

Irrigation through canals

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Bangladesh occupies the major part of the biggest delta of the world, viz., the Ganges-Brahmaputra delta.

It is a vast alluvial plain through which pass innumerable rivers-tributaries and distributaries of the three trunk rivers, the Ganges, the Brahmaputra, Jamuna and the Meghna, which have their flood plains. The flood plains and the delta in general are inundated to different depths during the rainy season but in winter, the whole alluvial plain gets dry and remains so till the onset of the next rainy season.

Again, it falls under the tropical monsoon region, where prevails the monsoon which reverses with the changes of seasons. During the winter months, wind blows from the north-east to south-west i.e., from the land to the sea. This wind does not contain sufficient moisture and other meteorological conditions are also not favourable for causing rainfall in this area during this period. However, under the influence of the depressions in the Bay, cyclonic rains sometimes occur but the quantity is very little and it comprises only a negligible amount of the annual rainfall. After the winter, there is a period of short summer when also there is no rainfall.

But in April the wind current reverses. The wind now begins to blow from the south-west towards the north-east, which brings along with it sufficient moisture from the sea and being obstructed in the high hills and mountains in the background give high rainfall comprising over 90

per cent of the annual total. This rainfall of the season is so high that the rivers of the country soon become full to the brim and begin spilling over their banks and gradually submerge their flood-plains. Soon, most of the low-lying areas of this vast alluvial plain get submerged and remain inundated for the rest of the period. During this period there is no dearth of water.

The villages then look like floating islets in a vast sheet of water which again is here and there covered with crops like deep water Aman.

A special physical condi-

tional, under stress of the constant blowing wind from the south.

In the above circumstances, during the winter, the rivers flow fast into the sea and the land gets dry; less availability of water during the lean period, therefore, poses a problem for irrigation, navigation and domestic uses.

In Bangladesh with an area of only 55,598 square miles including the rivers, forests and unculturable lands, has a population of about an estimated 80 million with a growth rate of 2.8. This is also one of the densely populated regions of the world. Food

sea. Again, if the little water is used for irrigation purposes, navigation will be hampered and water will not be available for domestic uses within short reaches.

In spite of all these obstacles from nature, devices must be sought to solve the problem; for without improving the situation of shortage of food for the teeming millions, the nation cannot survive. The challenge of nature for Bangladesh has been accepted and hence a programme for digging of canals. Canalisation of Bangladesh for irrigation, has already been taken on

A nationwide campaign for digging canals is on. Ultimately, a dependable, national irrigation network will be set up for raising agricultural production.

tion prevails in the Bay which is very unfortunate for Bangladesh. During the winter months the wind blows on it from the north which sweeps away the water of the northern part of the Bay to the South sea causing a lower sea-level. This condition enhances the swift and early discharge of the river water into the sea. During the summer and the rainy seasons again when the wind direction reverses i.e., when it blows from the south to north water from the deep sea shifts towards the shore. As this water approaches from the deep sea to the shore, the level of water gradually increases for both the shallowness and the lesser and lesser area covered. In general the water remains at a higher level than

shortage is getting acute day by day. In the circumstances, agricultural pursuits must be enhanced to increase food production. With a view to do this double or triple cropping of the land is considered to be one of the measures.

In order to increase production, irrigation is considered to be a fundamental operation. But the circumstances obtaining in the country, do not naturally favour this for water shortage seems to be the major obstacle. During the winter months most of the rivers have very little water. The major rivers though perennial, their levels go so low and the quantity of water available in them is so small, that it is difficult to get sufficient water from these rivers for irrigation purposes.

Teesta which has more or less an alignment from west to east and other rivers, some are derelict, have more or less a north-south alignment. In the case of the Atrai, in the southern part before joining the Jamuna, it floods from west to east. Flow condition of the Karatoya, the Nagai, the Pangai can be improved. In the north-eastern part of the country again the course of the old bed of the Brahmaputra has an east-west alignment. This has a command area of the agricultural plains to the south. The rivers Bansi and the Banar and the Turag etc., flow towards the south but their headwaters have no link with the old Brahmaputra in the present days.

Further, in the southern part of the country, the Ganges has more or less an east-west alignment with a command area of the agricultural plains of the south. In the moribund delta the Ganges-Kobadak project is operating and independent projects are being developed in Faridpur and Barisal for irrigating these areas. A number of distributaries both active and derelict lies in this area.

From the above, it may be clearly seen that for canalisation purposes the country may be divided into three major zones: (i) North-Western region, (ii) North-Central region, (iii) Southern region. The existing rivers both old and new of these regions may be dug and improved.

**TOMORROW:
CONSERVATION
OF WATER**

If there be heavy siltation of the beds of these rivers, these can also be dug and conditions improved. In the northwestern part of the country, it is only the