branches of administration have robbed even the great Administrators and Engineers of the present generation of their insight into the present and their vision towards the future. The new projects introduced in the Presidency are most of them minor jewels in the P. W. D. crown made to order simply to justify the existence of the officers.

First, as regards Unproductive works of Class II, the following particulars regarding some of them will show how they were conceived and how they are working.

(1) Panjapatti project—Outlay up to end of 1930-31—3·39 lakhs; source of supply—drainage basin, area commanded—900 acres; area irrigated in 1930-31—37 acres.

(2) Siddhapur tank—Outlay—8·04 lakhs; source of supply—drainage; area commanded—4,250 acres; area irrigated in 1930-31—*Nil*—on account of failure of supply; still special project water rate of Rs. 9-6-0 for the first wet crop and Rs. 4-11-0 for the second wet crop.

(3) Bavanasi tank—Outlay—2·95 lakhs; source of supply—rainfall; area commanded 2,548 acres; area cultivated in 1930-31—659 acres; still special project water rates of Rs. 9-6-0 and Rs. 4-11-0.

(4) Venkatapuram tank—Outlay—4·56 lakhs; source of supply—drainage and vagus; area commanded 1,700 acres; area irrigated in 1930-31—209 acres; project water rates of Rs. 4-3-0 and Rs. 2-1-0.

(5) The Mopad project—Outlay—22·90 lakhs; source of supply—Manneru river; area commanded—13,890 acres; area irrigated in 1930-31—5,747 acres; project water rates Rs. 7-3-0 and Rs. 3-15-0.

(6) Kocheru tank—Outlay—1·35 lakhs; source of supply—free basin; commanded area 1,026 acres; area irrigated in 1930-31—246 acres.

(7) Dondpad tank—Outlay—1·40 lakhs; source of supply—rainfall; area commanded—2,880 acres; area irrigated in 1930-31—165 acres.

(8) Kanniyampalayam anicut—Outlay—1·21 lakhs; source of supply—Bhavani river; commanded area—1,600 acres; area irrigated in 1930-31—210 acres.

The necessity for constructing protective works in tracts liable to famine or drought cannot be under-rated. Far be it from my wish to minimise the very useful work done by the Irrigation Department in connection with these works. But a little scrutiny of the outlays spent in these cases, the wild expectations originally made as to the areas likely to be irrigated and the very poor results achieved will confirm the lack of vision already referred to.

Next, as regards Productive works, the Gunjana Pumping Installation was abandoned some years after its introduction and the machinery was sold; the Divi Pumping project and

the Nagavalli project were worked at a loss for a long time. The Government and the Irrigation Department seem to be now seriously considering why some of the Productive projects should not be shoved down to Class II—Unproductive works. In the Review of the Administrative Irrigation, *etc.*, accounts at pp. 169-170 of the Administration Report for 1930-31, it is stated that the Cauvery, Srivaikuntam, Chembarambakam, Arakkankottai, Palar and the Lower Coleroon systems have failed to satisfy the test of productivity only during a portion of the triennium ending 1930-31, that their retention in the productive category is therefore justified, that the Pilandurai and the Palar systems have since been transferred to the unproductive category under the orders of the Government, that the fate of the Nandiyar and the Lower Coleroon systems is pending further experience and experiments and that proposals have also been made to the Government to remove the Cumbum tank, the Ganjam Minor rivers system and the Divi Pumping project from the productive to the unproductive category. How is it that the Government have been compelled, of their own accord, to revise their ideas and arrangements in connection with so many so-called productive works? In this connection attention is invited to the following observations made by the Government at p. 167 of the Administration Report of 1930-31.

"Every irrigation, navigation, embankment or drainage work for which a capital account is kept is classed as productive, if the net revenue anticipated at the end of ten years from the date of the closing of the construction estimate, appears likely to pay the annual interest charges on the capital invested (including direct and indirect charges and all arrears of simple interest), calculated at 4 per cent. for works sanctioned before 1st April 1919, at 5 per cent. for those sanctioned between 1st April 1919 and 1st August 1921 and at 6 per cent. for those sanctioned after the last mentioned date. If a work is not expected to yield such a return, it is classified as unproductive."

But this increase in the rate of interest can, if at all, affect only the projects sanctioned after 1st August 1921 and those

likely to be sanctioned in the future and not the earlier projects referred to above, which are still governed by the rates in force at the time they were sanctioned. Be that as it may, it may still be of interest to know how this system of charging interest on capital outlay works.

B.—Financial Management.

The mysteries of the financial accounts of irrigation are known only to the men forming the esoteric section of the P.W.D. Accounts Branch. A layman like myself outside this fraternity will be treading on treacherous ground if he ventures too far into the dark and dreaded forest. I shall, therefore, confine myself here to a mere statement of facts as disclosed by the Capital and Revenue Accounts appended to the Administration Report in respect of one or two irrigation works and plainly record my doubts and difficulties where I do not understand the figures themselves.

In pre-British days, whenever the rulers embarked upon big schemes of public utility, such as, the construction of irrigation works, bridges, roads, temples, mosques, etc., at the worst, they only impressed labour and materials, paid, half-paid or unpaid, but never constructed such works from any Loan Funds placed by them at the disposal of the Provincial Governments and charged interest thereon up to eternity. This is a British system introduced by the Government into India and it has somehow come to stay as a permanent and universal arrangement in the administration of the country. Under this system, if the Local Government want to put on the label of 'productive' or 'unproductive' upon any irrigation work, be the cost one lakh, one million, one crore or ten crores, they have no option but to draw the capital outlays from that Loan Fund and pay interest at the prescribed rates varying from 3 to 6 per cent. There seems to be here no question of the repayment of the principal. Both the creditor and the borrower are bound only to the eternal payment of interest.

Another special feature of the accounts is the system under which all establishment charges are debited to the accounts of the irrigation works concerned. It is the primary duty of the

officers of the Irrigation Department to investigate and carry out irrigation works. If not for this, what else are they here for? There can be no objection to debiting to particular irrigation works the cost of any temporary establishments entertained for the purpose in addition to the permanent officers of the department and the pay of the new entrants to acting appointments made in the chain of promotions made to permanent officers. But what is done is to saddle the works with all conceivable charges relating to the full salaries, acting allowances, compensatory allowances, travelling allowance, pensionary contribution, contingencies, camp equipage and what not. I shall illustrate the volume and heaviness of pressure which these items of expenditure throw on the general tax-payer by examining the Capital and Revenue accounts of the existing Cauvery and Godavari delta systems for and up to the end of 1930-31.

The Cauvery—The Capital Account up to end of 1930-31.

	Rs. Lakhs.
I.—Works—	
Head works—Main canals and Branches—Distributaries—Drainage and Protective works—Special tools and plant and old outlay	57·90
II.—Establishment—	
Non-voted—Pay of officers—Passage pay and Travelling allowance.	
Voted—Pay of officers, pay of temporary establishment, Travelling allowance, Fixed travelling allowance, Other compensatory allowance, Contingencies, Non-contract contingencies—Miscellaneous—English cost of establishment, Loss by exchange, Debit by transferred establishment, Pensionary charges, Debit by Mettur, Debit by Pensionary charges	12·03

	Rs. Lakhs.
III.—Tools and Plant—	
Scientific instruments and drawing materials—Plant and machinery—Tools—Office furniture—Camp equipage—Repairs and carriage, etc.	1·31
Total ..	71·24
IV.—*Deduct*—	
Receipts from Capital Account—Establishment charges incurred in England ..	·20
Add—	
Loss by Exchange ..	·02
Net Outlay ..	71·06

The Revenue Account up to the end of 1930-31.

RECEIPTS.

I.—Direct receipts—	
Revenue realized by the P.W.D. and Civil Departments ..	551·34
II.—Indirect revenue—	
Share of Land Revenue collected in the Civil Department ..	90·58
Total receipts ..	641·92

CHARGES.

I.—Extensions and Improvements ..	23·60
II.—Maintenance and Repairs ..	142·88
III.—Establishment ..	60·31
IV.—Tools and Plant ..	2·05
V.—Refund of revenue ..	0·02
Deduct recoveries on revenue account ..	0·04
Total direct receipts ..	228·82

	Rs. Lakhs.
Share of collection charges in the Civil Department ..	35·30
Indirect charges ..	8·83
Total direct and indirect charges ..	272·95
Deduct—Old maintenance charges saved to Government ..	131·65
Net Total ..	141·30
Balance Net Revenue ..	500·62
Total ..	641·92

Interest Account.

Total Interest charges up to end of 1929-30 ..	66·56
Interest charges during 1930-31 ..	2·92*
Total ..	69·48
Net accumulated Surplus Revenue ..	431·14

*The following foot-note is added at the end of the interest account to show how this sum of Rs. 2·92 was arrived at—

Interest at 3·3252 per cent. on the outlay to end of 1916-17 ..	1·37
Interest from 1917-18 to end of 1929-30 *plus* half the outlay during 1930-31, *viz.*, Rs. 28,43,395, at 5·44 per cent. ..	1·55
Total ..	2·92

GODAVARI SYSTEM.

Capital Account up to end of 1930-31.

(Minor heads similar to those for the Cauvery.)

	Rs. Lakhs.
I.—Works ..	116·83
II.—Establishment ..	29·93
III.—Tools and Plant ..	9·49
Less receipts on capital account ..	·07
Grand Total ..	156·18

Revenue Account up to end of 1930-31.

RECEIPTS.	Rs. Lakhs.	CHARGES.	Rs. Lakhs.
I. Direct receipts—		I. Extensions and Improvements ..	18·63
Total revenue realized in P.W.D. and Revenue Depts.	1866·22	II. Maintenance and repairs ..	212·48
II. Indirect receipts—		III. Establishment.	143·31
Share of land revenue collected in the Civil Dept.	123·38	IV. Tools and Plant ..	27·79
		V. Refunds of revenue.	·20
		VI. Less recoveries on revenue account ..	·34
Total P.W.D. and Revenue.	1989·60	Total direct charges ..	402·07
		Share of collection charges in the Civil Department ..	103·40
		Indirect charges ..	21·49
		Total direct and indirect charges ..	526·96
		Balance Net Revenue.	1462·64
		Grand Total ..	1989·60

Interest Account.

Total interest charges to end 1929-30 ..	282·71
Total interest charges for the year 1930-31 (Interest calculated at the same rates as for Cauvery) ..	5·68
Total ..	288·39
Balance—net surplus revenue accumulated ..	1174·25

The Construction Estimates for the Cauvery and the Godavari systems were closed on 31st March, 1889 and 31st March, 1890, respectively. For the purpose of the present study, I shall exclude all charges relating to Works, such as, head works, main canals, distributaries, extensions and improvements, maintenance and repairs, *etc.*, though even in regard to them considerable economy could have been exercised. They may be passed over as reasonable and legitimate items of expenditure.

First, I shall take the Establishment charges. There are three sets of charges incurred annually after the closure of the construction estimates, of which one is debited to the Capital Account and the other two to the Revenue Account. The Cauvery and the Godavari systems show the following amounts of expenditure under the two heads of Capital and Revenue Accounts for and up to the end of 1930-31:—

	Capital Account.		Revenue Account.	
	During 1930—31.	To end of 1930—31.	In 1930—31.	To end of 1930—31.
	Lakhs.	Lakhs.	Lakhs.	Lakhs.
The Cauvery ..	0·49	12·02 (*a*)	2·75	60·33 (*c*)
The Godavari ..	0·52	29·93 (*b*)	3·17	143·31 (*d*)

Besides these, there is another item of charges shown in the Revenue Accounts under the head 'Share of collection charges in the Civil Department'. Their particulars are as shown below:—

	In 1930-31.	To end of 1930-31.
	Lakhs.	Lakhs.
The Cauvery	.. 0·41	35·30 (*e*)
The Godavari	.. 1·98	103·40 (*f*)

Of these, items (*a*) and (*b*) are shown as Direct Establishment charges in col. 3 of Statement B-1, while items (*c*) and (*d*) are shown as establishment charges for Maintenance and repairs in cols. 17 to 19 of Statement C-1 and items (*e*)

and (*f*) are exhibited as charges for Revenue management—Civil officers in cols. 13 to 15 of the latter Statement. These charges are increasing from year to year even under the normal conditions of management. When the Establishment charges for these two works alone have swelled to such huge sums as a little over one crore for the Cauvery and 2¾ crores for the Godavari, the aggregate totals for all the productive works in the Presidency may be more imagined than described. In the absence of details, it is not possible to find out whether these charges relate to the whole or part of the regular P. W. D. staff, permanent or temporary, working in the tracts, whether they include passage money, exchange compensation allowance, compensatory allowance, travelling allowance, contingencies, *etc.*, how the cost of the Revenue management by Civil officers has been calculated and why it should at all be debited to the Revenue account of the works concerned.

Secondly, the Interest Accounts show 69·48 lakhs against Cauvery and 288·39 lakhs against Godavari up to the end of 1930-31. From the foot-notes in these accounts it is not, however, clear whether the so-called outlay which forms the basis for charging interest is the one shown in the Capital Account alone, or whether it includes either the whole or a part of the enormous outlays shown in the Revenue accounts also. But whether it includes the latter or not, sufficient unto the day is the evil thereof. Excluding the Polavaram Island project, the Mettur project and the Kattalai scheme, which are in progress, most of the Productive works are just beginning to be somewhat shaky. The Pilandurai, the Palar anicut, the Nandiyar, Divi Pumping project and the Toludur project have not only no accumulated surplus revenues, but are also largely in arrears of interest amounting to 4·81, 3·25, 0·43, 3·47 and 9·38 lakhs respectively. All the works of Class II—Unproductive—are likewise hopelessly in arrears of interest, without any surplus revenues, to the extent of 486·64 lakhs. It is a matter for surprise how in spite of all the enhancement of assessments made at successive re-settlements and the increase of water rates made by the Government wherever possible, these irrigation works are collapsing like the Banks in the United States.

Possibly more than half the productive works will have to be shoved down to the unproductive class within a decade or so. Why? So long as these two white elephants,—Interest and Establishment charges—roam triumphantly on in the otherwise beautiful Ryotwari garden, there does not seem to be much hope of redemption for the people, nor can the Government ride on them safely for any length of time.

SECTION IX.

The Cauvery Mettur Project.

A.—General Features.

The young Ryotwary saplings which Sir Thomas Munro first planted in the South Indian soils in 1820 and which began to take their roots in about 1830, have within a century developed into a huge forest with an enormous overgrowth and undergrowth of rank vegetation fed and nourished by the fertile springs of red-tapism. This woodland is now interspersed with innumerable trenches, ditches, cellars, forts and fortresses erected for the protection of the millions of denizens inhabiting it. In the preceding Sections I have indicated with sufficient clearness, though rather very briefly, where these denizens stand and whither they are drifting in their evolution as peaceful and contented citizens of this benighted forest. There are already indications of a growing suspicion in the minds of the people that the atmosphere is becoming stuffy and uncongenial to normal life. I shall now proceed to examine without further delay the magnitude and the real and potential effect of the new project introduced into the Tanjore Dt., under the above conditions with all due pomp and ceremony.

The work in connection with the Mettur project was commenced in 1925-26 with an estimated cost of 7·37 crores and, as is always usual with our local P.W.D., its cost has now been increased to over 9 crores by revision of the estimate, as often as may be necessary. From the middle of the last century up to the end of 1930-31, the Government have spent a total capital outlay of 7·96 crores on all the productive works in the Presidency excluding only the Polavaram Island project, the Kattalai Scheme and this project which are in progress. The

sum invested in the Mettur project is in itself far in excess of the entire capital expenditure for the presidency during a period of eighty years. The capacity to spend about 9½ crores all upon one work and to bring it to completion within less than a decade, especially in this period of economic depression, is in itself a virtue of which any Government may feel justly proud. From the engineering point of view also, this project is said to be the second biggest, finest and the most scientifically constructed one in the whole world, the first being somewhere in America. The zeal and tenacity shown by the Government and the Engineers of the present generation, not only in living up to the level of, but also in excelling, their predecessors are far more commendable than the power to draw huge sums from the Loan Funds and to spend them. The only defect in the whole performance, and that not a slight one, is that they have all reckoned without the host. Having already spent nearly three crores before the depression began, they could not draw back and having now spent nearly the whole of nine crores or so, they are compelled to make the project productive from the financial point of view.

If I had had access to the final Revised Estimate and the report on the revenue forecast of the project, I could have made some useful contribution to a dicussion on the subject. But in the absence of such authentic and up to date information, I shall content myself with examining the project with reference to the Capital and Interest Accounts given in the Administration Report for 1930-31 on the basis of the original estimate for 7·37 crores of rupees.

B.—Capital and Interest Accounts.

The provision made in the original sanctioned estimate for 'works' was 642·51 lakhs which was distributed under the several minor heads as shown below:—

	Rs. Lakhs.		Rs. Lakhs.
Preliminaries ..	4·79	Special Tools and Plants ..	92·28
Head Works ..	283·23	Earthwork, weirs, falls ..	113·97
Land Acquisition ..	70·36		
Buildings ..	29·59	Total ..	642·51
Bridges and Escapes ..	10·47		
Plantations, Maintenance and Miscellaneous ..	37·81		

The charges on account of lands, buildings, plantations, maintenance and miscellaneous which already amounted to 1·36 crores by the end of 1930-31, should have since increased to something like two crores. Even assuming that the bulk of the charges incurred for acquisition of lands went into the pockets of the owners thereof, it is somewhat staggering that more than a crore should have been spent in acquiring lands for head works and the canal systems. The buildings, at any rate most of them, are evidently furnished bungalows and quarters constructed for officers, subordinates and lascars. Again the necessity for spending about 38 to 40 lakhs on plantations and miscellaneous expenditure can be justified only from the official point of view. Whatever the Accounts *'Bagavat Gita'* may say, the cost under these three heads should be debited, from the common sense point of view, to the general expenditure of the Department and not to the financial accounts of the project, since these charges are subject to the payment of 6 per cent. interest in the Interest account upto eternity.

The amount sanctioned in the original estimate under the head "Establishment" was 74·26 lakhs. In dealing with this item, I think it necessary to give full particulars of the details of actual expenditure up to the end of 1930-31.

	Rs. Lakhs.
Establishment—Non-voted—	
Pay of officers ..	9·35
Cost of passage granted ..	·21
Other compensatory allowances ..	·12
Travelling allowance ..	·59
Bonus contribution to Special Provident Fund.	·12
Voted—	
Pay of officers ..	5·58
Pay of Establishment—Temporary ..	12·30
Travelling allowance ..	1·87
Fixed Travelling allowance ..	·21
Other compensatory allowances ..	·40
Supplies and services ..	·01
Non-contract contingencies—Stationery and Printing ..	1·75
Bonus contribution to Special Provident Fund	·07
Total ..	32·58
English cost of establishment ..	1·87
Loss by exchange ..	·09
Deduct recoveries ..	·80
Add debit by Transferred Establishment ..	·03
Add Pensionary charges.	4·10
Total ..	37·87

	Rs. Lakhs.		Rs. Lakhs.
Police Establishment. Voted.		Pensionary contribution at foreign service rates ..	·06
Pay of Establishment—			
Temporary ..	·31		
Other compensatory allowances ..	·03	Total ..	·44
Travelling allowances ..	·04	Total Establishment ..	38·31

Deductions have been made at the end of the Capital Accounts in respect of the following items already included under the major heads of 'Works' and 'Establishment.'

	Rs. Lakhs.
Establishment charges incurred in England ..	1·81
English cost of Land Acquisition Establishment charged to the work ..	·03
English cost of Stores ..	49·98

The Establishment charges shown above represent the actual expenditure incurred up to the end of 1930-31. In all probability, they should or might have increased to about three-fourths of a crore by the end of 1932-33. This head in particular requires not only quantitative, but also qualitative, analysis and it is exactly for this reason that details are given above. As the details speak volumes for themselves, comment is needless. But the only thing to be remembered in this connection is that the entire quantity of expenditure under this head, irrespective of its quality, passes on *en bloc* to the ever rolling Interest Drum.

The turn over of the Interest account even before the project has come into operation compels us to gasp for breath. It stood at 55·47 lakhs at the end of 1930-31, made up of 34·37 lakhs up to the end of 1929-30 and 21·10 lakhs for the year 1930-31. By the end of the official year 1932-33 it should have swelled up to more than a crore of rupees. Judging from the turn over of the interest producing machine even during the moratorium period, it does not require any knowledge of astrology to predict that the project will be

hopelessly in arrears of interest without any accumulated surplus at all, within the next five or ten years, under existing conditions.

C.—Irrigation in Zamindari and Whole Inam Villages.

So far as the Ryotwary tracts in the Tanjore District proposed to be benefited by the project are concerned, the steps taken by the Government to make the scheme productive from a financial point of view are too well known to require reiteration here. Without entering into a futile discussion of insignificant matters, such as, fall in prices, commutation prices, cultivation expenses, udu cultivation and so on, I have fairly traversed in the preceding sections in broad outlines the whole ground where exactly the landholders are agitating and where the Government are keeping themselves on the fence. There is only one small matter which I should not omit to mention here, *viz.*, irrigation in the Zamindari and Whole Inam Villages in the project area of the district.

Excepting portions covered by the Vadavar Extension, the entire project area in Tanjore East is essentially non-deltaic and unconnected with the Cauvery. The famous Urlam decision of the Privy Council (33 M.L.J. 144) does not apply to the Zamindari and Whole Inam Villages situated in this tract. The project canals are not natural streams dating their existence from the time of the Permanent or Inam Settlements, nor on that account can the proprietors claim any riparian rights. In fact, the question of riparian rights does not arise here at all. As the Government have acquired lands for all the main and branch channels, they possess ownership not only in the waters, but also in the beds, of the channels. The mamul wet lands in the tract are lands recognised as such under tanks rain-fed or supplied by jungle streams and vagus. Neither the proprietors, nor the tenants can claim a right to the free use of water from the artificial project canals newly constructed and introduced by the Government. (34 M.L.J. 223). The irrigation now proposed to be introduced into the tract in question cannot be regarded

as indirect flow or involuntary over-flow of Government water liable to water charge. If water is taken by the proprietors or the tenants on the one side, or supplied by the Government on the other, it must be by a deliberate act on the part of either or both. The only question, therefore, for consideration is whether the Government will be justified in forcing water into the proprietary tanks without the consent of the proprietors or the tenants and levying water rate for irrigation therefrom. This question has been decided by the High Court in *Sri Rajah Vadrevu Ranganayakamma Garu* v.*The Secretary of State,* 28 M.L.J. 297. According to this decision, "a classification of land as wet at the permanent settlement amounts to an engagement and the proprietor is exempted from water cess for such land. The Government by their anicut system cannot cut off the present sources and then supply their water for a charge. Under S. 1 the Government can make rules having the force of law for water cess rates and their collection only. They cannot decide the question of an engagement exempting the land-holder from tax. It can be done by Civil Courts only". The proper course to be adopted in the present case will, therefore, be to supply water to Zamindari and Whole Inam Villages with the consent, and on the application, of the proprietors and all the tenants, whoever may be responsible for the payment of the water rate to the Government, in accordance with the practice followed in the Periyar tract where water is supplied to mamul wet lands in proprietary tracts on the application of either the proprietor or all the tenants on their collective responsibility at contract rates.

The case of the Whole Inam Villages situated in the Cauvery delta is somewhat different. Here the Inamdars are entitled to the free use of Government water up to the extent of the mamul wet lands. A grant of land by the Government implies an undertaking on their part to supply water free of charge to the extent of the accumulated flow at the time of the grant and in the absence of it, the area irrigated will be presumed as the measure of the quantity of water at the time of the grant. (1 L.W. 941.) This view was upheld by the High Court in *The Secretary of State* v. *Ambalavana,* 34

Mad. 336. The whole question was finally set at rest by the Privy Council in the Urlam case, where they laid down the general principle that the proprietors have acquired the right to take from the river for irrigation an amount of water limited only by the size of the channels and sluices as they stood at the time of the Permanent and Inam Settlements and not limited by the *irrigation* then customary. (33 M.L.J. 144.) It follows, therefore, that so long as the Inamdars do not increase the area entitled to free irrigation, the Government will not be justified in levying an additional charge in the shape of either assessment or water rate on the ground that they are using an increased supply of water.

SECTION X.

REMEDIES POSSIBLE AND IMPOSSIBLE.

I now come to the most difficult task of suggesting remedies. Were it only a question of courting cheap popularity with the people, I could easily and straightway make the suggestion that the Government should permanently reduce the assessments all over the Presidency by about 50 per cent. or at least 25 per cent. But such a prayer will be as easily rejected as it is uttered, because it is only the soul's sincere desire expressed in a moment of depression. He who runs over the previous pages will readily see the utter futility of using such *mantarams* to cure dropsy. In matters of this kind affecting the vested interests of millions of people, the Government should place themselves in the position of the landholders and the latter should mentally assume the reins of Government for a short period and both should seek for a *via media* to safeguard their respective interests. But if the Government and the people are determined to pull each other in opposite directions, there can be no compromise, no way out of the difficulty, no patience on the one side to hear the grievances of the other side and no hope on the other side to make their prayers heard. In a previous section I expressed my suspicion that the Ryotwary Tower of Pisa is just beginning to show indica-

tions of an angular inclination on one side. If this suspicion be well founded, can the leaning tower be restored to its proper position merely by pulling out a hundred bricks from the middle of the heavy side of the structure, leaving a hollow which may produce a crack elsewhere? It is of course obvious that there is something radically wrong with the tower. A clever, careful and critical architect should examine the structure as a whole, find the weak parts where the danger lies and then determine which of them require urgent attention, which of them require detailed examination at leisure, where the weight has to be lowered, where additional weights should be added to maintain equilibrium and several other matters which would tax the brain of even the most experienced administrators. The repair of a weather-beaten, moth-eaten, rusty, century-old tower cannot be effected all in one day, or one year by panicky measures. Even if the Government and the people put their united strength on the work and pull through in a constructive and co-operative spirit, it will take some years to straighten the tower, to provide moving space in it, to remove the congestion, to introduce fresh air for ventiliation and to make it habitable for man under normal conditions. When these considerations oppressed my mind, I often felt it better to remain in oblivion, because my venture will only land me in a position where I can please neither the people, nor the Government. But in the midst of this mental depression, I was reminded of the following maxim by Havard:—

"Our country's welfare is our first concern

And who promotes that best—best proves his duty."

Seeing that our country's welfare is also the first concern of our Government, I have ventured to perform my duty more towards the Government than towards the people to the best of my lights. This is, however, neither the place, nor the occasion, to waste time over details. The discussion about them may be taken up, if and when the Government show an inclination to look into the matter. It is of course difficult to convince a Government who are determined not to be convinced,

but if they find that their interests also are likely to suffer, they may probably begin to meditate over the question, quite independently behind the screens. I shall, therefore, confine myself to suggesting a few remedies in broad outlines, remedies which are urgently required to ease the critical situation and those which may be considered at leisure. Whether they are feasible or fantastic, whether they are found to be too radical on the one side, or too insufficient on the other, they may be taken for what they are worth.

I. First, I shall dispose of the agitation made by the landholders and their representatives in the Legislative Council for a permanent reduction of the assessments by 50—25—or 12½ per cent. It is a sad irony of fate there is no provision, or loop-hole in any Act, or Board's Standing Orders, or Re-settlement Manual, or Re-settlement Notifications, enabling Government to grant such reduction of assessments in the interval between two Re-settlements. The Re-settlement Notification, while it gives power to the Government to enhance the assessments under certain circumstances during the currency of the settlement period, is silent on the question of reducing the assessments during the same period under any circumstances. The only course by which the landholders may get relief in this direction is to invoke the Government to exercise their right of State prerogative by which they can do and undo things.

II. Interest Account.—The first thing to be done, therefore, is to reduce the interest on the capital outlay spent on productive works to a maximum of 3 per cent. and on unproductive works to a maximum of 1 per cent. Prior to 1916—17, the rate of interest charged on all productive works was only 3·3252 per cent. It was raised to 5·44 per cent. from and after 1917—18 and has since been further raised to 6 per cent. While these enhancements may be advantageous to the Government of India to secure larger returns from their Loan Funds, they eat the foundations on which the Loan Funds stand. When the Government of India have the power to raise the rates of interest at their

pleasure, they have also the right to reduce them whenever a necessity arises. But necessity is more or less a relative term. What is sauce for the goose may not always be sauce for the gander. It is only when the force of circumstances begins to act against them that they think of removing certain so-called productive works to the unproductive class, *i.e.*, by transferring the works themselves from a higher to a lower scale of interest. This, they can avoid, if they begin low and advance higher step by step.

In this system of loan accounts, the Local Government only stand in the position of intermediary agents, or accountants for obtaining and spending the loans and maintaining accounts. The real borrowers in the transactions with the Government of India are the landholders who pay all the interest worked out by the agents and accountants. If the proposal here made to reduce the rates of interest to 3 and 1 per cent. is approved, it will considerably mitigate the burdens which the landholders are now shouldering and will also afford the much needed relief to the Local Government.

III.—The Capital and Revenue Account.—Our quarrel here is with the accountants and not with the accounts. The expenditure incurred in the actual construction of irrigation works, such as, head works, regulators, falls, weirs, bridges and escapes, sluices, cross drainages, earthwork, main and branch channels, distributaries, plants and machinery and compensation for lands acquired, is perfectly legitimate and cannot be questioned except on grounds of economy. But the accountants do not stop there. They debit to the irrigation works all conceivable and inconceivable establishment charges incurred for direction, construction, supervision, land acquisition, regular management under the normal conditions of the working of the Department and also for Police bundobust. This they do, no doubt, under the slogans contained in the accounts 'Bagavat Gita'. But whether a Special duty for the construction of an irrigation project arises or not, the pay and emoluments of the members of the permanent staff of the Department are perfectly safe in the regular budget of the Department.

Their deputation to temporary duty at once transforms all of them as temporary establishment and all the expenditure incurred on their behalf is transferred *en bloc* to the accounts of the works on which they are engaged. And the worst feature of the arrangement is that the landholders have to pay interest to the Government of India on all the expenditure so incurred. Quite apart from the financial, or accounts point of view, the only legitimate items of establishment charges debitable to the works would appear to be the cost of purely temporary establishments, *i.e.*, of men who hold no permanent appointments in the Department, specially and newly entertained for the works. However fantastic this proposal may appear to the Government, it is made specially to give less fuel to the interest-producing machine.

IV.—No productive projects involving increase of assessment and water rate should be introduced without consulting the wishes of the landholders in the commanded area and ascertaining their capacity to bear the increased burdens.

V. The original and all the revised estimates framed by the P.W.D. in connection with the productive projects should be sanctioned by the Legislative Council after scrutiny by a Standing Committee of official and non-official experts, co-opted on each occasion by two or three landholders of the districts or tracts concerned. This will enable the landholders to be forewarned against the exploits of the professional men of genius.

VI.—The enhancement of assessments made at the Re-settlements should not be made merely on the basis of the rise in prices, but upon the actual income from land. No attempts are now made at the Re-settlements to ascertain the actual outturns or income from land by crop experiments anywhere by the Settlement Department who, however, build their *gopurams* upon some outturns arrived at by local enquiry or fixed by the Director of Agriculture for the districts as a whole. By all means, let the Government increase the assessments once in 30 years, but let the increase be based upon the actual outturns obtained by the landholders during the settlement period of 30 years. This will no doubt involve some

labour in providing the means for the collection of statistics and in compiling them. But a good deal of unnecessary work now done by an army of settlement staff may be eliminated and this may be made the primary duty of the Settlement Party at each Re-settlement. If the actual outturns so collected, compiled and valued in terms of the commutation price show any increase in income from land, the assessment may be raised in suitable proportions after making the necessary deductions therefrom. If the Government are pleased to try this proposal, they know how to carry it out more than anybody else, while if they want to reject it, they know also how to do it effectively. The grain outturns fixed at the original settlements are now out of date by sixty to seventy years. The outturns proclaimed by the Agricultural Department can, if at all, be found only in their farms and in some isolated fertile localities as will be seen from the low values of paddy per acre shown by the statistics in Section II. So long as land tax is a tax upon income from land, it is this income that should form the main item of investigation by the Settlement Party, but it is exactly this work that has been eliminated from the Re-settlement operations. The Settlement Officer's outturns are now arrived at merely by enquiry at different places.

VII.—Simplification of the Re-settlement procedure. At present, the Settlement Parties take from 5 to 7 years to complete the Re-settlement of a district and to introduce the Re-settlement rates merely on the basis of a percentage enhancement. They waste their time in doing many things which the Revenue Department ought to do, or ought to have done. If they confine their attention to things which they are bound to do for fixing the Re-settlement rates of assessment and eliminate all other extra-settlement work, the work of the Parties can be finished in about two years. The Government tried their hands once or twice upon this simplification work according to Newspaper reports, but then the will to carry out their object was lacking.

Of these proposals, Nos. VI and VII may be worked out and experimented upon in a district where the Re-settlement

operations have just been commenced, or are likely to be taken up soon. Nos. IV and V may be adopted when the next productive project is taken up for investigation, *e.g.*, the Tungabudra project. Nos. II and III are urgent and should be immediately taken up for consideration; for on them depends the success or failure of the Cauvery—Mettur project.

The landholders of the Tanjore district have been running from post to pillar and *vice versa* and have almost exhausted all their resources of constitutional agitation through the Press and platforms, by petitions and prayers, by protests and deputations, by discussions and talks and by resolutions in the Legislative Councils. They have now reached almost the end of their tether in hopeless resignation. During all these two years, the Government have been looking askance from their vantage position on the noise made below, while the people have been retreating as often as they advanced out of sheer helplessness. The sooner this diplomatic drawn game is ended, the better for both the people and the Government. Whether rightly or wrongly, the Government have invested a fabulous sum on the project and the waters of the canals are knocking against the gates of the landholders; but by some unaccountable mischance, the people are repugnant to use the water for irrigation as if there is some witchcraft in it. Why? Because they are frightened by the pinch in their stomach likely to be produced by the 5·44 per cent. interest. The Doctor says that he sincerely prescribed the costly and specially prepared balm for the good of the patient, while the patient cries that he is afraid that the balm will do him more harm than good and that he will not swallow the medicine. How to reconcile the doctor who does not understand the condition of the patient and the patient who is so ungrateful and refractory as not to understand the ability and sincerity of the doctor?

If the Government adopt proposals II and III at least as a special case in regard to this project, they can reduce its legitimate cost to something like 7 crores and with 3 per cent. interest thereon, they can easily bring the project into operation even in the next cultivation season by the following working methods.

PROJECT AREA.

1. Application of the Differential water rate system to the project area on the basis of the First class Delta wet rates.

2. Levy of water rates at Rs. 7-8-0 and Rs. 3-12-0 on Zamindari and Whole Inam Dry lands.

3. Levy of Fasaljasti on Government single crop wet lands (W-D.).

4. Levy of contract water rates at Rs. 7-8-0 and Rs. 3-12-0 on Zamindari and Whole Inam mamul wet lands on the collective applications of all the tenants on their joint responsibility to pay the entire charge on the whole of the area irrigated under any source, as is done in the Periyar tract.

EXISTING DELTA.

5. Application of the Differential water rates on all dry lands.

6. Levy of Fasaljasti on single crop wet lands at half of W-D.

7. No need to raise the classification of the sources, or to levy additional water rates on the Government, Zamin and Whole Inam mamul wet lands in the delta.

A reduction of the capital cost to about 7 crores and of the rate of interest to 3 per cent. will surely make the project productive according to the above scheme on the basis of irrigation revenues amounting to about 21 lakhs. The water rates here suggested may in all probability suffice to reach that limit. Any deficit in the revenue so calculated may, if necessary, be made good by the addition of one rupee to W-D for the first wet crop and half a rupee for the second wet crop.

If the Government do not find their way to adopt the above course, the only other alternative for them will be to treat the project as unproductive. If they do not adopt that alternative too before it is too late, they will, as sure as night

follows day, be forced to do it some years after trial and after accumulating arrears of interest to a sum more fabulous than the capital outlay, just as they are doing in the case of several other productive works. The sooner, therefore, they do it in their own interests, the better. May God give our benign Government the wisdom and courage to translate into action their long established reputation as the generous benefactors of our country!

Nisi Dominus frustra!

APPENDIX.

A PROVISIONAL SCHEME FOR THE SIMPLIFICATION OF THE MADRAS LAND REVENUE SYSTEM.

Having regard to the fact that the Madras Land Revenue system has become highly hypertrophic, I have thought it necessary on further consideration to amplify and supplement in this Appendix the remedies suggested in the last Section of this Memorandum and to place before the people and the Government a provisional scheme for the simplification of the present system. The proposed scheme no doubt involves the performance of a major operation for bleeding. Though the official Doctors and their Assistants may frighten the people that such a serious operation is dangerous and unnecessary, it is for the people to decide whether the operation is imperative in their own interests or not. If at all it should be done, it can be done only in the course of the Re-settlement operations in districts. For the present, the scheme may be tried in Malabar and South Kanara where they are nearing completion and may be introduced in Salem where they are impending.

The issues involved are, however, too varied, complex and difficult to form the subjects of paper resolutions in conferences in less than an hour, or of unthinking mob agitation without a full knowledge of the consequences and repercussions likely to follow. Rev. Doctor A. H. Sayce says "Constructiveness belongs to a few; the artist who can create, the architects who can build are exceptions; the great mass of mankind without leaders and instructions can only destroy. . . . . It is easier to excite the passions of the multitude than to allay them; the politician too often forgets that the primeval instinct of destruction lies very near the surface ready to declare itself as soon as the hand of restraint is removed." Without, therefore, exciting the passions of the multitude,

the leaders should take up the question for serious cogitation and thought, explain the issues calmly to the landholders, arrive at considered opinions and decisions in consultation with them and communicate their views to Collectors, Board of Revenue and the Government. The first thing to be done is to educate the people as to what is good for them, to give them time to think over the proposals in all their aspects and when they have matured a scheme, to find the constitutional ways and means of making their voices heard by the Government, and last but not the least important, to convince the Government of the necessity to overhaul the Revenue machinery on the lines suggested by them. In matters of this kind, the Government will surely not act precipitately, nor force any new system both upon themselves and upon the people without adequate safeguards, first to protect their own interests and secondarily to improve the lot of the landholders. But if they are convinced that the demands bear the stamp of sincerity, necessity and universality, they will only be too ready to meet the people at least half way in the first instance and then to proceed cautiously step by step.

To this end, and for the reason that this Memorandum will be incomplete without some concrete proposals, I have prepared the following provisional scheme for overhauling the Revenue machinery. The feasibility of the entire scheme depends upon the acceptance by the people of the first proposal contained therein and any scheme which omits to take this proposal as the basis may not carry the landholders even a furlong on the road to prosperity. The Government may, doubtless, turn it down as too radical and uncalled for and some of the landholders may also hesitate to try experiments with the scheme here proposed, but time will show wherein wisdom lies. The Scheme may, however, be subjected to careful scrutiny and severe criticism on all sides and by all concerned.

Provisional Scheme.

I.—Wet Classification.

Abolish the wet classification of lands in the accounts, whether as single crop, or as double crop; register all arable

lands as dry in the accounts, but preserve the existing rights of irrigation, without annual or periodical permits, to all lands hitherto classed as wet. So long as this right is kept in tact, it matters very little by what name the lands are designated in the accounts. They may be described in the accounts as mamul irrigated dry. The object of this proposal is to separate the charge for water from the assessment for land and to bring all wet lands under the category of dry lands for purposes of water charges.

II.—IRRIGATED DRY LANDS.

A. The only basis for determining the water rates to be charged on the mamul irrigated dry lands will be W-D. But if the wet classification is abolished, there can be no W. The best course to be adopted in respect of these lands is, therefore, to fix the water rates at the average W-D levied in each taluk for the first wet crop and half of it for the second wet crop. Three-fourths of these rates may be charged for dry crops irrespective of their rotation, or of the systematic or occasional irrigation required by them.

B. *All other dry lands.*—The Standard, or Special, water rates now prevailing may be continued.

C. In both the classes of cases, the water rates should on no account exceed Rs. 10 for the first wet crop and Rs. 5 for the second wet crop.

D. These water rates should not be liable to enhancement at each Re-settlement, nor in the intervals between two Re-settlements except under the conditions set forth in clause V-C below.

E. If the wet classification is abolished, there will be no need for the classification of the sources into five classes by the Settlement Department. For purposes of water rates, all sources which receive supplies for six months and over may be treated as First class sources and all others as Second class sources with three-fourths water rates. This is what is being done now.

F. No water rate should be charged when water is not used for irrigation. When crops fail, or are lost, on account

of excess or deficiency of water, the water charge should be remitted. With the abolition of the wet classification, the Remission rules in BSO No. 13 will become practically inoperative. The only provision to be retained therein will be in respect of remission of water rates. By these methods the landholders may regulate their cultivation with reference to season, water supply and their own resources and escape from the payment of the consolidated wet assessment, or charge for water if they do not cultivate their lands, or any portion of them, from causes beyond their control. Under such extreme conditions, they will be liable to pay only dry assessment.

III.—Re-settlements.

The dry assessment on all lands may then be subject to revision at each Re-settlement once in 30 years. But the revision should be made on the basis of the actual outturns secured in respect of three staple dry crops in the district, such as Ragi, Cumbu and Cholam. The anna notations to indicate the outturn of crops in the cultivation accounts may be abolished and in their place, the Karnams may be asked to record the actual outturns in the column intended for the anna notations, in terms of Kalams, Maunds or Tons. Since the Karnams note the anna notations only after ascertaining the actual outturns, it will facilitate their work by recording the actual outturns straightway. At each Re-settlement, these actual outturns may be classified and grouped and an average may be struck for each money taram. If the Government, however, think that the Village officers cannot be relied upon to record the actual outturns correctly, they may direct the Revenue Divisional officers to conduct crop experiments in typical villages annually during the whole of the settlement period, or ask the Settlement officers to fix the grain outturns for lands of each money taram by crop experiments as was done at the old settlements. To the actual outturns so obtained for each money taram, apply the commutation prices, determine the values of the gross produce and make the usual deductions for vicissitudes of seasons, unprofitable areas included in the holding, cultivation expenses and so on. If the net income shows any increase,

the Government may, by all means, order a proportionate enhancement of dry assessments up to a maximum not exceeding 12½ per cent. If for any reason, this procedure cannot be adopted, any other more feasible method may be followed so as to make the actual outturns the basis for making the enhancements.

IV.—Curtailment of Re-settlement Work.

The Settlement Parties need not waste their time in doing Special Staff work, conversion from dry to wet or *vice versa* and the other innumerable items of miscellaneous work now done by them. They may be attended to by the Revenue Department in due course.

V.—Construction of Irrigation works.

A. The system of constructing all productive and unproductive works from borrowed capital as a matter of routine should be put an end to. They should ordinarily be done by the Local Government from their provincial funds without charging the landholders with interest on the capital outlay.

B. No establishment charges except the pay and emoluments of temporary men newly employed in connection with any work for fixed periods should be debited to the works concerned.

C. No project involving an increase of water rates should be constructed by Government from borrowed capital unless at least half the landholders in the tract proposed to be commanded by it give their consent in writing for the utilization of the loan funds and the payment of increased water rates. This will prevent the repetition of the trouble that has now arisen in connection with the Mettur project. The criterion in such cases should be that the projects should be more productive to the people from an economic point of view than to the Government solely from the financial point of view irrespective of all other considerations. The Government should arrive at a *via media* by limiting the interest on the capital outlay to 3 per cent. in the case of productive works and 1 per cent. in the case of unproductive works.

WORK BY THE SAME AUTHOR

MANU'S LAND AND TRADE LAWS

(Their Sumerian Origin and Evolution up to the Beginning of the Christian Era)

R. S. VAIDYANATHA AYYAR, B.A.,

WITH A FOREWORD

BY

DIWAN BAHADUR SIR T. VIJAYARAGHAVACHARYA, K.B.E., M.A.

Published by :	Rs. 5	Sole Agents for Europe :
Messrs. Higginbotham & Co. Madras & Bangalore.	Sh. 7-6 Net.	Messrs. Luzac & Co., 46, Great Russell St., London, W. C.

The book deals *in extenso* with the following novel and original theories *viz.*,—

1. The Code of Manu is essentially Sumerian in origin and was compiled from the same sources as King Hammurabi's Code of Babylon, the Assyrian Code and the Hattic Code of Cappadocia.

2. It deals with a state of society in India closely analogous to that found in Babylon from 2400 B.C. to 2000 B.C.

3. The original Code of Manu was compiled by the Priest King Jamadhagni Bhrigu and the abridged Code which we now possess was prepared by his son, Parasurama, in about 2300 B. C.

4. The idea of property in India was essentially individualistic from the commencement of the Vedic period and passed through four stages of evolution (a) the constructive period, (b) the legislative period, (c) the working period, and (d) the period of amending legislation before the beginning of the Christian Era.

5. Manu's one-sixth share of land tax was not an all round universal rate, but was the highest one in a gliding scale

of rates. His normal rate in prosperous years was only one-twelfth.

6. The several fractional rates prescribed by Manu, one-twelfth, one-eighth and one-sixth were levied only after making deductions for expenses of cultivation and the distribution of the produce.

7. Chanakya abolished all the lower rates and adopted one-sixth as the minimum rate which could be enhanced to one-fourth and one-third.

8. The communistic idea of property was a later growth originating from the scheme of colonisation instituted by Chanakya in the fourth century B. C. but it soon broke down in all provinces governed by the Hindu Law of property except in the Punjab which is still governed by the customary law of the province.

SELECT OPINIONS

ENGLAND

The Times Literary Supplement, dated 25—8—1927:—

"His book insists upon that which is of greater historical importance and which is gradually receiving more and more recognition, the intimate connection between ancient India and Trans-Himalayan States of Western Asia. Hindus, of course, love to thrust back their history as far into the past as is possible or plausible, often without much evidence except that of tradition and the ancient writings; but Mr. Vaidyanatha Ayyar has at least a reasoned case and one that deserves the attention of scholars in spite of their inclination to reject what is new and to cling to theories that themselves owe their stability largely to tradition."

The London Law Journal, dated 9—7—27:—

"Two problems connected with the Code of Manu are discussed in this essay. The first is concerned with the origin, antiquity and authorship of the Code; the second with the evolution and history of its land and trade laws up to the beginning of the Christian era.

"The origin, antiquity and authorship has been a subject of much speculation, a measure of which may be found in the varying views as to its age which range between 1200 and 500 B. C. according to different scholars. It was generally considered to be God-given law and its origin held to be indigenous in the people for whom it was compiled. Recent research, however, on the origins of civilization has led Mr. Ayyar to explore once again these problems. ..... The authorship is deprived of its divinity and is traced back with the help of Indo-Sumerian Seals to a certain Parasurama who flourished in Circa 2300 B. C. to which date the compilation of the Code is ascribed. This, it will be observed, is some eighteen hundred years earlier than the latest ascription, viz., 500 B. C. .....To those interested in the origins of civilization and the early history and development of law, we would recommend this little book as worthy of attention."

Rev. Dr. A. H. Sayce. M. A., LL. D., D. D., Professor, Oxford University, Honorary Vice-President, Royal Asiatic Society, London and author of several works on Sumerian and Hittite Studies, writes:—

"Very many thanks for your interesting book on Manu's Land and Trade Laws which you have been so kind as to send me. You have opened a new chapter in the history of Indianic research. Your legal investigations are especially instructive."

Dr. Stanley A. Cook, Litt. D., Ph.D., Professor, Cambridge University, and one of the Chief Editors of the Cambridge Ancient History, writes:—

"You have taken up a most interesting subject and one upon which there is need for new research..... Your theory of the Sumerian origin of the Code of Manu will be read with attention, especially by those who are not easily persuaded that parallels in culture are necessarily due to influence and I, for one, am very glad to have, in so readable and accessible a form, the materials which you have so carefully collected relating to early Indian usage. ..... You are to be congratulated upon perceiving its (Sumero-Indian

problem) importance and impressing it upon those who might otherwise be inclined to ignore it. I hope that you will be able to continue your valuable work which you have so well begun."

Dr. L. A. Waddell, LL.D., C.B., C.I.E., Scotland, writes:—

"I heartly congratulate you on the distinction of being the first in India itself to take up the newly found Sumerian historical keys for the scientific exploration of the long lost origin of the Indian civilization."

AMERICA.

Professor G. A. Barton, University of Pennsylvania, U. S. A., writes:—

"Please accept my sincere thanks for your kindness in sending me your interesting work, Manu's Land and Trade Laws, which I have found most suggestive. ..... Your own treatment of the laws of Manu seems very sane. You have rightly recognized the various strata which come from different periods. .....You have opened a fruitful field of investigation and I thank you for the honour you have done me in sending me a copy of your work."

Professor R. J. Kellogg, Ottawah University, Kansas, and President American Oriental Society, Writes:—

..... It contains a wealth of information in concise and non-technical form. It is limpidly clear in style and fascinatingly interesting. It adds another important chapter to the Sumero-Aryan cultural contacts in the prehistoric period, first revealed by the excavations at Harappa and Mohenjo-daro. To already known resemblances you have added those between early Hindu and Sumerian social organization, customs and legal enactments. I find these results intensely interesting and startlingly suggestive of new fields of research which may throw actual light on Indo-European origins.....

INDIA.

The "Hindu" Madras:—

"It cannot be denied that Mr. Vaidyanatha Ayyar has opened up a fascinating vista of historical speculation and

developed a number of original theories with considerable cogency which should form the starting point of a fruitful discussion. His exposition of the land revenue system is particularly interesting as showing how firmly it was based on equity in glaring contrast to what obtains to-day. His book is thus of considerable value not only to the historian but also to the political economist and the practical administrator."

The "Madras Mail":—

"India needs such investigation and elucidation of her ancient civilization and laws on the part of her sons. The time is propitious for this kind of work."

The Mythic Society's Journal, Bangalore:—

"In this valuable little book, Manu's Land and Trade Laws, Mr. Vaidyanatha Ayyar, B. A., expounds several new theories which, I am sure, will be welcomed by every reader of Ancient Indian History as the best contribution to our knowledge on the subject. Though the early period is shrouded in mystery, the author has taken immense pains to penetrate deep into the recesses of the so-called dark ages in the Hindu period and convinced the reader with his arguments regarding the origin, antiquity and authorship of the Code of Manu. What deserves the greatest praise is the beautiful and well arranged matter bringing out the central theme of the book, namely, the evolution of the individualistic idea of property from the primitive law of the village communities to the fully developed Ryotwari system of Chanakya's times 320 B. C. The later chapters dealing with the Smrithis, Kautilya's Arthasastra and the origin of the village communities must be read by all interested in early Indian History as they cover quite a good number of original ideas and theories—the result of the author's extensive and laborious research .....If a number of such books are written, I do not really see why they should not make the early history of Hindustan interesting and accurate like the early history of most other countries."

The Indian Review, Madras:—

"Mr. Vaidyanatha Ayyar's book opens up another vista which seems to lead us to an inviting and illimitable past. (It)

is a welcome and important contribution and is a credit to his scholarship and patient investigation."

The Hindustan Review, Calcutta:—

"It is an excellent epitome of the recent discoveries in Sindh and the Punjab and bearing on the Indo-Aryan civilization. Mr. Ayyar has opened by his laborious research an attractive vista of historical speculation and his work merits appreciation."

Sir John Marshall, K.C.I.E., M.A., Litt. D., F.S.A., Director-General of Archæology, Simla, and the discoverer of the Indo-Sumerian Seals writes:—

"Pray accept my thanks for the presentation copy of your work on Manu's Land and Trade Laws. Your thesis is naturally of the greatest interest in connection with our newly discovered Indus culture."

Diwan Bahadur Sir C. V. Kumaraswami Sastrigal, Kt., M.A., High Court Judge, Madras, writes from England.

"Thanks for your interesting book. In the present state of our knowledge it is difficult to do more than to afford convenient starting points for further research by taking stock of the knowledge afforded by materials now available and suggesting lines of further research. I think your book will serve this purpose admirably. Several of the parallels are striking."

C. R. Reddi, Esq., M.A., (Cantab.), Vice-Chancellor of the Andhra University, Bezwada, writes:—

"I read through your very interesting book on the origins of Manu's Land and Trade Laws and was much struck by the originality you have displayed."

Dr. R. Shama Sastri, Ph.D., Curator, Mysore Government Library and author of "The Kautilya Arthasastra," writes.—

"A learned work ..... on such an important subject as you have elaborately discussed ..... a bold attempt ..... I wish you success in your original investigation."