

The State Irrigation works in India

By Nihal Chand.

— PREFACE. —

WATER IS LIFE.—The existence of animals, plants, and all other beings depends on water and hence it is not taxable, like other commodities. The construction of irrigation works like wells, tanks, reservoirs and canals was always recognised by the Indians to be their first duty and the best form of charity. Wherever you will go in this hot season, you will find arrangements made for the distribution of water gratis to the people. At a very early date Raja Bhagirath was advised by a saint to bring down Ganges water to the desolate plains of Hastinapur in the Meerut District and so the river was called Ganga Bhagirathi after his name.

In the Deccan and Rajputana, magnificent old irrigation works are the living testimony of what was accomplished in the past in this respect.

Later on, the Muhamaden rulers also did not neglect this part of their duty and opened the Junna Canals. It was the old irrigation works that gave an incentive to the British rulers in India for constructing new canals and repairing the old ones, as admitted by the Irrigation Commission of 1901:—“ para 41—“ India therefore in a great measure owes to her former rulers

the first inception of the present unrivalled systems of state irrigation works.”

The boon conferred by the British Government upon the people by the extension of irrigation works is beyond calculation and I am second to none in acknowledging their value. But every thing has some defects and stands in need of improvement. Being a landlord myself some grievances were brought to my notice which drew my special attention to the subject and to which I will make a short reference here :—

(1) In 1874 the owner's rate was imposed on canal irrigated lands in addition to the water-rate. It was levied on those lands that were dry and assessed as such at the time of the last settlement, with the object of taking a share in the enhanced produce caused by canal irrigation and was nothing else but land revenue bearing another name. It was evidently very unjust to impose such a tax on land during the term of a settlement and at the instance of the Zamindars of Muzaffarnagar District I submitted a memorial to the Local Government of these Provinces to remit this tax, but it was summarily rejected on the advice of the Board of Revenue.

This order of the Local Government was appealed to the Governor General of India on the 2nd March, 1892, and I am glad to say that the prayer was granted and the rules for the imposition of this tax were modified.

(2) In 1891 the scale of waters was revised and the rates were enhanced by 1/3rd of the then existing rates. It was bitterly felt by the tenants and a memorial was submitted by the Zamindar Association of Muzaffarnagar to the Local Government on the 5th September 1896. It was rejected on the 5th April, 1897. The Chief Secretary to the Government said:— "I am to say that the decision to enhance the occupier's rate was arrived at after a prolonged correspondence between this Government and the Government of India and on full consideration of facts, and to express regret that the question of reverting to the old rates cannot be reopened."

As there was no hope of success no further steps were taken to have the grievance redressed.

(3) Formerly the Ganges Canal terminated at Cawnpur, but a few years ago it was extended further into the Districts of Fatehpur and Allahabad. The water supply in the river Ganges was the same as before and nearly the same quantity of water was to be distributed on the whole irrigated area on both the old and the new canals. The consequence was that the tenants on the old canals were deprived of a portion of water they used to get for their crops. No doubt the Government Revenue was much enhanced by the extension of the canals and some dry area on the new branches was irrigated but the produce of land on the old canals was much diminished for want

of sufficient water and yet the water rates on the old canals were not reduced at all.

(4) On the contrary, the rates on wheat and sugarcane, the chief valuable crops in these Provinces were immensely enhanced; the former at the rate of 77 per cent and the latter at 100 per cent, when compared with the rates in force till 1891..

I thought that the interests of the landholding classes would be better served if the whole question of water rates were discussed exhaustively by some eminent person and with this object I intended to offer a handsome prize for the best essay on the subject. However for some reason or other proper arrangements could not be made and I had to content myself by writing these lines. I am fully aware that I could not deal with this question as thoroughly as the importance and nature of it requires, but I have tried to put before my readers what information I could collect together with my own views and I respectfully pray that the Government and the well-wishers of the country will take up the question in right earnest and give it a thorough consideration. As suggested by the Irrigation Commission of 1901, the Government is extending irrigation works and is investing large amounts of money thereon and therefore the earlier due attention is paid to the subject the better for the poor people, because if the rates are not moderate the benefits from irrigated works will be minimized.

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I am glad to see that I have been able to write these lines at a time when His Excellency Lord Minto, P. C. G. M. S. J., G. M. J. E., G. C. M. G. is the Viceroy and Governør General of India and I hope that His Excellency will be graciously pleased to take the same interest in this important subject as was taken by his illustrious ancestor, the Earl of Minto in 1810.

MUZAFFARNAGAR, }
The 21st March, 1906. } NIHAL CHAND.

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The State Irrigation works in India.

1. The question of extending irrigation for the improvement of cultivation, and for the protection of the country from the bad consequences of drought and famine, is one of the most important questions, as the welfare of the people depends upon it to a very great extent. The British Government for this very reason repaired and improved some of the old canals opened by the Hindu and Mohammedan rulers, and constructed new ones. With the object of developing the irrigation sources further, an Irrigation Commission was appointed in 1901, and it is expected that this branch of administration will receive due attention of the Government.

2. However, there is one side of the question which has never been properly discussed. I mean the question of regulating the water rates. Up to this time the rates have been fixed by the Government and the matter has not been discussed by any public body and well-wishers of the country. It is a serious matter and must, I think, be properly discussed and well threshed out in all its bearings without any further delay because if the price of water is fixed at an exorbitant rate, and the irriga-

tion works are made to pay Government Revenue to the utmost possible limit, the advantages of irrigation to the people will be very much minimized.

3. The importance of constructing irrigation works such as canals, tanks, reservoirs and wells for drinking and agricultural purposes, was recognized in India from immemorial times by the Hindu and Mohammedan rulers, zamindars and tenants. It was considered one of the most pious duties of men of power and affluence and the religious tenets attached great merit to this form of charity and benevolent act. It is for this reason that so many magnificent works of irrigation are to be found throughout India. They were built as works of public charity for the comfort and prosperity of the people.

4. Indians took up the idea of building canals for irrigation and drinking purposes at a time when no other country did so. It is said that the river Ganges was brought down from the Himalayas in the shape of a canal by Raja Bhagiratha whose name is associated with it and Ganga-Bhagirti is a household word. Although the engineering skill of the present day would scarcely admit that Ganga was brought down as a canal but looking to the height to which the art of architecture had reached in ancient times when a bridge was made over the sea between Rameshwar and Ceylon, and many admirable works such as the Taj exist to-day, it is not impossible if it were so.

5. I will now give the history of Irrigation works in India as described by the Indian Irrigation Commission of 1901:—"36. In the early records of the people of India, dating back to many centuries before the commencement of our era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the almost innumerable tanks of Southern India have been in existence for many generations—two in the Chingleput district of Madras, which still irrigate annually from two to four thousand acres, are referred to in inscriptions which are said to be of the 8th and 9th centuries of our era; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigating channels which have been buried for centuries in the undergrowth of the forests. But the numerous large works which now exist for utilizing the supplies of the larger rivers are of comparatively recent date; and little seems to have been done in this direction before the country came under British rule. The most notable exceptions are the 'Grand Anicut' across the Coleroon river in Madras, some of the inundation canals on the Indus and its tributaries, and two canals taken out of the Jumna river at a point where, passing a gorge in the outer ranges of the Himalayas, it debouches on to the plains.

“ 37. To the ‘ Grand Anicut,’ tradition assigns a period corresponding to the close of the second century, though it is probably of a much later date. This work is, so far as is known, the greatest engineering work carried out in India before British rule began. It consisted of a solid mass of rough stones, over 1,000 feet in length, 40 to 60 feet in breadth, and 15 to 18 feet in depth, stretching across the whole width of the Cauvery river. It fulfilled its purposes for some centuries, and in 1830 was still in operation, but the vagaries of the river had not been watched, and by that time the main stream had begun to flow down a northern channel known as the Coleroon, and the district of Tanjore had lost much of its former prosperity.

“ 38. Most of the existing inundation canals in the Multan, Muzaffargarh, and Dera Ghazi Khan districts, were constructed by the former Muhammadan and Sikh rulers, and on many of these canals a high degree of efficiency was attained under the management of the great and energetic canal-maker, Diwan Sawah Mal.

“ 39. A canal, known as the Hasli, was also constructed by the Sikh or Muhammadan rulers of the Punjab to carry water to Lahore from a point on the Ravi river at a distance of 130 miles. When the Punjab came under British rule, the area irrigated by the canal was paying a revenue of eighty-five thousand rupees. Its general alignment was fairly good, but in detail there had been so many errors that to

rectify them would have cost more than making an entirely new channel. The Hasli has been replaced by the Bari Doab Canal, which has more than twenty times its carrying capacity, and is one of the most important irrigation works in India.

“40. Owing to the proximity of the Jumna to Delhi, the Muhamadan rulers of India turned their attention at an early period to utilizing the waters of that river for the irrigation of the higher lands on both banks. In the fourteenth century, Firoz Shah Tughlak constructed a canal taking water from the right or western bank of the Jumna, a distance of about 150 miles, to irrigate his favourite hunting grounds at Hissar. This canal, which had silted up, was repaired during Akbar's reign by the Governor of Delhi for the irrigation of lands in his private estate, but for want of repairs it again stopped flowing. About the year 1647 A. D., the canal was repaired under the direction of Ali Mardan Khan, the celebrated engineer of Shah Jahan, and a new channel excavated to carry water into the city of Delhi. During the decline of the Mughal Empire the canal again gradually silted up until it ceased to flow. The canal on the eastern bank of the Jumna was also constructed during the Mughal Dynasty, probably during the reign of Muhammad Shah (1718-1748); but it appears to have been very soon abandoned, if indeed it had ever been used for the carriage of water. In 1754 the work was partially restored by a Rohilla Chief who succeeded in bringing water to

some short distance below Saharanpur, and there are traditions of serious injury having been caused thereby to the towns of Saharanpur and Behut. No masonry works of any kind were constructed in connection with the canal; and in their absence, owing to the excessive slope of the country, if any considerable volume of water had been allowed to enter the canal, it must have led in time to a fatal retrogression of bed-levels.

“ 41. Doubts have been expressed as to whether these works, in their former condition, ever irrigated any considerable areas or conferred much benefit upon the people. Be this as it may, it is certain that it was the existence of the ‘Grand Anicut’ in Madras, and the remains of the old Muhammadan channels in the Punjab and United Provinces, which suggested and led to the construction of the earliest works carried out under British rule. *India, therefore, in a great measure owes to her former rulers the first inception of her present unrivalled systems of State irrigation works.* The most efficient and useful works which were constructed in former times are, however, the smaller works tanks, wells, and river channels which are to be found scattered throughout the Peninsula, and in Upper Burma. They are most numerous in the Madras Presidency, where to this day they irrigate collectively an area equal to that irrigated by all the larger works which have been constructed by the British Government in that Presidency.”

Development of State Irrigation works under British rule.

6. It appears that since the commencement of British rule in India, though the authorities always had an eye to business, the advantages of irrigation works were not overlooked. The increase of Land Revenue seems first to have attracted their attention and gradually the saving of revenue in years of drought. In course of time, as it seems, the humanitarian view of preserving people from distress and privations also gained ground. The following facts may be cited in support of this allegation:—

* “ Great irrigation canals, constructed by Mohamadan rulers in Northern India, had fallen into disrepair during the wars of the eighteenth century, and attracted the notice of the servants of the East India Company shortly after they had acquired Northern India in 1803. A Committee of Survey was appointed under Lord Minto’s administration in 1810 to inquire into the state of the old canals both east and west of the Jumna ; but the Chief Engineer and the Surveyor-General were divided in opinion, and “ poured over the survey report such a flood of contradictory learning” that the first scheme of restoring the canals perished under its weight.†

* Victorian age by Mr. R. C. Dutt.

† Sir John Kaye’s administration of the East India Company (1853) p. 278.

Lord Hastings approached the question in a more practical manner. As a result of his tour in Upper India in 1815, he wrote hopefully of the scheme of restoring the old canal west of the Jumna:—"I will only say that my own inspection has fully convinced me of the facility and the policy of immediately restoring this noble work. Setting aside the consideration of its certain effect, in bringing into cultivation vast tracts of country now deserted, and thereby augmenting importantly the landed revenue of the Honourable Company, the dues to be collected for the distribution of the water from it would make a most lucrative return." *

"Lieutenant Blaine accordingly commenced the restoration of the West Jumna Canal, and saw the waters return to Delhi after a suspension of half a century, but his work did not go much farther. In 1823, Colonel John Colvin was appointed General Superintendent of Irrigation at Delhi, and the work proceeded rapidly towards completion. During the great famine of 1837 the gross value of the crops saved by the water of this canal was estimated at a million and a half sterling. The main line of the canal was 445 miles in length. *The East Jumna Canal* then attracted attention. That work, too, had been constructed by Mohammedan Emperors."

"In 1837, Captain Cautley, an Artillery Officer quartered at Dehra, a town which, from some time in

* Minute dated September 21, 1815 p. 166.

the seventeenth century had been supplied with drinking water by means of a small canal from the Rispana river, was deputed to make an estimate of the cost of a small canal from the Tons, a tributary of the Jumna. *Here, and subsequently on the Eastern Jumna Canal, Captain Cautley gained the knowledge and experience which he afterwards utilized to such wonderful effect in the construction of the Great Ganges Canal, a work which in magnitude and boldness of design had not been surpassed by any irrigation work in India or elsewhere. By the construction of this work was laid the foundation of the numerous large canal systems which now carry their waters so widely over the plains of North-Western India.*"

" The history of the Ganges Canal belongs to the last years of the Company's rule. The great work was commenced by Lord Auckland, but was unfortunately suspended by his successor Lord Ellenborough. Lord Hardinge, however recognised the merits of the magnificent scheme, and gave it his sanction and approval. " The Ganges Canal, in the words of the Lieutenant-Governor of the North-Western Provinces, ' presents a system of irrigation unequalled in vastness throughout the world; while the dimensions of the main channel, and the stupendous works of masonry which occur in its course, more particularly in the section between Roorkee and Hardwar, render the work eminently one of national distinction and honour.' "

Sir William Muir, who had been Lieutenant-Governor of Northern India, and then Finance Minister of India said : " I do not think I have expressed with sufficient emphasis the great value which I attach to the advantages derivable from the large canals, such as the Ganges Canal and the Jumna Canal. The extent of prosperity which has been conferred upon the districts through which they pass is very great in a general point of view ; and the degree in which the people are preserved from the distress and privations of famine beyond all calculation a benefit to the country. The advantage also which I spoke of before in saving land revenues, which would otherwise be in arrear and loss is also great. And further, there is an advantage in the country being protected and being preserved from deterioration, which is incidental to land which is affected by famine, that is to say, being protected from the secondary effects of famine which are liable to continue for considerable periods after the famine itself has passed away. Altogether the general improvement and advancement of the Doab, which is due specially to these canals, is a matter which, apart from their immediate financial returns, cannot be overlooked, and must be borne in mind in determining the general advantages derivable from canal irrigation." †

" In 1386, Sir Arthur Cotton constructed what is known as the 'Upper Anicut', across the Coleroon river, so as to maintain the level required for the fu

utilization of the ancient dam or 'Grand Anicut' across the Cauvery, which he also strengthened and restored. To this work carried out at a cost of about 15 lakhs, the district of Tanjore, which pays annually to the State a revenue of 56 $\frac{3}{4}$ lakhs, owes its present agricultural prosperity. Subsequently Sir Arthur Cotton designed the works which, constructed and improved at a cost of about three crores irrigate more than two million acres in the Godavari and Kistna deltas. It would be difficult to find in any country three works of similar magnitude or cost which have conferred the same degree of benefit upon the people and the State. The important permanent canal which the East India Company undertook in the Punjab was the *Baree Doab Canal*, about 550 miles in length. To John Lawrence and to Lord Dalhousie, India is indebted for this magnificent work. John Lawrence continuously pressed on the Indian Government the expediency of constructing roads and canals, promising that such expenditure would soon return itself tenfold in increased revenue. "If we wish to feed the thousands of human beings," wrote the Lahore Board, "whom the change of rule must necessarily throw out of employment, we cannot more readily do so than by cutting new canals, and improving the beds of the old ones*." "Everywhere," responded Lord Dalhousie, "I found lands of vast extent, fertile properties now lying comparatively waste,

*Lahore Board to the Supreme Government, Letter, dated November 29th, 1850.

but wanting only water to convert them into plains of the richest cultivation.†”

7. The above extracts clearly show that the irrigation works were not undertaken by the British Government so much for the sake of making them an additional source of revenue as for the sake of improving agriculture and general prosperity of the country.

8. In further support of my remarks I will refer to the instructions given by the Government of India to the Irrigation Commission of 1901 from which it is clear that the Government aimed at the extension of irrigation works not for the sake of direct profit from the sale of water on commercial principles, but for increasing the produce of land and protecting the country from the ravage of famines:—

“In considering proposals for new irrigation works the Commission will understand that great importance may often be attached to the extent and reliability of the protection that will be afforded to the merits of the schemes regarded as financial investments. The irrigation works hitherto constructed by the State in India have on the whole, proved directly remunerative; but it is recognised that the programme of works of this kind may be approaching completion, and that the great storage works required for a considerable extension of irrigation in the tracts which are most exposed to famine must necessarily be mo-

costly per acre protected, and, therefore, less remunerative, than the completed works which draw unfailing and perennial supplies from the great rivers in Northern and Southern India. As regards new works therefore, the *main question is not whether they will be likely to prove directly remunerative, but whether the net financial burden which they may impose on the state in form of charge for interest and maintenance will be too high a price to pay for the protection against famine which they may be relied on to afford.* It is from this point of view that the Commission should consider proposals for the extension of irrigation in districts in which cultivation is very insecure and precarious."

9. The above opinion of the Governor-General in Council was endorsed by the Secretary of State in his despatch, dated the 17th November, 1905. His Excellency writes: - "I also agree to the principle that, in considering whether a work should be completed or extended, even though it has failed to satisfy the conditions of a productive work, the criterion should be, not whether the work will yield a return upon its total cost, but whether the anticipated increase of revenue will produce a return on the new capital expenditure at the rate prescribed for productive works."

10. I have already mentioned that the construction of irrigation works is considered by the Indians to be the most pious duty and one of the best forms of

charity and they do not therefore charge any direct rates for water. The following table will show that the area irrigated by private works in British India far exceeds that irrigated by the State works; the former being 58 per cent and the latter 42 per cent:—

Class of works.				Area irrigated by each class of works.	Percentage of total irrigated area.
<i>State works.</i>				Acres.	
Canals	...	...	...	15,844,000	35.5
Tanks	...	...	...	2,944,000	6.7
		Total	...	18,588,000	42.2
<i>Private works.</i>					
Canals	...	...	...	12,35,000	2.8
Tanks	...	...	...	51,94,000	11.8
Wells	...	...	...	12,895,000	29.2
Other sources	...	...	...	61,86,000	14.0
		Total	...	25,510,000	57.8
		Grand Total	...	44,098,000	100.0

11. On referring to the Reports of the Famine Commission of 1880 and of 1901 (the latter being presided over by Sir Antony MacDonnell, the well known Lieutenant-Governor of the United Provinces of Agra and Oudh) it is found that they suggested in a very strong language the stimulation of private irrigation works even at the sacrifice of Government Revenue and by incurring public expenditure. Thus runs the latter Report:—

“315. We have carefully considered this question in the light of the grievous misfortunes which have

within recent years afflicted Upper India. Our enquiries demonstrate that there is a field for the construction of wells, tanks and other artificial means of irrigation, to which it would be difficult to assign a limit. It has also been forcibly brought home to us—as it was to the commission of 1880—that the present terms on which these loans are offered do not attract the owners of land to make more than a partial use of the opportunities held out to them. We are convinced that nothing short of a permanent exemption will stimulate the owners of land to that full activity, which is on every ground so greatly to be desired.

“316. We recommend, then, that in all future settlements any increase of assets due to the construction, otherwise than at the expense of the state, of wells, tanks or other artificial sources of irrigation should be permanently exempted from assessment to revenue. We are aware of the objection that it is financially unwise to exempt permanently the increase of assets due to irrigation in the poorer soils, because it is in the poorer soils that irrigation will lead to the largest increase of assets. But this objection is met by the consideration, that, from the protective point of view, it is just the poorest soils which are most in need of irrigation.

“317. With a view to the encouragement of well sinking, we would also recommend that an expert staff be appointed, with power to disburse loans on the spot.

Under the advice of this staff trial wells might be made at low rates the cost being recoverable from the landholder in the area good water is reached. In all cases where the cost exceeds that partial or complete remissions should be granted if the well is a failure from causes beyond the borrower's control. The cost of this expert staff and of these remissions should be charged to a fund constituted from the difference between the rates of interest at which the Government respectively borrows and lends."

12. Another proof of the fact that irrigation works are not built for direct revenue is found in the fact that the irrigation works in Bombay (Deccan) and (Gujrat) Bengal, Rajputana and Biluchistan do not earn enough revenue to cover the interest charged on capital outlay, but they are constructed and kept up for other indirect advantages. Not one of the major and minor works in Bombay and Bengal has proved remunerative and there is no prospect that any of them will ever become so. Here is a statement showing the financial results attained on them during the year 1900-01 which may be regarded as fairly normal in the aggregate. It shows that in the Bombay Presidency in nine major works the percentage of net revenue on capital outlay was only 1.2, in 27 minor works 1.6; in Bengal in 3 major works it was 0.8 and in 1 minor work 0.2.

Province.		Number of works.	Capital outlay to end of 1900-01. In Lakhs of Rupees.	Percentage of total revenue on total capital outlay.	Total area irrigated in 1900-01 In Acres.	Average value of crops per acre.	Cost assessed per acre.
						Rs.	Rs.
Bombay ...	Major works	9	187.6	1.2	84,172	77.2	4.8
	Minor works	27	74.47	-1.6	39,922		
Pengal ...	Major works	3	616.8	0.8	716,271	34.4	1.9
	Minor works	1	7.66	-0.2			

13. The reason why the water rate must be moderate and the price of water should not be charged at the utmost limit is that the water is used by the poor tenants whose condition is well known to the Government and with whom sympathy is always shown by it. Records are full of evidence on this subject, and I need not quote more than one or two declarations made by the highest authorities. In 1875 Lord Salisbury, the then Secretary of State for India, thus remarked in a Minute:—

“So far as it is possible to change the Indian Fiscal System, it is desirable that the cultivator should pay a smaller proportion of the whole national charge. It is not in itself a thrifty policy to draw the mass of revenue from the rural districts, where capital is scarce, sparing the towns, where it is often redundant and runs to waste in luxury. The injury is

exaggerated in the case of India, where so much of the revenue is exported without a direct equivalent. As India must be bled, the lancet should be directed to the parts where the blood is congested, or at least sufficient, not to those which are already feeble from the want of it."

The same view was expressed by Lord Curzon, the late Governor-General, in one of his recent eloquent speeches:—

"My view has always been that, as the revenue of the country comes, in the main, from the people of the country, it is to the people that the disposal of the surplus, if there be one, should return. And who are the people of whom I speak? They are the patient humble millions, toiling at the well and at the plough, knowing little of budgets, but very painfully aware of the narrow margin between sufficiency and indigence. It is to them that my heart goes out. They are the real backbone of the country's prosperity. They give us nearly 20 millions sterling per annum in land revenue alone, or about one-fourth of our entire receipts."

14. Notwithstanding such noble declarations no relief was given to the poor tenants although there was a suitable opportunity of doing so on account of large surpluses in the Government Treasury.

The benefits which the country has derived from the canal irrigation are so numerous and so conspicuous that there is scarcely any need of dwelling upon

them at length. As a typical instance, the case of the Punjab may be mentioned. In 1887-8 the major canal works irrigated 1,422,775 acres, this being the year when the Chenab canal was opened. At the end of the year 1904-05 the area irrigated was 5,689,132 acres. It means that during the 18 years (from 1887-8 to 1904-5) the irrigated area increased by 4,266,357 or 299 per cent. It may easily be imagined what may be the extent of prosperity caused by irrigation in the districts through which the canals have passed and the degree to which the people have been preserved from the distress and privations of famine and how much land revenue has been enhanced on account of irrigation and how much certain its payment is made. Looking to these advantages it does not seem befitting to a sovereign like the British Government to charge a high rate of water on commercial principles. I am sorry to note, however, that the matters as they stand now tell a different tale and the tenants are feeling the severity of water rates very much. In the United Provinces of Agra and Oudh the net profit from canals is about 9 per cent on the capital outlay. In the Punjab the financial results of the "productive" irrigation schemes during the *triennial* (ending 1904-05) may be summarized by stating that on a capital of about 1088 lakhs of rupees the works constructed and worked by Government have paid 11.91 per cent on money borrowed at 3½ p. c. leaving a clear profit of 8.16 per cent. Notwithstanding such high profits

water rates are still going on rising in both the Provinces. Is it not too high a rate of interest and does it not amount to rack-renting ?

15. *Water rates in the United Provinces*:—The history of imposing water rates in the United Provinces of Agra and Oudh and their increase from time to time, will show how hopeless is the condition of the poor peasantry and how the poor sheep are not spared from being recklessly sheared either in years of plenty or in those of scarcity. Up to 1890 the scale of water rates was as follows :—

Class.	Nature of crops.	Lift per	Flow per	
		acre.	acre.	
		Rs. a. p.	Rs. a. p.	
I	Sugarcane and rice	3 5 4	5 0 0	per year.
II	Tobacco, opium, Vegetables, Singhara, gardens and orchards ...	2 0 0	3 0 0	per Fasl.
III	All rabi crops, indigo and cotton ...	1 8 0	2 4 0	do
IV	All Kharif Crops not otherwise specified	1 0 0	1 10 8	do

Under the Board of Revenue's Circular Order No. 84—IV (a) 28, dated the 23rd January, 1892, a higher scale of occupier's rate for land irrigated from the Ganges and Jumna canals, was levied in the Saharanpur and Muzaffarnagar districts, and collec-

ted from the Rabi of 1892. Subsequently the same was extended to other districts and collected from Kharif of 1892. The enhanced rates were as follows:--

Class.	Nature of crops.	• Lift.	Flow.		
			Rs. a. p.	Rs. a. p.	
I	Sugarcane, etc.	•	3 5 4	6 10 8	per year.
II	Tobacco, etc	•	2 0 0	4 0 0	per crop.
III	Rabi crops, etc	•	1 8 6	3 0 0	do
IV	Kharif crops, etc	•	1 0 0	2 0 0	do

16. The Zamindar Association of Muzaffarnagar submitted a memorial on the 5th September, 1896 protesting against this enhancement. One of the grounds of objection was:—

“That the rents of occupancy, as well as those of non-occupancy tenants are governed considerably by water rates, and the Government revenue has a close connection with them. In the Muzaffarnagar and Saharanpur districts the Government revenue was revised just before 1892 and enhanced for a term of 30 years, when the old scale of water rates was in force, therefore, the Government was not justified in enhancing the water rates in 1892 during the above term of settlement.”

The memorial was rejected by the Government on the 5th April, 1897, and the letter of the Chief Secretary to the Government runs thus:—

“It is suggested that the orders of 1892 under which occupier's rate on an enhanced scale is levied on lands irrigated by the Ganges and Jumna canals in the Saharanpur and Muzaffarnagar districts, and which scale has been subsequently extended to other canal irrigated districts, should be cancelled; and that the scale of rates previously in force should be reverted to. I am to say that the decision to enhance the occupier's rate was arrived at after prolonged correspondence between this Government and the Government of India and on a full consideration of facts, and to express regret that the question of reverting to the old rates cannot be re-opened.”

There is scarcely any need of making a comment on this order. It seems that the enhancement was made at the free will of the Local and Supreme Governments, without consulting or informing the poor taxpayers, and it is rather curious that the memorial of such a public body was rejected so summarily, without paying any regard to the weight of arguments raised by them and without informing them of the facts on the full consideration of which the enhancement was sanctioned.

17. These enhanced rates have been in force since 1892, and during this interval of 12 years many changes have taken place in the administration of canals; the length of the canals was extended, the supply of water in the upper portions of the canals curtailed,

the number of outlets reduced, the beds of distributaries lowered so that less water may go out by the outlets and the distributaries kept closed for longer periods than before. Thus the quantity of water supplied to the cultivators was much reduced, while the price of water was not reduced at all, but on the contrary enhanced.

18. In the meeting of the Legislative Council of the United Provinces of Agra and Oudh held on the 11th April 1905, the Hon'ble Mr. Marsh, Chief Engineer of canals, announced the following increase and decrease in the scale of water rates. Up to that moment the non-official members of the Council had no knowledge or idea of such important changes being made in the scale of water rates and therefore, could not criticise them.

“As regards the coming kharif season, we have just received the opportune intimation from the Government of India that your Honor's application to reduce the occupier's rates on the major canals has been approved and will come into effect in this fasl. Cotton and indigo have been reduced to the lowest class *i.e.*, flow rates drop from Rs. 3 per acre to Rs. 2; lift rates from Rs. 1-8 to Rs. 1. It is too late, perhaps, to help the dying indigo industry, but it is hoped that the concession for cotton will stimulate the people to sow their crops in May instead of waiting for the monsoon. Experts have pointed out that the plant of the latter period is more delicate and never yields as good an out-turn.

“ On the Lower Ganges the rice rates have been lowered more than $5\frac{1}{2}$ p. c. ; and this may lead to the cultivators of Mainpuri, Etawah, Cawnpur, Fatehpur and Allahabad sowing a better class of crop and irrigating it with the rich monsoon water of the Ganges.

“ Your Honour has also secured solid concessions for the land commanded by the Ghatampur and Fatehpur extensions on the ground that the people were unskilled in the use of watering lands, and should not pay higher rates than those on the older works where irrigation has almost reached a scientific condition. For this reason the following reductions have been made:—

Sugarcane from Rs. 10 to Rs. 5 per acre. Tobacco, poppy, vegetables, orchards, gardens and waternuts from Rs. 7 to Rs. 4. The lift rates on the same works have been similarly reduced. As regards the rabi fasl commencing with the season of 1905, sanction has also been obtained for the reduction of rates for the coarser crops. In other words, gram, linseed and peas have been reduced from Rs. 3 flow to Rs. 2, and from Rs. 1-8 lift to Rs. 1. I think the concession will be appreciated by the cultivators, as these crops only take one watering. *It must also be stated that, in order to recoup the revenue, dropped by these changes, sanction has been received to raise the rates for all other rabi crops from Rs. 3 to Rs. 4 flow, and from Rs. 1-8 to Rs. 2 lift.*

The enhancement cannot press heavily on the cultivator, as these rates have been cheerfully paid on the

Fatehpur extension for the last five years and have even led to the cultivation of land that has hitherto lain fallow."

This speech of the Hon'ble Member made every one believe that the Government did not intend to enhance the scale of water rates on wheat for additional taxation, but that it was led to enhance some rates to *recoup the loss* caused by the reduction thereof.

19. Assuming that there must have been some stronger reasons than those mentioned above for increasing taxation upon the poor tenants at such a time when there was so heavy a surplus in the Government Treasury and when some relief was given to other tax payers I asked the Government to supply me with information as to the grounds of enhancement of water rates but the Government refused to do so as will appear from the following letter of the Government, dated Naini Tal, 2nd June, 1905 :—

"In reply to your letter of the 9th May 1905, to the Hon'ble Mr. J. M. Holms, Secretary to Government, United Provinces, asking to be furnished with a copy of papers and correspondence between the Local and Supreme Governments regarding the enhancement of Irrigation rates, I am directed to say that it would be contrary to existing rules to comply with your request."

20. Not being satisfied with this reply I asked the following questions in the meeting of the Legislative Council held on the 8th November, 1905.

“ Will the Government be pleased to mention the grounds why a non-official member of the Legislative Council cannot be furnished with a copy of the correspondence between this Government and the Government of India and other papers connected with such public matters as the question of enhancement of the water rate on wheat or be allowed to have a look at them ” ?

The Hon'ble Mr. Winter replied:—

“ In the instance to which the Hon'ble Member refers it was not deemed advisable to depart from the rule which ordinarily obtains that copies of official papers are not to be given.”

21. It would appear from the above, that there were no other grounds for enhancement of water rates than those mentioned by the Hon'ble Mr. Marsh, otherwise there could be no objection in stating them. The first ground mentioned by him was to recoup the loss caused by a reduction of rates on some crops and, the second, that the enhanced rates were cheerfully paid on the Fatehpur Extension, for the last five years.

I think, however, that neither of these arguments justifies the enhancement on the following grounds:—

(a) As to the first ground, if some relief was given to the tenants by reducing taxation on one branch of the canal, it can not justify the proportionate increase of rates on other canals. Is it right “ to rob Peter to pay Paul ” ?

- (b) Similarly, if it was found expedient to reduce rates on certain crops, it cannot justify their increase on others to recoup the loss, because every crop should be treated on its own merits.
- (c) The plea of recouping the loss falls to the ground when facts and figures are examined. Working out the increase and decrease from the figures of the irrigated area in 1903-04, the last available now, according to the enhanced rates, it will be found that the amount of increase, far exceeds that of decrease, in that the decrease on all crops comes to about Rs. 3,92,665, while that of increase on wheat comes to Rs. 8,36,687 as will be seen from the statement appended herewith. Thus if this calculation is correct, the enhancement would not only cover the loss caused by reduction of rates, but will raise taxation to the extent of Rs. 4,44,022, for which no explanation was given to the Council. It is also worth noting, that when a question was put in the Legislative Council held on 8th November, 1905 as to the grounds on which the water-rates on wheat were enhanced, the Hon'ble Mr. Sutherland did not advance this ground of recouping the loss, which shows that he did not

find it cogent enough to put forward in support of the enhancement.

- (d) After making the above calculations I have been able to ascertain the following figures for 1905 from the Government on the 11th April, 1906 :—

“ It is estimated that for the past year there will be a decrease of Rs. 8,97,000 due to reduction of water rates and an increase of Rs. 1,220,000 from enhanced water rates ; or a net increase of Rs. 3,23,000 ”
In view of such facts how can it be said that the rate on wheat was enhanced to *recoup the loss* caused by reduction of rates on other crops.

- (e) As to the second ground, *viz.*, that on newly opened branches of canals a higher rate than that paid on the old canals was cheerfully paid by the cultivators, I think that it also does not justify enhancement, because the enhanced rate of Rs. 4 per acre was paid by them as a matter of necessity. If the rate would have been the same as that on the old canals, *viz.*, Rs. 3 per acre apparently the poor cultivators would have paid it more cheerfully than paying Rs 4.

- (f) Revenue Officers are in the habit of referring to the prompt collection of Revenue as an evidence of moderation of assessment and the Canal Officers follow

them. They, however, overlook the fact, that it is all due to the powerful machinery of Government administration employed in collecting Government dues. Moderation of assessment of Land Revenue or of water rates cannot, therefore, be fairly inferred from the collection.

- (g) It must also be borne in mind that the water rate is not collected from the tenants who use the water but from the landlords who are responsible for the payment and therefore the payment does not indicate with what difficulties the tenants pay it.

22. The reader will be surprised to hear that the evil did not end here. Another order was issued on the 3rd August, 1905, declaring that the water rate on sugarcane had been enhanced from Rs. 6-10-8 to Rs. 10 per acre. It will give an increase of about Rs. 7,60,000 when the enhanced rates will be extended to other districts.

23. No ground for this enhancement has been assigned. The two grounds stated in the case of wheat do not apparently apply to the case of sugarcane, because there was neither any loss to recoup, nor was the rate of Rs. 10 per acre cheerfully paid on any canal; on the contrary it was reduced from Rs. 10 to Rs. 5 on the Ghatampur and Fatehpur extensions on account of its being severe. Then no reason

has been shown why the rate for sugarcane has been enhanced for three districts only, *viz.*, Muzaffarnagar, Saharanpur and Meerut and not for other districts enjoying the same benefits from canal irrigation. This has probably been done in order to extend the same enhanced rates to other districts next year, on the plea that they were cheerfully paid in three districts as is done now regarding the wheat crop.

24. Having shown above, that the alleged grounds did not justify enhancement of rates, I will mention the reasons that stand against this enhancement amounting to about twelve lacks of rupees a year.

25. The cultivators of dry lands at a long distance from the head of a canal may willingly pay a higher rate than that paid by their brethren on the old canal nearer to the head, because the longer is the distance of water from the head of a canal the more expensive the water becomes, and hence it would be reasonable to levy enhanced rates; and this was the only reason why the enhanced rates were charged on new extensions. But taking this as a precedent, and to compel the tenants on old canals nearer to the head to pay the same enhanced rates would entail great hardship upon them.

26. There was plenty of well irrigation in the Meerut Division at the time when the canal was opened, but subsequently the wells were abandoned as the water rates then levied were moderate. It would be

unfair to enhance those rates now when wells have gone out of repair, and the poor cultivators, with the limited means at their disposal to repair these wells, have no other alternative but to use canal water at whatever price they can get it.

27. It is not equitable to enhance the scale of water rates within the term of settlement, because the settlement officer bases his assessment of Government Revenue on the rent roll which is considered to be fair and is corrected by himself. It cannot be denied that when rents are fixed either by the court or by mutual consent the amount of water rate paid by the cultivator is taken into account. Therefore, it follows that, if the water rates are enhanced after the settlement, they must affect the rental and be prejudicial to the interest of either the tenant or landlord. In other words the Government share of profit from the land is enhanced within the term of settlement at the cost of either the landlord or the tenant, and thus the sanctity of the contract is violated.

28. During the short period of 12 years the water rate on wheat has been enhanced by 77 per cent. and that on sugarcane by 100 per cent. when compared with the rates in force till 1891, and when compared with the rates in force till the last year the rate on wheat has been enhanced by 33 per cent. and that on sugarcane by 50 per cent.

Will not such a sudden and enormous enhancement of rates press heavily upon the poor cultivators and is it not against the policy of the Government which shows so much sympathy with the tenants when dealing with them as against the landlords. For instance, rents cannot be enhanced in Oudh more than one anna in the rupee and even that after an interval of 7 years.

29. The cultivation of indigo has already died out owing to the action of foreign countries and cultivation of sugar is also going to meet the same fate. The bounty sugar has much effected its price and the consequence is that its produce is going down year by year. The area under cane in 1904 has declined by 62000 acres when compared with the previous year, while it is less by 167,275 or 13 per cent. when compared with 1898-99. Moreover the outturn of sugar was 85 per cent. of the normal. The following is the remark of the Board of Revenue on this important subject:—

“The area under sugarcane, which declined 62000 acres, is the smallest on record since 1889-90. In the particular year under report some of the decrease must be attributed to the character of the season: and it is remarked, in Bijnor for example, that in the long continued hot weather much of the cane dried up, and the land had to be ploughed and sown with another crop. For the continuous decline, how-

over, it is necessary to seek some other cause, and the Director finds it in the persistent low prices of sugar and the favourable results of other crops. That a very considerable change is in progress is plain from the figures published of "area and yield" which show that since 1898-99 the area under cane has declined from 12,27,881 to 10,70,606 acres, viz. decrease of 13 per cent."

In my opinion, this decline is chiefly due to the importation of bounty sugar from foreign countries. It is more white and crystalized than country sugar and is sold at a cheaper rate and therefore the country sugar cannot compete with it and its price has gone down; the result being that many of the sugar refineries had to be closed and the tenants could not get ready purchasers for their uncleaned sugar (*rab*). There is no doubt that the Government took some measures to restrict the importation of sugar, but they have not had any appreciable result, because the measures were not so effective as they ought to be. The importation of bounty sugar into this country could be checked by adopting some such stringent measures as those adopted by the Government with so much success in the Eighteenth Century for preventing the importation of Indian cloth into England, the result of which was that instead of importing cloth, Lancashire and Manchester now export a large quantity to India.

At this time when the importation of foreign sugar is doing so much harm to the industry of the country the

Government should have taken suitable measures to encourage and stimulate the cultivation of sugar as was done by other Governments in other countries like Germany, Australia, &c.; but it is to be regretted that instead of that, the water rates on sugarcane have been raised from Rs.6-10-8 per acre to Rs. 10 in some parts of these provinces. If the use of intoxicating liquors and drugs can be checked by raising excise duties it is a logical sequence that the production of sugar must meet the same fate. However, it is impossible to suppose that Government could intend to check the production of sugar; then the question arises why the water rates are raised.

30. The increase of water rates at such a time would further discourage the industry of sugarcane and the consequence would be most ruinous to the peasantry. In the Administration Report of the Irrigation Department for the year ending 31st March, 1904 it is remarked. —“ The sugarcane area shows a decrease of nearly five thousand (5,000) acres. This is a very important point and shows that the industry requires encouragement, *viz.* decrease of rates on some canals and certainly no increase on others for some time to come.” I fail to understand how the Government could see its way to increase the rate in face of such a declaration by the Canal Department itself?

31. There is a general and widespread complaint among the cultivators on canal irrigated lands that

sufficient water is not supplied at the proper time with the result that the crops die out and yet they have to pay full water rates. This complaint is particularly general this year as a very large quantity of sugarcane died in the hot season, there being neither rains to protect them nor sufficient canal water available for irrigation. Even now sufficient water is not supplied for wheat crops. Under such circumstances is it equitable to enhance the rates?

32. The fact of insufficient supply of water is not unknown to the Government as will appear from the following remarks on the statement of Irrigation operations of Fasil Rabi 1905-06 up to 20th November 1905 as published in the Government Gazette of 8th December, 1905.

Northern Division.—Demand strong. Supply insufficient.

Anupshahr Division.—Intense demand everywhere and not enough water to meet it.

Anupshahr Branch in Narora Division.—Supply very poor.

Meerut Division.—Demand Intense. Supply generally sufficient during the first half of the month, thereafter insufficient.

Narora Division.—The Farukhabad Branch was opened for irrigation on the 2nd of the month. The supply was not equal to the demand.

Cawnpore Division.—Demand strong from the commencing of the season but supply insufficient.

Etawah Division.—Demand very strong, supply insufficient.

Bhoighnipur Division.—Very strong demand for palew.

Mat Branch.—An excessive demand throughout the month.

Lower Division Eastern Jumna Canal.—A dry month, with intense demand and generally short supply.

33. The following remarks on the same Fasil up to 31st December, 1905 show that the state was still more gloomy than before.

Northern Division.—Demand very strong throughout the months. Supply insufficient. About three-fourths of the *Kor* finished by end of December, the remainder needed water urgently.

Anupshahar Division.—Intense demand everywhere.

If continuous full supply could have been secured, the irrigated area would have been half as much again.

Anupshahar Branch in Nurora Division.—Demand full throughout the month.

Meerut Division.—Demand very strong. Supply inadequate. About 65 per cent. of the *kor* was

irrigated up to the end of the months. Crops backward, but healthy. Fodder scarce.

Bulandshahr Division.—Demand for *rabi* very strong. Supply insufficient. The greater part of the sowings were carried out after *palowas*.

Aligarh Division.—Full demand throughout the month. Supply insufficient.

Narora Division.—Demand full throughout the month. Supply insufficient.

Mainpuri Division.—The increase in the irrigated area is entirely due to the nature of the season, which is one of extreme drought. Demand excessive throughout the month. Supply not fully up to requirements towards the end of the month.

Cawnpore Division.—Prevalence of clear weather with a very strong demand for water all over the Division. The winter rains have failed. Prices ruling very high. Poppy may show a falling off, as probably the cultivators will not sow it in preference to other more paying crops.

Etawah Division.—Demand very strong. Supplies altogether inadequate.

Bhoghnipur Division.—Very strong demand throughout, supply exceedingly short. No rain.

Mat Branch Division.—Excessive demand throughout the month. Increase in every kind of crops, especially wheat, barley and other food grains.

Upper Division Eastern Jamna Canal.—Increase under all crops, as compared with last year, chiefly under wheat and “miscellaneous” owing to the dry nature of the season.

Lower Division Eastern Jumna Canal.—Full demand throughout the month and unusually short supply.

Lower Division Agra Canal.—Very strong demand throughout the month. Supply insufficient.

Rohilkhand and Bijnor Canals.—Demand began early, owing to short rainfall, and the area is good for the time of year. Owing to insufficient supply, previous rate of irrigation cannot be maintained.

Dun Canal.—The large increase under “miscellaneous” is due to a larger area having been sown by *palew*, on account of insufficient moisture.

General.—The sugarcane area has been included in this statement, as it is also irrigated during *rabi*.

Cawnpore Division.—Demand strong from the commencing of the season but supply insufficient.

Etawah Division.—Demand very strong. Supply insufficient.

Bhoghnipur Division.—Very strong demand for *palew*.

Mat Branch.—An excessive demand throughout the month.

Lower Division Eastern Jumna Canal.—A dry month, with intense demand and generally short supply.

34. The reason of all this complaint is that since few years the canals and distributaries have been extended immensely while the quantity of water supplied from the river is the same.

The total length of all channels opened up to the end of 1903-04 amounted to 13,395 miles. The following statement shows to what extent the channels were extended year after year during the last five years viz. at $\frac{5}{1}$ p. c. :—

1899-1900	...	...	...	279 miles
1900-1901	...	...	...	259 „
1901-1902	...	...	...	129 „
1902-1903	...	...	...	72 „
1903-1905	...	...	...	391 „

1130 miles.

35. I may be allowed to state that this repeated increase of water rates has given rise to wrong impressions in the minds of ignorant peasantry. They think that the Government increased water rate on sugarcane and wheat to discourage their cultivation and has reduced that on cotton to encourage it for the sake of European traders only. I am afraid the creation and existence of such notions in the public mind are not healthy and safe on political grounds.

It is noteworthy that the cultivation of sugarcane is on the decline not only in the United Provinces of Agra and Oudh but in the Punjab also, where it is gradually superseded by that of cotton as appears from the following extract. —

“The average occupier's rate per acre for the Kharif in both British and Patiala Territory shows tendency to decrease slightly owing to a reduction in cultivation of the more valuable crops. Cotton is gradually displacing sugarcane. Of the total area now cultivated annually 36 per cent is cotton and 30 per cent wheat.” The area of cotton rose from 7,41,022 acres in 1903-04 to 8,48,966 acres in 1904-05, increase of 1,07,944, viz. 14.3 per cent.

It is a fact that in the Punjab the produce of sugar is not at present enough to meet local demand and large quantities of it are imported from Muzaffarnagar and other districts of the United Provinces. The natural consequence of further decrease of sugarcane crop will be that the population of the Province will be deprived of one of the necessaries of life. The Government of Germany, France and other countries adopted effective measures to improve the produce of sugar in their countries and spared no money and trouble to further this noble object, but here the existing industry of sugar is going down and nothing seems being done to save it. There is no reason why our benign British Government should not heed for the welfare of her subjects just as the other Governments do.

36. It may also be noted here that when a field is irrigated and sown but the crop does not grow and dies out for want of water, before the field is measured for assessment of water rate, one third of the actual rate is charged. It is seriously objectionable looking to the relation between the Government and the tenants. In such cases the latter deserve to be treated with that generosity which leads the Government and the landlords to remit revenue and rents at times of need. Last year in Muzaffarnagar district a large area was sown under sugarcane which died on account of insufficient supply of canal water. The tenants had to pay one third of the full water rate. It may be imagined what loss the tenants had to bear when one of their best crops failed but still they had to pay one third water rate.

Owner's rate on Maufi lands.

37. In addition to the canal water rate charged on the tenants who actually use the water, one third of it is imposed on the landlords on the plea that on account of canal irrigation rents were enhanced and the Government was entitled to a share of that increase as land revenue. It is called the owner's rate. As land revenue could not be enhanced during the term of a settlement, it was enhanced by this name. The rules provided that owner's rate would be imposed on those lands only that were dry and assessed as such at the last settlement. Again the owner's rate was amalgamated

with land revenue at the time of revision of settlement. Therefore the owner's rate is nothing else but the land revenue.

38. This owner's rate is levied on muafi lands also that were granted to muafidars by the old Governments in recognition of their loyal and good services. They were left to their fate whether their income would increase or decrease. Accordingly in the sanads so generously renewed by the British Government the quantity of land was mentioned and the above assurance was clearly given.

The muafidars feel it very hard to pay now this rate. They think that land revenue is imposed on their estates and thus they have lost their old existing muafi rights to this extent. Even on those estates where muafidars had sunk Pukka wells at their own expense and received rents at irrigated rates, the owner's rate is imposed on the plea that they are irrigated by canal. However it is not justifiable to do so because canal irrigation has caused no enhancement of rent. If the tenants use canal water it is not due to any fault of the muafidars and they should not be subjected to the payment of the owner's rate. The muafidars feel it very hard and shall be much relieved by its remission. It may also be noted that the amount collected on account of the owner's rate on muafi lands is very insignificant for the Government to remit.