

The Coast Canal in Orissa During the Colonial Era

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In 1866 Orissa was visited by a most devastating famine in her colonial history. It was so terrible that one third of its population were perished. It is called *Na Anka* famine in Orissa because it came in the 9th Regnal year of king Divya Singha Deva, the Gajapati king of Orissa. The Secretary of State for India ordered for an inquiry into the appalling catastrophe and a Commission was appointed in Dec 1866 by the Govt. of India under the chairmanship of George Campbell. The Commission submitted its report on 6th April 1867.

The Famine Commission of 1866 directed the attention to the state of communication of Orissa and measures were taken thereafter to prevent the recurrence of similar disaster by improving the communication. The Commission recommendations constituted important milestone in the economic history of Orissa. It realized how greater part of Orissa, as it were, out of world, how inaccessible it was to the ordinary trade, and with this fearful results that inaccessibility was attended during the famine. With these facts in view, the commission suggested for speedy execution of Trunk Road from Cuttack to Calcutta. Further the Commission recommended for making the irrigation canals navigable. So, several canals were developed in Orissa for communication purposes.

The works for the Orissa Coast Canal started in the year 1880-81. The amount of original estimate of the Orissa Coast Canal was Rs.36,02,297 inclusive of indirect charges

sanctioned in India Govt. No. 155 dated 20th Aug. 1879. The estimate was revised in 1888 chiefly on account of excess in navigation works due to bad foundation and cost of extra land. The revised estimate was Rs.44,74,941.

The main causes, which attributed for the construction of the coast canal was that the province of Orissa was only in Bengal, which was completely isolated and cut off from all communications with Calcutta by rail or river. So trade was compelled to take the sea route. But the ports were so inferior that transport was effectuated with many difficulties and consequent expenses. The False Point harbour was rapidly deteriorating and steamers of British India Company were forced to lie outside while the only other port Dhamra was blocked by a bar, on which the depth at low water was only nine feet. The construction of costly bridges due to the presence of several rivers did not encourage the British Government to extent the railway construction to Orissa. Famine, poverty and high mortality in Orissa did not receive the consideration of the Government for extension of railway to Orissa.

Since the famine of 1865-66 in Orissa, actually nothing had been done to improve the means of communication with Orissa. But if the coast canal would be constructed and if another famine visited Orissa a vast number of boats from the rivers of lower Bengal would be concentrated for the carriage of grain without any additional expenses to the Government.

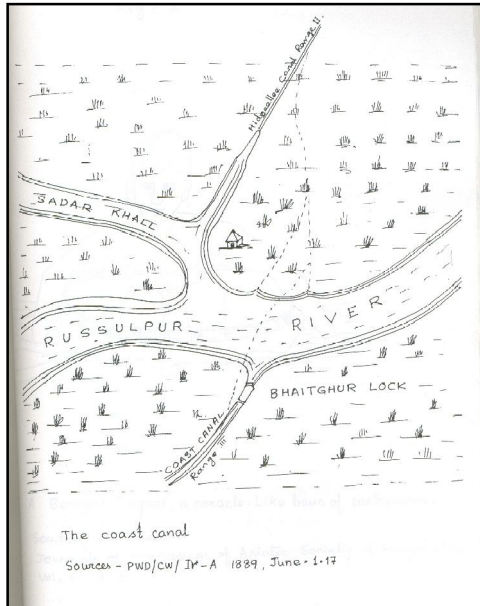
Further Orissa Coast Canal was constructed not as a productive public work but as a famine protective work. It was designed not to yield profit but to afford protection to Orissa from famine.

The Lt. Governor of Bengal was of the opinion that the High-level canal should eventually be connected with the coast canal by a link from the Matai to Bhadrak, and that the locks on this link should be of the full size. (150 feet by 20 feet) Direct thorough communication with Cuttack would then be established for a class of boats, which could traverse the branch canal to the coast, viz., the Taldanda, the Kedrapara, the Gobri; the locks on which was only 100 feet by 17 feet.

Its construction was undertaken because it was considered that it could be valuable as a protection against famine and remunerative as a trade route. It was anticipated that all the import and export trades of Orissa would pass through it and that it could yield revenue of over Rs.2½ lakhs.

The Coast Canal connected the river Hoogly at Geonkhali; 45 miles from Calcutta with river Matai at Charbatia near Bhadrak. It ran along the sea face at a distance varying between 2 to 10 miles. By this it was planned to open the navigation via Gobri Canal to Cuttack and by tidal creek to False Point Port. It was also further planned to connect Chilika Lake and Ganjam into direct communication with Calcutta and thus connect large towns and marts. (Calcutta, Balighai Hidgelee, Balasore, Chandbali, Cuttack, Puri and Ganjam). Its length in Orissa was 92 miles and was divided into four ranges. The canal

was fed by tidal water so it was not useful for irrigation. The four ranges of coast canal were as follows.



Range-III

1. It connected the Badga river, a branch of Rasulpur River in Hidgelle with Subarnarekha River, in Balasore District thirty one and quarter miles in length.

Range-IVA

2. It connected Subarnarekha River with Panchapara River seventeen miles in length.

Range-IVB

3. It connected Panchapara River with Burabalanga River seven miles in length.

Range-V

4. It connected Burabalanga River with Matai River in Balasore District, thirty eight miles in length.

Each of these ranges was an open cut with level bed, provided with a lock at each end. During the dry season the canal was filled by tides and during the rains by surface drainage from the adjoining country. The canal was generally laid out parallel to the great line of sand-hills extending uninterruptedly along the whole coast from Contai in Hidgelee to Dhamra. Thus the canal was to a great extent protected the country from cyclone.

The northern terminus of the range III was placed on the south or right bank of the Badga River. It was located opposite to the village Surpai where a tidal creek connected Badga River with Contai, the headquarter of Hidgelee sub division of the Midnapur District. The southern terminus of Range III was on the left bank of Subarnarekha

River. But due to excessive flood of the Subarnarekha River, and the incapacity of its channel to carry off its maximum discharge, the southern terminus of the range III was placed Goocheeda River about one mile from its junction of the Subarnarekha River near Kalaburea.

The terminus of ranges No IVA and IVB and V were placed as to interfere as far as possible with flood sections of the rivers connected by them, viz. the Burabalanga and the Panchapara River. There was inconvenience to the boat navigation owing to the termini not being exactly opposite to each other. The Southern terminus of Range No V was placed on the left bank of the Matai River, a little below Charbatia village. The Matai River was one of the finest natural tidal canals in Orissa. The average width of the river at surface of low water was over 130 feet and its depth was 12 to 15 feet.

The bed level of the canal was determined with reference to the average spring tide of the cold season, when the rise of the tide was the least. The minimum depth of water in the canal was 7 feet. But it was to be remembered that this minimum depth was only for about 8 or 10 days at the outside in the 12 months i.e., during the spring tides of December, January, and February. The interval between two successive spring tides was taken to be the period between the days that the tide raised to the maximum height to the period to the days that its rise was the least. Or from the first or 14th day of the moon to the 10th or 24th day, according as spring tides due to new moon or full moon.

The bed level of the different ranges of the canals was fixed in accordance with the calculations given below.

Range III -	101.50	
IVA -	99.00	Plus datum
IVB -	98.00	
V -	101.00	

The datum line used in all the levels connected with these coast canals was the mean sea level at Karachi, as used almost all over Bengal and upper India. The mean tidal level on the coast here, whereas it was actually three to four feet below it.

The canal originally had a minimum bottom width of 40 feet. But to raise the side banks in several places above the flood level and also increase the width near the terminal locks, the mean bottom width of the several ranges was considerable more. The following table indicates the bottom width of different Ranges of the coast canal.

Table-1
Different Ranges of Coast Canal.

Name of the Range	Bottom width	
	Minimum width	Mean width
Range No. - III	40	50.00
Range No. - IVA	46	56.08
Range No. -IVB	36	40.00
Range No. -V	40	43.00

The average depth during the cold season is eight feet and during remainder of the year ten feet. The minimum depth in No III and V was experienced once or twice during 12 month and it was continuing a day or two in the tide. The average minimum mean width of the canal at the water surface at the cold season was 64 and 74 feet. The average minimum mean width during rest of the year 70 or 80 feet, according as the base of the canal was fixed at 40 to 50 feet. In the Statement marked were shown the depth of water in different ranges during the cold season.

Table -2

Depth of water in different ranges during the cold season

Name of Range	Base 40 feet						Base 50 feet					
	Spring Average Tide			Spring Lowest Tide			Spring Average Tide			Spring Lowest Tide		
	Max.	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min
Range-III	8.5	7.725	6.95	7.50	6.95	6.43	8.30	7.78	7.06	7.50	7.00	6.50
Range-IVA	10.00	9.015	8.03	9.00	8.33	7.70	10.00	9.015	8.43	9.00	8.55	7.75
Range-IVB	11.00	9.50	8.00	10.00	9.00	8.00	11.00	9.30	8.10	10.00	9.00	8.00
Range-V	8.00	7.43	6.86	7.00	6.035	6.27	8.00	7.49	6.98	7.00	6.67	6.54

Range III in prolongation of Range-I and II of the Hijli canal was opened in July 1885 and the first return from the revenue shown in 1885-86. Ranges IVA and V were temporarily opened for traffic from 15th July to 31st December 1886. The entire length of 92 miles was opened in 1st Sept 1887.

But with the opening of railway in 1896 the canal became a dead loss to the Government. It failed to fulfill the expectations. The canal was being fed by tidal water, so it was not useful for irrigation. So it did not benefit the agriculture. It was a common complaint of landlord and Raiyat, that its effects had been deleterious. It was difficult for one who was not a Civil Engineer to arrive at any conclusion upon this point. One of the popular view was that the embankment of the coast canal prevented free egress of the Subarnarekha flood and thus raised its depth on the western side from Pragana Kamardachour as far south as Sartha and also similar effects produced in Pragana Ankur. On the other hand, it was supposed that canal bank would afford protection against cyclonic irruptions of the sea. But on the other hand, the water passed over the embankment and approached to within two miles of Balasore town.

So the coast canal did undeniable damage to the people. In Orissa, where the capacity of the river is often fraction of total volume of water

to be disposed off, the excess water must necessarily pass to the sea over the surface of the land. In that circumstances, it was unwise to deliberately interpose a barrier of 60 miles long (between the water and the sea). The result was that the formation of a reservoir of huge dimensions. So the proposal for numerous and large cross drainage planned but abandoned due to heavy expenditure. So the flood advisory committee of 1928 recommended the abandonment of canal. So the ranges of IVA, IVB of the canal were abandoned.

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