

*** Multi-purpose Plan for Development of Orissa's Rivers**

Dr. B. R. Ambedkar's Speech at Cuttack

“Orissa wants to get rid of the evils of floods. Orissa wants to get rid of malaria and other—to use American phraseology—‘low-income’ diseases causing ill-health and corroding the stamina of her people. Orissa wants to raise the standard of living of her people and advance their prosperity by irrigation, by navigation and by producing cheap electrical power. All these purposes can fortunately be achieved by one single plan, namely to build reservoirs and store the water which is flowing in her rivers”

Thus observed the Hon'ble Dr. B. R. Ambedkar, Labour Member to the Government of India, in his Presidential address at a conference held in Cuttack on November 8 between the representatives of the Central Government and the Governments of Orissa, the Central Provinces and the Eastern Slates, to discuss the possibilities of developing Orissa rivers.

Orissa's Problems

Referring to the problems of Orissa, the Labour Member observed: “To say that the problem is one of floods is both an oversimplification and an understatement of the problem. I see the problem in somewhat different light. When I think of Orissa, the picture that comes to my mind is that of a people subject not to one affliction, but many.

“One such affliction, which is on the lips of everybody, is the constant exposure of her people to floods which cause damage to life and property and, in a general sense, insecurity. This affliction is due, not merely to floods, but also to droughts and famines. Damage by

* Indian Information, December 15, 1945, pp. 692-95.

droughts and famines can be as great as that caused by floods. It is said that in the drought of 1866, nearly 40 per cent of the population of Puri district perished.

“Deterioration in health is another affliction of the people of Orissa. The total population of the province of Orissa is $77\frac{1}{2}$ lakhs. According to the health report of the province, the total deaths in 1944 were 2,35,581. Of these, 1,30,000 died from some kind of fevers and a majority by malarial fever. This means that three per cent of her people died in 1944, and of these nearly half died of malaria. This is a very high figure. In 1944, 19 per cent of the student population was found to show distinct signs of malnutrition and 8.7 per cent showed signs of vitamin deficiency.

“If these facts are true, Orissa cannot be said to be above the poverty line. The third affliction of Orissa—I think it could be called an affliction—is its want of internal communications. Orissa is a locked-up country. Except for the solitary railway line, running along her eastern sea coast, there is no means of communication either by railway or by canal to connect the vast hinterland with the sea coast.”

“Should Orissa continue to be in such a wretched state as it is today?” Dr. Ambedkar asked. “It need not. It has natural resources, and they are by no means meagre. Orissa has coal, Orissa has iron, chrome, graphite, bauxite, limestone, mica, and Orissa has also bamboo, to mention only some of its important natural resources.”

“There is another precious possession which Orissa has, namely her water wealth. The amount of water that passes through the Orissa delta is just vast. The delta—comprising roughly the three districts of Cuttack, Puri and Balasore and covering an area of about 8,000 square miles—is traversed by a network of distributaries arising mainly from three rivers, the Mahanadi, the Brahmani, and the Baitarani.

“Two more rivers—the Burabalang and the Subarnarekha—of relatively lesser importance, also pass through the delta. The three main rivers referred to above drain an area of 69,000 square miles above the delta, lying in the Eastern States, Central Provinces and Bihar. Of these the Mahanadi—the largest of the three—drains 51,000 square miles. Between them, these three rivers carry each year to the sea a discharge of about 90 million acre feet.”

Use Of Water Wealth

The Labour Member continued : “Given the resources, why has Orissa continued to be so poor, so backward and so wretched a province ? The only answer I can give is that Orissa has not found the best method of utilising her water wealth. Much effort has undoubtedly been spent in inquiring into the question of floods. As early as 1872, there was a general enquiry by Mr. Rehmand. I do not know what happened to his report. Nothing seems to have been done thereafter till 1928. From that year down to 1945, there have been a series of committees appointed to tackle this problem.

“The Orissa Flood Enquiry Committee of 1928 was presided over by the well-known Chief Engineer of Bengal, Mr. Adams Williams. In 1937, the enquiry was entrusted in the able hands of Sri M. Visvesvarayya, who submitted two reports—one in 1937 and another in 1939. His work was followed by the Orissa Flood Advisory Committee. The Committee submitted a preliminary report in 1938 and continued its work till 1942, during which period it submitted three interim reports. The latest effort in that direction was made as recently as March 15, 1945, when a Flood Conference was convened at Cuttack by the Government of Orissa.

“With all respect to the members of these committees, I am sorry to say they did not bring the right approach to bear on the problem. They were influenced by the idea that water in excessive quantity was an evil, that when water comes in excessive quantity, what needs to be done is to let it run into the sea in an orderly flow. Both these views are now regarded as grave misconceptions, as positively dangerous from the point of view of the good of the people.

Conservation Of Water

“It is wrong to think water in excessive quantity is an evil. Water can never be so excessive as to be an evil. Man suffers more from lack of water than from excess of it. The trouble is that nature is not only niggardly in the amount of water it gives, it is also erratic in its distribution—alternating between drought and storm. But this cannot alter the fact that water is wealth. Water being the wealth of the people and its distribution being uncertain, the correct approach is not to complain against nature but to conserve water.

"If conservation of water is mandatory from the point of view of public good, then obviously the plan of embankments is a wrong plan. It is a mean which does not subserve the end, namely conservation of water, and must, therefore, be abandoned. Orissa delta is not the only area where there is so much amount of water and there is so much amount of evil proceeding from that water. The United States of America had the same problem to face. Some of these rivers—Missouri, Miami and Tennessee—have given rise to the same problem in the U.S.A.

"Orissa must, therefore, adopt the method which the U.S.A. adopted in dealing with the problem of its rivers. That method is to dam rivers at various points to conserve water permanently in reservoirs. There are many purposes which such reservoirs can serve besides irrigation. I am told that if it were possible to store the entire run off of the Mahanadi it will be enough to irrigate thereby a million acres, provided that much area was available. Water stored in the reservoirs can be used for generating electric power.

"If in the midst of its natural resources, Orissa has remained an industrially undeveloped area, it is due to want of cheap power to run its factories. Here there will be abundance of electric power, more than Orissa can hope to consume for a long time to come. Another use to which this water could be put to is navigation.

"Navigation in India has had a very chequered history. During the rule of the East India Company, provision for internal navigation occupied a very prominent part in the public works budget of the Company's Government. Many of the navigation canals we have in India today—and you have one in Orissa itself—are remnants of that policy. Railways came in later, and for a time the policy was to have both railways and canal navigation. By 1875, there arose a great controversy in which the issue was railways *versus* canals. The battle for canals was fought bravely by the late Sir Arthur Cotton—one of the few engineers with big ideas. Unfortunately supporters of Railways won.

"I am not quite happy about this victory of railways over canals. Much more annoying is the ignorant opinion of supporters of railways that canals must go because they do not pay, without knowing that if the canals do not pay it is not because they cannot pay but because

their capacity to pay has been terribly mutilated by leaving them uncompleted. I am sure that internal navigation cannot be neglected in the way in which it has been in the past. We ought to borrow a leaf from Germany and Russia in this matter and not only revive reconstruction of our old canals but make new ones also and not to sacrifice them to the exigencies of railways.”

Special Feature

The Labour Member reiterated that the storage scheme, as applied to the rivers of Orissa, will have this special feature, namely, that it will not only give irrigation and electricity, but also provide a long line of internal navigation. “I am told it may be possible to connect Chandbali to Sambalpur and beyond by a navigable inland waterway by construction of, say, some three dams at (1) the point of its debouche from the hills (seven miles above Naraj), (2) Tikkirpara and (3) above Sambalpur. If this plan works out, there will be a navigable channel for 350 miles which could be maintained all the year round, affording a cheap and convenient artery for passenger and goods traffic. Imagine the possibility coastal craft or light vessels going right into the interior on a canal extending from the sea *via* Cuttack to Sambalpur, and beyond into the Central Provinces. Here is a scheme which converts forces of evil into powers of good.

“Orissa wants to get rid of the evils of floods. Orissa wants to get rid of malaria—and other—to use American phraseology—‘low-income’ diseases causing ill-health and corroding the stamina of her people. Orissa wants to raise the standard of living of her people and to advance her prosperity by irrigation, by navigation and by producing cheap electrical power. All these purposes can fortunately be achieved by one single plan, namely, to build reservoirs and store the water which is flowing in its rivers.

Multi-purpose Reservoirs

“I am, therefore, glad to note that the Orissa Flood Protection Committee held in 1945, struck the right note when it said that the final solution of Orissa’s water problem should be sought in the construction of multi-purpose reservoirs. My comment is that this should be regarded as the only method and treated as an immediate programme

rather than as an ultimate aim. The potentiality of this project may not be clear to everybody. But it is indeed very great. It is desirable that some idea of its immensity should be conveyed to the Government of Orissa, the representatives of the States of Orissa and the people of Orissa as well, so that their interest in the project may be aroused.

“A comparative statement may well give such an idea. One hears of the lake made at the Boulder Dam in the U.S.A. as the biggest man-made lake in the world. We also hear of the Mettur Dam in Madras and the proposed Tungabhadra Dam in Hyderabad, which are likely to be its rivals. Compared with the first, the total volume of water that flows annually through the Orissa rivers will fill three times the lake mentioned. Compared with the Mettur Dam in Madras and the Tungabhadra Dam in Hyderabad, it may be pointed out that the Mahanadi alone carries over 65 million acre-feet, which would be 30 times the capacity of the reservoir at the Mettur Dam in Madras and 20 times the capacity of the proposed Tungabhadra Dam. How much of this water we can economically and effectively store is a matter for investigation. The Government of Orissa, the States in Orissa and the people of Orissa should, therefore, regard themselves as lucky and proud of this project and determine and endeavour to make it a reality.”

Dr. Ambedkar continued : The agenda for the meeting is a very modest one. It is (1) to consider the desirability of undertaking forthwith surveys and investigations of Orissa rivers with a view to the preparation of schemes of unified and multi-purpose development comprising (a) flood control, (b) navigation, (c) irrigation and drainage, (d) soil conservation, and (e) power development; (2) to consider the desirability of concentrating, in the first instance, on surveys and investigations on the Mahanadi river for control and development of that river ; (3) to examine the desirability of surveys and investigations being carried out by provincial governments in conjunction with, and under the general direction of, the Central Waterways, Irrigation and Navigation Commission.”

“Our main purpose today is to see if we can agree on the necessity for a thorough survey and investigation of the natural resources and physical features of the region with a view to prepare a comprehensive scheme for its development. For a balanced appreciation of the situation it is necessary to carry out comprehensive surveys and investigations

with a view to ascertain the possibilities of irrigation, navigation, power development and their facilities in the delta as well as in the drainage area as a whole. Investigations so far carried out have been mostly limited to the delta, although some work had been done in 1862 on the survey of dam sites for small reservoirs on the five tributaries of the Mahanadi, namely, the Telcoma, the Ibcoma, the Maudcoma, the Hasd and the Jonk.

“The Central Waterways, Irrigation and Navigation Commission constituted by the Government of India under the chairmanship of the able and well-known irrigation engineer, Rai Bahadur Khosla, is shortly going to initiate hydrological and other surveys of Orissa rivers as part of their enquiry. It will be necessary for provinces and states to undertake connected surveys in conjunction with, and under the general direction and supervision of, the Commission.

Submergence Of Areas

“Before closing”, Dr. Ambedkar observed, “I would like to draw the attention of the parties which have met at this conference to two points. They are intimately connected with the success of the project and about which they will have to make up their mind at an early date. First is their readiness to consider the question of submergence of land. Reservoirs formed by construction of dams will submerge large areas of land, both in Orissa and the Eastern States. If these dams are carried higher up the river or its tributaries, certain areas in the Central Provinces will also be submerged. This question will need to be considered in detail in relation to the over-all benefits of the integrated scheme.”

“Submergence of areas will be inevitable if the waters of the rivers have to be conserved for beneficial use instead of being allowed to run waste and to work havoc *en route*. The resulting benefits from a scheme of united and multi-purpose development should far outweigh loss of lands due to submergence. This project can be a success only if it is treated as a regional project. It cannot succeed with a local treatment. The province of Orissa will fail if it were to take up a project confined to its own boundaries. The same will be the result if an Orissa State were to make a similar attempt.

“The project being essentially regional, it raises the question of submergence of State and Provincial sovereignty to the extent

necessary. This is the second question to which I wish to refer. It is for the Orissa States and the Government of the Province to come together in order to shed a part of their sovereignty over different sections of the rivers that are flowing through their territory so that the project could be undertaken, planned, devised and run by a single authority without disturbance either from the province or from the states once it is established. I need hardly say that the welfare of the public is far more important both to the Government of Orissa as well as to the Rulers of Indian States affected than sovereignty. Their sovereignty should be used for advancing the welfare of the people and not for blocking it. With co-operative and co-ordinated effort on the part of the Central Government and the Provincial and State Governments, it should be possible to harness for beneficial use this perennial source of wealth waters of Orissa rivers—which are at present running to waste and causing untold suffering on their way to the sea.”

SURVEY OF ORISSA RIVERS : CONFERENCE DECISIONS

The conference decided to undertake a preliminary surveys of the Orissa rivers to prepare schemes of unified and multi-purpose development. Multi-purpose schemes which may be prepared after this preliminary survey are intended to comprise flood control, navigation, irrigation and drainage, soil conservation and power development.

The Conference agreed that, in the first instance, the possibilities of controlling and developing the Mahanadi river should be surveyed. It was further agreed that surveys should be carried out by the Provincial Governments concerned in conjunction with and under the general direction and supervision of the Central Waterways, Irrigation and Navigation Commission.

It was explained that the Commission would, in the beginning, carry out a preliminary reconnaissance over the entire length of the Mahanadi, and if, as a result of such reconnaissance, a *prima facie* case for the development of the river for the benefit of the provinces and states concerned was established, further detailed survey and investigation would have to be undertaken. It would only be at this stage that full participation of parties concerned, both administrative and

financial, would be necessary. Till then the Central Waterways, Irrigation and Navigation Commission propose to carry on preliminary reconnaissance with the help of the recently created Orissa Rivers Division of the Provincial Government. It was agreed that the C. P. Government and the Eastern States would supply the Central Waterways, Irrigation and Navigation Commission with all such data and information as they already possessed and would cooperate fully with them in order to explore the possibilities of the Mahanadi river.

Mr. GOKHALE'S SPEECH

Mr. B. K. Gokhale, Adviser to H. E. the Governor of Orissa, welcoming the plan outlined by Dr. Ambedkar, said : "Orissa is perhaps the most backward part of India and no single project is likely to do more to improve the conditions of the people than the multipurpose development which we have under contemplation". He outlined the history of Orissa up to modern times, and said that Orissa expected that the thought which had been given to planning and regional development would start her on an era of happiness and prosperity.

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POST-WAR IRRIGATION AND HYDRO-ELECTRIC SCHEMES

"There is no doubt whatever about India's lead to the world in irrigation. Nor of its vital importance to India; with our rapidly increasing population we must irrigate to live", said H. E. the Viceroy opening the 16th annual meeting of the Central Board of Irrigation held on November 26 in the Council Room of the Viceroy's House, New Delhi. Besides the experts of the Government of India and the Chief Engineers of Provinces and States, the Hon'ble Dr. B. R. Ambedkar, Member for Labour, and the Hon'ble Mr. H. C. Prior, Secretary, Labour Department, attended.

* Indian Information, December 15, 1945, p. 697.

The Viceroy said :

“I am very glad to be able to open the 16th Meeting of this Central Board of Irrigation. Your branch of engineering is an ancient, important, and very honourable one. Irrigation engineers are the oldest experts in the world. The 2nd Chapter of Genesis tells us that ‘A river went out of Eden to water the garden’ obviously the first recorded example of irrigation. The two ancient civilizations of Egypt and Mesopotamia were of course built entirely on irrigation ; and the forerunners in your craft were presumably a much honoured guild or fraternity in those countries.

“Amongst the most eminent of the early irrigation experts must be numbered Moses, of whose achievements, in the art of irrigation we know at least two ; when he smote the rock at Horeb, bidding drink and live the crowd beneath him ; and when he sweetened the bitter water at Marah, presumably by building a dam to keep out some brackish clement.

India’s Achievements

“Other engineers may give us speed in travel or comfort in our dwellings ; your gift is that of life itself. If you want a text for your labours you will find it in a verse of Isaiah ; ‘I give waters in the wilderness and rivers in the desert, to give drink to my people’.

