



## **A Study of Drainage System in Beed District (MS)**

**Dr. More S. M.**

Dept. of Geography  
Bankatswami College, Beed

### **Introduction:**

Drainage of the region is the result of a combination of numerous factors such as climate, precipitation, isolation, cloudiness, wind direction, humidity, rock types, vegetation, soil, human activity etc. Drainage system is one of the important components of the physical environment which affects the agriculture directly and indirectly. Ground water influent becomes the base flow that maintains the flow of streams in clean weather. When we speak of surface water, we mean stream flow regardless of its source.

### **Beed District (Study Region):**

Beed District is located to the south of Aurangabad District and centre of Marathwada. Geographically, Beed is spread over 18°27' to 19°27' North latitude and 74°49' to 76°44' East longitude. The district had total population of 2585049 as per 2011 census which account to 2.30% to total. The total area of the Beed District is 10694 sq.km which account to 3.47% to Maharashtra State. There are 11 tahsils in the district, i.e. Beed, Georai, Patoda, Ashti, Shirur, Ambajogai, Kej, Majalgaon, Dharur, Parli and Wadvani. In 2011 census, the district has 9 towns and 1368 villages (including 11 uninhabited villages). The total literacy rate of the district as per 2011 census is 76.99%. The rural and urban literacy rates are 74.73% and 86.04% respectively.

Sex ratio of the District is 916 and ranks 31st among the Districts in the State. The sex ratio for rural and urban areas of the district is 912 and 933 respectively. In 2011 Census, the district recorded 3,51,254 (13.6 percent) Scheduled Caste population and 32,722 (1.3 percent) Scheduled Tribe population.

It is surrounded by Aurangabad and Jalna in the North, Parbhani and Latur in the East, Ahmednagar and Osmanabad in the south and Ahmednagar in the west. The east - west extension of Beed district is 268 kms and north-south distance of the district is 127 kms. The shape of the Beed district is broadly likely that of a trapezium, the northern and southern sides of which are nearly parallel.



### **Drainage Network:**

In the Beed district, big and important rivers are Godavari, Manjra, Seena, Bindusara, Kundalika and Vaan. The Godavari forms the boundary of the district from the village of Kuranpimpri to Borkhed throughout the northern border. The southern boundary mostly coincides with the course of the Manjra but makes a considerable number of deviations from it, comes to the north and others to the south. The south - eastern boundary similarly follows the course of the Sina with three deviations away from the river and one only beyond it to include a small stretch to the south of the river in Aurangpur village. Leaving aside the boundaries formed by these rivers the district boundary elsewhere is the result of historic accidents and administrative convenience. All the streams of the district drain in to one of the three principal rivers viz the Godavari the Manjra and the Sina which along the northern southern and the south – eastern boundaries of the district.

### **Godavari:**

Godavari is the important river of the Beed district which flows in a winding course with the general trend from north- west to south – east direction through the northern border of the Georai and the Majalgaon tahsils. The tributaries of the Godavari in order from the west to the east of their confluence with that river are the Lendi the Amrita, The Sindphana, the Saraswati , the Gunwati and the Wan.

### **Lendi River:**

The lendi river in the low hills to the south – west of the Chaklamba village and flows northwards passing by the that village on its east and after a further flow of 2 kms. from the district boundary for the greater part of its course in its lowermost reach it again flows within the district to join the Godavari.

### **Amrita River:**

The Amrita rising further east from the same hills flows in the general north-easterly course leaving Umpire a 9 kilometers to the north west of it and flowing by Dhondari joins the Godhavari at Sawleshwar.

### **Sindhphana River:**

Sindhphana rises in the Chincholi hills at the north- western apex of the Balaghat. Plateau and flows in a north- easterly course past Amalner about a kilometers below Chavarwadi it makes a right angular turn to follow the trend of the small tributary , The Gana in a north – westerly direction flowing by the Hingawadi and the resumes again it north – easterly course the trend of the another tributary, the Belapar below the confluence. After the confluence of the another tributary, The Kina, The Sindhphana, has a fairly long easterly course up to about Majalgaon ,where after it flows north – eastward and northwards to join the Godavari at Kshetra Manjrath.



### **Sindhphana Tributaries:**

The only important tributaries of the sindhphana on its left bank are the Aad. the Belapar and the Kina Is the western part in the eastern part of the tributaries on the left bank flowing from the north are very small sized streams the Aad rising on the southern slopes on the

Chichonli hills flows by the Kotan in a north easterly direction to join the Sindhphana below Hingalwadi the Belpar also rises on the north- east slopes of the Chichonali hills to the west of the Aad. After flowing past Hatola it makes a short so journ outside in to Ahmednagar district and after reentering the district flows by Pilmalner to join the Sindhaphana at Gomalwadi

The Kina river rising in the hills to the west of the Pangri village flows in an easterly and north easterly courses sometimes within and same times outside the district and joins Sindhaphana just above Nomgaon.

There are innumerable right flank tributires of the Sindhaphana flowing from the Balaghat slopes the more important of which in order from west to the east are the Uthola flowing by the Raimoha , the Uthawadi flowing the Khokarmoha, and Khalapuri, the dhomari flowing by the Dhomari and the Rajuri anf joining Sindhaphana opposite to the Sirsamrg the Bendsura the Takur rising on the eastern slopes of the pimpalgaon ghat, the Pimpalner river and the Kundalika of these Bendsura and the Kundlika are of considerable six and length and require same detailed consideration.

The Kundlika called as very often by the shortened form Kundka, rises to the north – east of the Neknur and follows first in a north easterly direction and then in an easterly direction up to Nagiheri after which it has a general northerly course to join the Sindhaphan a few kilometers up stream of Majalgaon.

### **Saraswati :**

After the sindhphana these are three tributaries of the Godavari of considerable size, the Sraswati, the Gunwat, and the wanganga. The Saraswati and the Gunwati rises very near each other the saraswati flows north- wards passing by the Hingni, Dindrur and after Belur eat wards to join the Godavari.

### **Gunwati**

The Gunawati flows in a northeasterly course passing by the Hiwara to join the Godavari, a kilometer and half the saraswati sangram.

### **Wan River:**

The Wan or the Wanganga as it as often called has its source to be south of Dharur and has fairly long deeply incised easterly and south – easterly course on the Balaghat Platetau itself. It makes an abrupt trun northwards to the north- west of Ambajogai cutting through the scarp and them flow in a north-easterly direction



towards the Godavari. Flowing through Ambajogai there is a small tributary of this river viz. the Jayanti Nala that meets the river in the opposite direction in the same valley of the valley of the Jayanti river but flow eastwards and then southwards to join the Manjara. The soils of the small length and size of the river. It must have been due to the fact that the Rana was a much larger and longer river, which must have been captured by an active stream working backwards at the scarp to form the present wan river. The deeply out upper wan valley, the distinct elbow of capture, the consequent Jayanti nala and the highly fertile soils of the Rena all provide evidence for such a capture having taken place. The large catchments area of the 372 square kilometers in the upper Wan and its tributaries as a consequence of this drainage evolution has been availed of in the construction of the wan project.

### **Manjra River:**

The Manjra sometimes called the Wanjra river rises in the northern edge of the Balaghat Plateau a little above Gaurwadi flows first southwards and then south-eastwards right across the plateau towards the opposite side and makes an abrupt turn. After Pimpalgaon ghat the course becomes zigzag motion but with a general easterly trend up to near Bhatangli in Osmanabad where it is joined by the Rena.

Throughout, a greater part of this course the river forms the southern boundary of the district. The river flows in the deep bed with high banks which rises the sometimes as much as 9 meters but on the average 5.5 meters above the bed of the river in the district so that the water is not available for the irrigation of the banks. Recently Mahasangvi project has constructed. Particularly all the streams of the plateau drain into Manjra. There are two directions in the flow of these rivers one from the north – east to the south – east and the other from the north to south corresponding to structural lines of the weakness.

### **Limba:**

The Limba or the Ganesh rises as the name indicates, near Limba Ganesh and flows in the south-easterly direction receiving a few tributary streams from the north – flowing due southwards, the last of which is a fairly large sized stream the Nimgur (Naiknur) river. This stream flows only in rainy season.

### **Yelambachi:**

The Yelamb or the Waghi flows by the Yelamb Waghera Babulgaon and Nandur has almost a due southerly course throughout this is also a seasonal stream.

### **Babhti:**

The Babhti or the Sanvi flowing by Eda, Arangaon and Warapgaon has a easterly course and receives two southerly streams the first flowing by Sindi and Masajog and the other flowing by Yevta.



### **Hol:**

The hol streams passing by the Hol is having southerly and the south-waterly course and joins the Manjra at the Deola.

### **Rena:**

The present Rena , river having its source south of the Ambajogai , must have once been a much longer and larger, the communication of the upper wan m as is Well testified by the high fertility of the soils of the Valley too big for the present river.

### **Mehekri River:**

The Mehekri after having a fairly long course in the Ahmednagar district enters the Beed district sea tow kilometers above the Nandur. In he Beed district it has along and the winding course in the flood plain south – south – eastwards to the join the Sina at the Sangvi. The Mehekri receives very small insignificant streams on its right or the west bank but fairly large sized streams on the its left or the east bank, of these the Keli, the Kambli, the Keri, and the Bokdi are relatively more important streams.

### **Conclusion:**

Most of the rivers and the streams which are flowing the through the Beed district are seasonal. They are having water in the rainy season and the same times in the winter season. The most of the rivers and streams become the dry in the summer season , hence they are not useful for the irrigation. the wells which comes under the jurisdiction of these streams nature of the rivers and the streams the agricultural sector is the greatly affected.

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