

Geographical Assessment of Drainage Pattern in Osmanabad district

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Abstract:

Drainage is one of the most important components of the physical environment that affects agriculture. When we talk about surface water, we mean the flow of a stream regardless of its source. By far, surface water provides significant irrigation that stabilizes and improves agro-economic life in an area that otherwise has rich soil potential. The main objective of this paper is to assess of Drainage Pattern in the Osmanabad district, the present study depends on the secondary data.

Keywords: 1. drainage pattern, 2. surface water, 3. groundwater.

Introduction:

Over time, the stream system achieves a particular drainage pattern of its network of channels and tributaries as determined by local geological factors. Drainage patterns or networks are classified based on their shape and structure. Their shape or pattern evolves in response to local topography and subsurface geology. In geography, drainage pattern is a complex term. It includes both underground and surface water flow. It is the result of a combination of geographical features including climate, particularly rainfall, solar radiation, humidity, cloud cover, wind strength and the structure and type of rocks, vegetation, soil, and human use, human obstructions to natural waterways such as roads, railways, dams, and reservoirs as well changes nature.

Objective: To assess the drainage pattern in Osmanabad district.

Database and Methodology:

The present study depends on the secondary data which collected through census handbook of Osmanabad District, District Statistical Department, Water Resources Department of Osmanabad district, District booklet Showing the Progress and current status of all irrigation schemes of Osmanabad district and socio-economic abstract of Osmanabad District.

Study Area:

Osmanabad is one of the 8 districts of the Marathwada region. The district lies between 17° 35' N to 18° 40' North Latitude and 75° 16' E to 76° 40' East longitude situated in the Balaghat plateau region. It has a total geographical area of 7512.4 sq. Km. The district of Osmanabad has the following sub-divisions Osmanabad, Tuljapur, Omerga, Paranda, Kalamb, Boom, Lohara, and Washi.

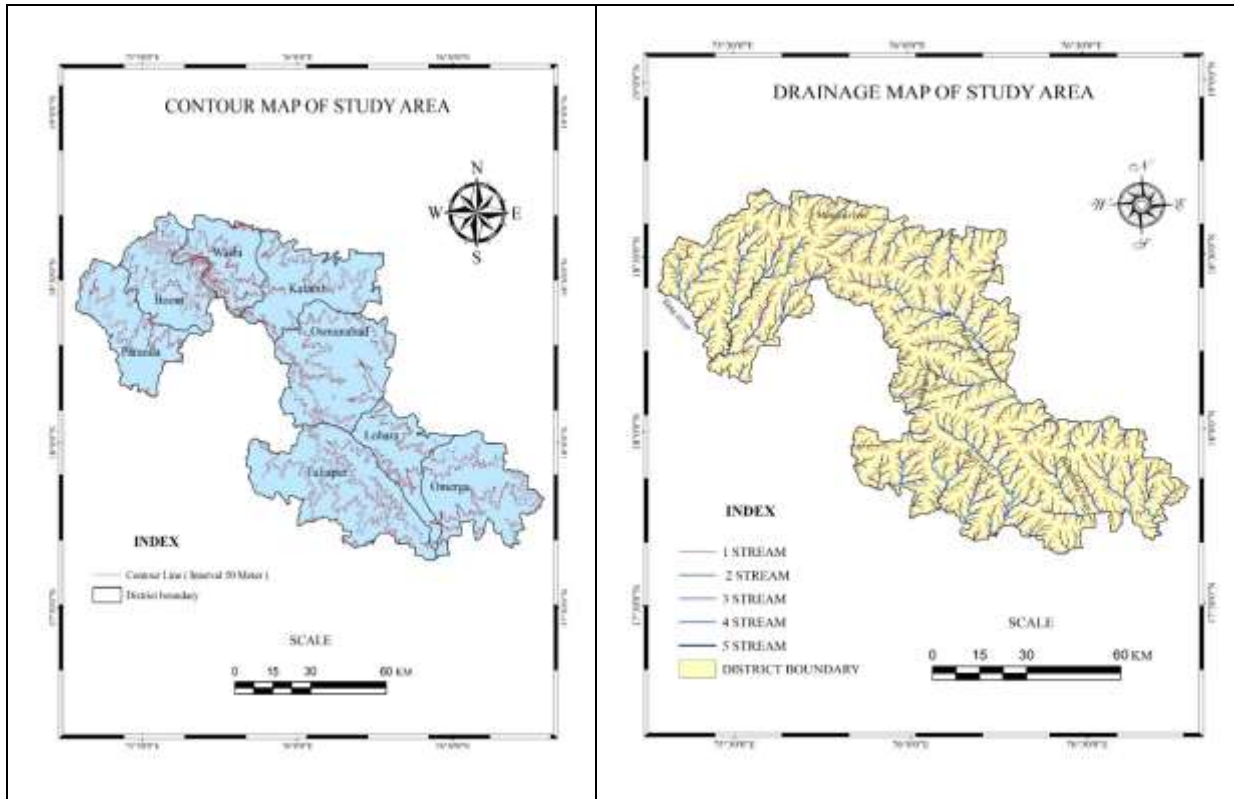
Drainage Pattern of Osmanabad District:

The northernmost divide in the district is between the Manar River and the Godavari River to the south of the district boundary. It is a low divide stretching from about 550 meters above sea level in the west and about 500 meters in the east. On top of this divide runs the road connecting Ambejogai in Beed district with Malegaon in Nanded district.

The key divide between the Manjra and Bhima drainage systems enters the district north of Malewadi at an elevation of about 760 metres. The highest point in the district at 792 meters is located on this divide, just northwest of Kanheri about 6 kilometers southwest of Washi. North of Terkhed, the spur runs east and makes a right-angled turn to the south past Bhabulgaon and again begins an easterly trend and runs at a summit level of about 700 meters and passes south of Moha. About three kilometers south of Nipani, it turns in a south-easterly direction and leads up to the Murud railway station. Here it branches

into two spur arms. The northern arm, on which the railway line runs to Latur, has a summit level of about 670 meters and stretches eastwards, forming a watershed between the Manjra and Tawarja rivers. In the east it drops in elevation and ends just east of Latur with a summit level of just over 640 meters. The southern arm stretches in a southeasterly direction, also with an initial summit level of about 670 meters, with a summit of 698 meters north of Nitli. It passes south of AUSA and leads to Halgar, where it drops to about 600 meters. This forms the divide separating the Terna River from the Tawarja and Manjra Rivers.

Map of Osmanabad District Drainage Pattern



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The core divide continues west of Terkhed in a southeasterly direction near the southwest escarpment of the Balaghat Plateau to Bawi west of Dharur. From there, it recedes from the scarp due to active backcutting of the plateau by the headwaters of the tributaries of the Sina and Bhima rivers. It runs almost east of the escarpment and passes outside the Kasarsirsi district to the south. Some of the notable heights in this are Dharur, 714 meters and Deobet near Dhanuri 668 meters.

Dynamic erosion of the Bori River into the plateau resulted in a valley floor about 30 meters below the plateau level, leaving the remainder of the plateau margin to its west as a prominent ridge running parallel to its course with a summit level of 610 metres. southeast as far as Naldurg. This bounding

ridge of the plateau, which carries the road from Tuljapur to Naldurg, descends in a steep escarpment into the Harni basin. Beyond the Naldurg Pass are continuing hills of a slightly lower altitude and after Alur (602.5 metres) pass beyond the district boundary.

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