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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1873	Press
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Dated	25-7	C876
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Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
25th July 1876. No. 1,873.*

Read the following papers :—

No. 400. From Captain L. CONWAY-GORDON, R.E., Examiner of Public Works Accounts, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Fort Saint George, 5th July 1876, No. 95-W.

I HAVE the honor to request instructions as to the principle which is to regulate the debit of charges for works connected with the rivers (?) and channels in the Cauvery Delta.

2. The whole of the rivers or rather deltaic branches of the Cauvery river below the dam at Srirangam are, I believe, virtually either irrigating channels (natural) or drainage channels (natural) connected therewith; and it seems only fair that the cost of regulating and improving these channels should be charged to the account of the Cauvery Delta System.

3. I notice, however, that in the Budget of 1876-77 a large provision is made under "Ordinary Agricultural" on account of these rivers or channels.

4. If any such distinction is to be made, it is, I think, necessary that the principle upon which the several works are to be classed should be clearly defined for the information of all concerned.

No. 108-W.

No. 400-A. *Note by the Chief Engineer for Irrigation.*

THE circumstances of the Cauvery Delta differ materially from those of the Godavery and Kistna Deltas. In the Godavery and Kistna the rivers have been dammed at the head of the deltas, and all the water required for irrigation has been taken off by main canals, and then divided by canals and sub-divided again by distributaries. In the Cauvery Delta the water-supply, when the main Cauvery is low, is diverted by the upper anicut at the head of the Coleroon into the Cauvery Proper, and this river is naturally divided into a number of minor rivers, and the water for irrigation is taken off from these at intervals throughout their courses by thousands of channels of various sizes. The thousands of channels in the Cauvery Delta take the place of the canals and distributaries of the northern deltas, and the cost of their maintenance is at present charged to Revenue.

On the other hand, the cost of river-conservancy in the Cauvery Delta, like that of the rivers in the northern deltas, is at present charged to Ordinary Agricultural, and is, therefore, not a debit against the revenue derived from irrigation.

2. The Examiner of Public Works Accounts raises the question whether this arrangement is proper. He supposes the Cauvery and its branches below the upper anicut to be either irrigating channels (natural) or drainage channels (natural) connected therewith, and he adds "it seems only fair that the cost of regulating and improving these channels should be charged to the account of the Cauvery Delta System." The Examiner is mistaken in his hypothesis. The Cauvery and its branches are the natural outlet to the sea of that part of the drainage of the whole basin of the Cauvery which does not pass down the

Coleroon. The volume of water taken off for irrigation is, of course, small compared with the total discharge, and it is on account of the great volume of flood-water which has to be disposed of that river-conservancy and the intimately connected flood-bank construction and conservancy have to be undertaken. Were only irrigation water admitted to the Cauvery as to the main canals of the northern deltas, there would be little or no need of conservancy; as it is, all the operations, which may be undertaken in this direction, have to be specially arranged with reference to the flood-discharges which have to be conducted with as little danger as may be through the delta to the sea.

3. All regulation of the rivers required in the interests of the irrigation has been deemed chargeable, and rightly so, to the Capital or Revenue Account of the delta according to circumstances; and, from time to time, various works of regulation,—the most noticeable being the Grand Anicut, the regulators at the heads of the Vennaur, and those at the heads of the principal branches of the Cauvery and the Vennaur, &c., being considered mainly desirable for, or beneficial to, the irrigation of the delta, though of considerable value in the distribution of flood-waters according to the natural capacity of the rivers,—have been charged* to Capital, and the cost of their management and maintenance to Revenue.

* Or will be as regards the older works in making up the accounts.

4. It might be said that the upper anicut has diverted more flood-water into the Cauvery, and has enhanced the cost of river-conservancy; and that as the anicut was built entirely for the benefit of irrigation, this enhanced cost is properly chargeable to the account of the latter. This is quite true, but only to a very small extent;

† Called Agunda Cauvery.

for when the main Cauvery† above the upper anicut rises to a level at which the volume of water is at all excessive, the natural distribution of water is but little interfered with, and, as a set off against the increased volume thrown into the Cauvery, the irrigation has borne, or will bear, the cost of the several surplus works from the 150 yards calingulah near the upper anicut, and that of the regulating works at the heads of the rivers, whereby river-conservancy has been much facilitated and its expense lessened.

5. It appears to be quite clear that it would be decidedly unfair to charge to the account of the Cauvery Delta System more than a part, and probably but a small part, of the cost of river-conservancy and of flood-banks. The whole property in the delta,—dry and wet cultivation, villages, roads, railway, &c., and the value of that property is, as the Government are aware, enormous,—is directly interested in the safe conduct of flood-waters to the sea. 1859 was the last year in which a great fresh occurred and occasioned widespread damage. Two or three years later a more systematic treatment of the rivers and embankments was started, and though a fresh of the height of that of 1859 has not since occurred, there have been several of not much lower level, and a marked improvement in the state of the rivers, due to the conservancy work which has been carried out and to the effect of the regulators, has been made manifest. In another ten or twelve years, if the work be steadily gone on with, probably a maximum fresh will do but little harm. Tanjore generally, and the irrigation among other interests no doubt, has benefited; but it is believed that it is,

not worthwhile to enter upon the elaborate inquiry which would be necessary to determine what share of the outlay which has been incurred should be charged to the account of the Delta System. Were this investigation undertaken in order to raise a debit against the delta works, it would no doubt be considered requisite to ascertain the influence of those works since the upper anicut was built some forty years ago in raising the value of land in the delta from a nominal to its present high figure, and in adding to the prosperity of the district, whereby other sources of revenue have been materially augmented. No exhaustively accurate account is possible, and it may perhaps be considered advisable not to go into either indirect expenditure or indirect results.

6. According to the entries in the preliminary issue of the Irrigation Budget, the proposed expenditure in 1876-77 on—

	RS.
Revenue Account is	1,01,800
Ordinary Agricultural Account is	69,200

OOTACAMUND, (Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
10th July 1876. Chief Engineer for Irrigation.

No. 401. ORDER THEREON, 25th July 1876, No. 1,873.

IRRIGATION, No. 41.

THE views of the Chief Engineer for Irrigation as set forth in the foregoing Note are accepted, and will govern the debit of expenditure on river-conservancy in Tanjore; all outlay for keeping the rivers efficient for the conveyance of flood-water being charged to Ordinary Agricultural, while work undertaken specially in the interests of the delta irrigation will be debited to the delta system.

(True Extract.)

Colonel,
Offg. Under Secy. to Govt., P.W.D.

To the Examiner of Public Works Accounts.
" District Engineers.
" the Chief Engineer for Irrigation.

Exd. F. R. Bantleman.
Spare Copies

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Circulated for orders.

Abraham Lincoln St. Colonel
M. A. Adams Joint Secretary to Govt.
P.W.

11/14/7

No. 956.

From

THE CONTROLLER,
PUBLIC WORKS ACCOUNTS,

To

The Secretary to Government,
Public Works Department,
FORT SAINT GEORGE, 5th July 1876.

Sir,

I have the honor to request in-
structions as to the principle which is to
regulate the debit of charges for works
connected with the rivers (?) and channels
in the Kaveri Delta. —

2 The whole of the rivers or rather
deltoid branches of the Kaveri river, below
the dam at Spirangam, are, I believe, vir-
tually either irrigating channels (natural)
or drainage channels (natural) connected
therewith, and it seems only fair that the
cost of regulating and improving these
channels should be charged to the account
of the Kaveri Delta System.

3 I notice, however, that in the
Budget of 1876-77 a large provision is
made under 'Ordinary Agricultural'

on account of these rivers or channels.

4 If any such distinction is to be made it is, I think, necessary, that the principle upon which the several works are to be classed should be clearly defined for the information of all concerned.

I have the honor to be

Sir,

Your obedient servant

Edmund Fortson.

Essex Street, St. James's

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3/7/76

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W. 1876 Sept
From No: 4802
The Examiner

P.W. Accounts

To

The Secretary to Government
P.W. Department

N: 956.

dated 5th
Recd 6 } July 1876.

P.W. 5362/76

Requests instructions
as to the principal which is to
regulate the debit of charges
for certain works in the Kaneri
delta

N: 400

De Cu - 21-7-76 P.W. 28776
R.L. 18-7-76
Cor. 13-7-76.

Despatch to Govt 6-7-76

Port St. George, 10th July 1876.

N: 108-W.

Note by the Chief Engineer for Irrigation.

The circumstances of the
Kaneri delta differ materially from
those of the Godavery and Krishna
Deltas. In the Godavery and Krishna
the rivers have been dammed at the
head of the Deltas, and all the water
required for irrigation has been
taken off by main canals and then
divided by canals and sub-divided
again by distributaries. In the
Kaneri delta the water supply, when
the main Kaneri is low, is diverted
by the upper ament at the head of the
Goleroon into the Kaneri proper,
and this river is naturally divided
into a number of minor rivers
and the water for irrigation is
taken off from these at intervals
throughout their courses by

Thousands of channels of various sizes. The thousands of channels in the Canvey Delta take the place of the canals and distributaries of the Northern Deltas, and the cost of their maintenance is at present charged to Revenue. On the other hand the cost of river conservancy in the Canvey Delta, like that of the rivers in the Northern Deltas, is at present charged to Ordinary Agricultural, and is therefore not a debit against the revenue derived from irrigation. 2. The Examiner of P.W. Accounts raises the question whether this arrangement is proper. He supposes the Canvey and its branches below the upper aicut to be either irrigating channels (natural) or drainage channels (natural) connected therewith, and he adds "it seems only fair that the cost of regulating and improving these channels

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should be charged to the account of the 'Canvey Delta system'. The Examiner is mistaken in his hypothesis. The Canvey and its branches are the natural outlet to the sea of that part of the drainage of the whole basin of the Canvey which does not pass down the Coleroon. The volume of water taken off for irrigation is of course small compared with the total discharge, and it is on account of the great volume of flood water which has to be disposed of that river conservancy and the continually continued flood bank construction and conservancy have to be undertaken. Were only irrigation water admitted to the Canvey as to the main canals of the Northern Deltas there would be little or no need of conservancy, as it is all the operation which may be undertaken in this direction have to be specially arranged with reference to the flood

discharges which have to be con-
-ducted with as little danger as may
be through the Delta to the sea.

3. All regulation of the rivers
required in the interests of the
irrigation has been deemed charge-
-able, and rightly so, to the Capital
or Revenue account of the Delta
according to circumstances, and
from time to time various works
of regulation, the most noticeable
being the Grand amicut, the regulators
at the heads of the Vennair,
and those at the heads of the
principal branches of the
Canvey and the Vennair &c.
being considered mainly desirable
for or beneficial to the irrigation
of the Delta, though of considerable
value in the distribution of flood
waters according to the natural
capacity of the rivers, have been charged to
Capital and the cost of their manage-
-ment and maintenance to Revenue.

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regards
works,
up the

called Agunda
Canvey.

4. It might be said that the upper
amicut has diverted more flood
water into the Canvey and has
enhanced the cost of river con-
-servancy, and that as the amicut
was built entirely for the benefit
of irrigation this enhanced cost
is properly chargeable to the
account of the latter. This is quite
true, but only to a very small
extent for when the main Canvey
above the upper amicut rises to
a level at which the volume
of water is at all excessive, the
natural distribution of water
is but little interfered with,
and as a set off against the
increased volume thrown into
the Canvey the irrigation has
borne or will bear, the cost of the
several surplus works from the
100 yards calingulak near the
upper amicut, and that of the
regulating works at the heads

of the rivers; whereby river conservancy has been much facilitated and its expense lessened.

5. It appears to be quite clear that it would be decidedly unfair to charge to the account of the Carvery Delta system more than a part, and probably but a small part, of the cost of river conservancy and of flood banks. The whole property in the Delta - dry and wet cultivation, villages, roads, Railway & ~~is situated~~ and the value of that property is, as the Government are aware, enormous, is directly interested in the safe conduct of flood waters to the sea. 1859 was the last year in which a great fresh occurred and occasioned wide spread damage. 2 or 3 years later a more systematic treatment of the rivers and

embankments was started; and though a fresh of the height of that of 1859 had not since occurred, there have been several of not much lower level, and a marked improvement in ^{the} state of the rivers, due to the conservancy work which has been carried out and to the effects of the regulators, has been made manifest. In another 10 or 12 years, if the works be steadily gone on with, probably a maximum fresh will do but little harm. I judge generally, and the irrigation among other interests no doubt has benefited, but it is believed that it is not worthwhile to enter upon the elaborate enquiry which would be necessary to determine what share of the outlay which has been incurred should be charged to the account of the Delta system. Were this investigation

undertaken in order to raise a debt against the Delta works, it would no doubt be considered requisite to ascertain the influence of those works since the upper canal was built some 40 years ago in raising the value of land in the Delta from a nominal to its present high figure and in adding to the prosperity of the District, whereby other sources of Revenue have been materially augmented. Its exhaustively accurate account is possible, and it may perhaps be considered advisable not to go into either indirect expenditure or indirect results.

6. According to the entries in the Preliminary issue of the Irrigation Budget the proposed expenditure in 1876-77 on

Revenue Account is Rupees 10,800
Ordinary Agricultural do - " - " 69,200.

Wendell H. Colwell
Chief Engineer for Irrigation

To
The Secretary to Govt. P.W.D.

P. W. 1876 Department

Form No. 13.

82-5362

From

The Chief Engineer for Irrigation,

To

The Secretary to Government,
Public Works Department.

Dated 10 July } 1876.
Despatched }
Received 27 July }

ENCLOSURE / V

No. 108. W.

Subject.

Cauvery Delta - Tanjore Dist.
— Note on the principle which
is to regulate the debit of
Charges for works in the —.

12400a

Recd - 21.7.76 P.W. 28.7.76
H.E. 15.7.76
Cir. 13.7.76 H. Shet 12 July

m No. 22.

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No. 108. W. Public Works Department,
PROCEEDINGS of the MADRAS GOVERNMENT.

UNDER date the 25 July/76

READ the following:—

From Examiner P.W. & H.E. No. 95 W.d. 5th July 1876.
Note by Chief Engineer
for Irrigation " 10th July 1876.

The views of
the Chief Engineer for
Irrigation as set forth
in the foregoing note
are accepted, and will
govern the debit of ex-
penditure on River
conservancy in Tanjore,
all outlay for keeping
the rivers efficient for
the conveyance of flood
water being charged
to ordinary agricultural,
while work undertaken

Specially in the interests
of the delta irrigation
will be debited to the
delta system.

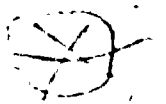
My 1872

[Faint, mostly illegible handwritten notes]

400/401

En. P. L. B. 5
Dr. Engrs: 13
C. E. for J. 5
Set 7/8/6 17#

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5362



Book of 1870 Madras
PUBLIC WORKS.

The Examiner of P. & A.

25th July 1873

No. 460/400

Expenditure on River Commissions
in Tanjore.— Accepting of
the views of the Chief Engr.
for Drayn as expressed in
his Memo relative to the
principle which is to regulate
the debit of —

15-8-73