Geographical study of Physical situation of the Nashik city in Maharashtra

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Abstract

Studying physical situation of any place helps us to have an awareness of the particular place. All places have a history behind them. Considering in the mind Nashik city has been selected for the study on the Geographical platform to understand the physical situation of Nashik city according to the physiography, geology, drainage, climate and temperature. Objectives of this study are to understand the physical situation of Nashik city in Maharashtra on the platform of Geography accordingly the physiography, geology, drainage, climate and temperature.

KEYWORDS Physiography, Geology, Drainage, Climate, Temperature

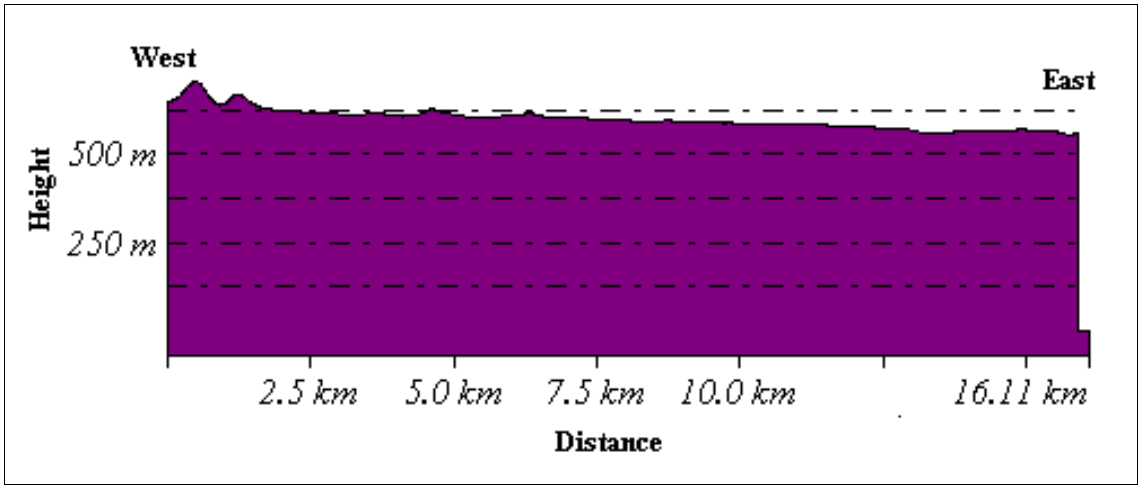
STUDY AREA

Nashik is located in Northern part of Maharashtra state. It is situated on the bank of Godavari River, the approximate coordinates of the city are 20^0 N and 73^0 E. The area of Nashik city is extended between 19^0 54' 56.7503"N to 20^0 04' 44.4821" N latitudes and 73^0 41' 01.73" E to 73^0 52' 02.02" E longitudes, which covers 259.1 sq. km. area, which is 2nd largest in Maharashtra after Mumbai. The city is situated at altitude of 565 meters above mean sea level (MSL) at a distance of 185 km.from Mumbai.

Physical situation (Physiography and Geology)

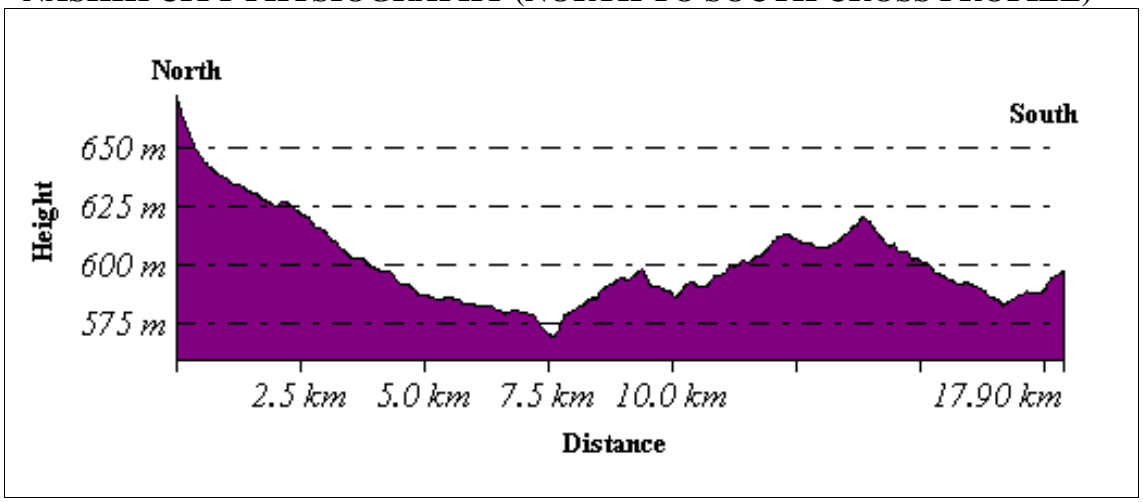
The Nashik city is the part of the upper Godavari valley, because the Godavari River originates from Trimbakeshwar on the distance of only 24 kms. From the Nashik city. The study area rests the foothill area of the upper Sahyadris on leeward side slope. Hence, its western part is more heighted than the other sides. The arc of the land in the north west; West and South-west is hilly; and changes more or less as a succession on Piedmont flats lower and lower elevation; in to the wider plateau surface to east. The maximum altitude is 848.074 mts, lies in South-west part and minimum altitude is 553.991 mts. in eastern part of the study area in Godavari River stream. The approximate average altitude of the area is 565 mts. above sea level. The river flows in eastern direction, therefore; the hill ranges run in west-east direction which is clearly identified by the contours on the physiographic map. The slope of the area is gentle one. River is flowing in middle of the area which creates valley in middle part. It is clear cut indicated in north-south cross profile. Comparing the altitude of north and south boundary of the area north part is much higher than the south and this is obvious that west part is much higher than the east.

NASHIK CITY PHYSIOGRAPHY (WEST TO EAST CROSS PROFILE)



Source: SRTM DEM

NASHIK CITY PHYSIOGRAPHY (NORTH TO SOUTH CROSS PROFILE)



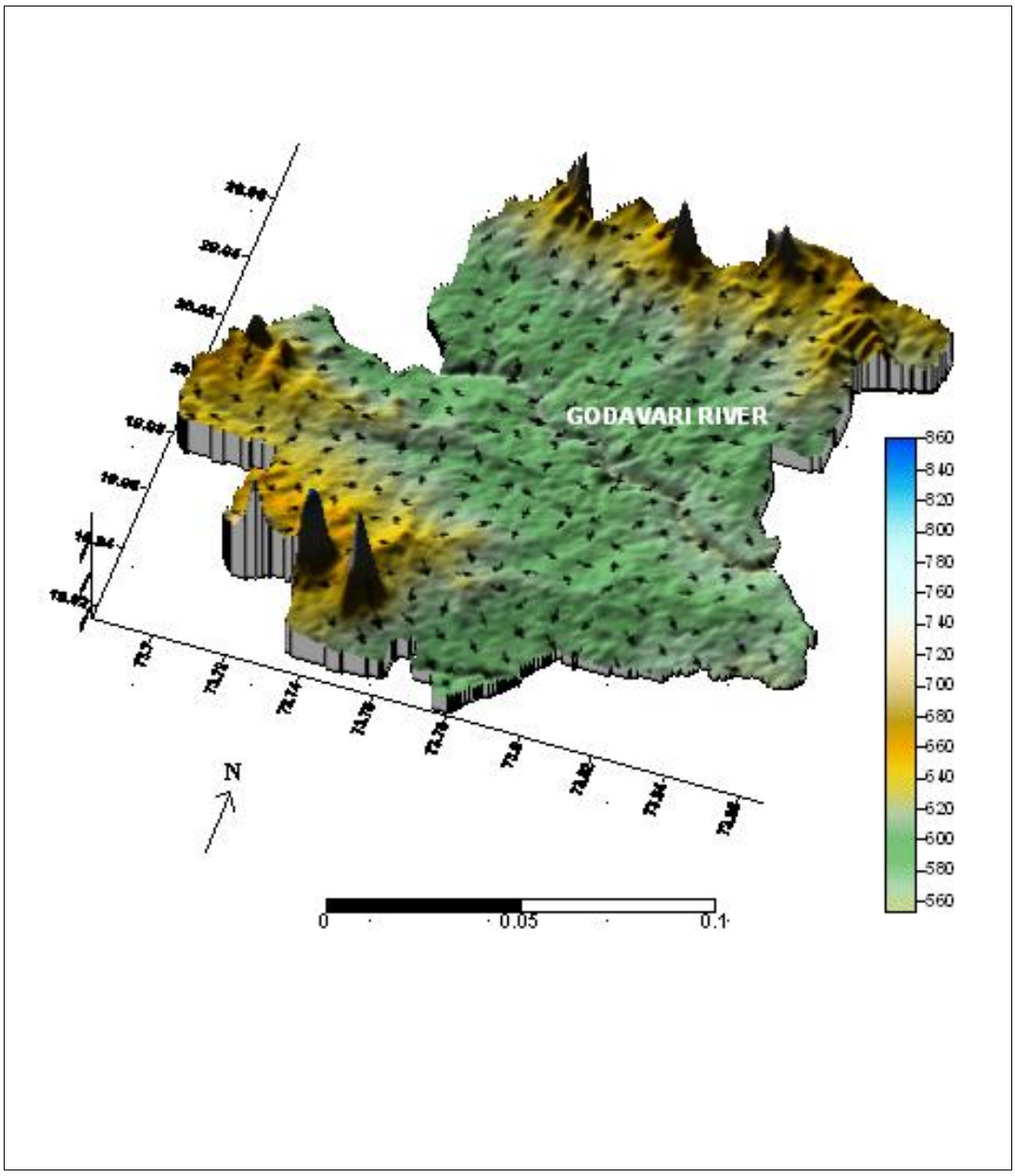
Source: SRTM DEM

Drainage

Nashik city is laid down in Godavari River basin. The river Godavari originates from Trimbakeshwar (24km. from Nashik) and flows through various parts of the city, flowing from west to east direction from northern boundary of Nashik city. The river Godavari rises in the western hills of Bhramhagiri in Sahyadri. The Godavari is east flowing river, which runs from western to south-eastern India and is considered to be one of the large river basins in India. The Godavari is the master stream gathering the waters of its tributaries which have a fan like drainage pattern. The low gradient the Godavari develops on a basilicas surface has induced meanders and alluvial banks. These banks are depositional and erosional character according to the nature of water erosion on the meandering stretches of the river. No less important it is the erosive process of its tributes. In reaching the best level of erosion of master streams, the tributaries have carved entrenched courses and gully, living the intermediate portion as remnant mounts. It appears, that the nine takes of Nashik city

are such alluvial mounts, the remnants of the level surfaces eroded by the Saraswati and other right bank streams and the Panchavati area is an alluvial platform perched on the high eroded left bank of the Godavari and mark off from the rest of the valley expansion by the entranced Aruna and Vaghadi rivers.

NASHIK CITY DRAINAGE MAP
OVERLAY OF SURFACE FLOW (VECTOR MAP)

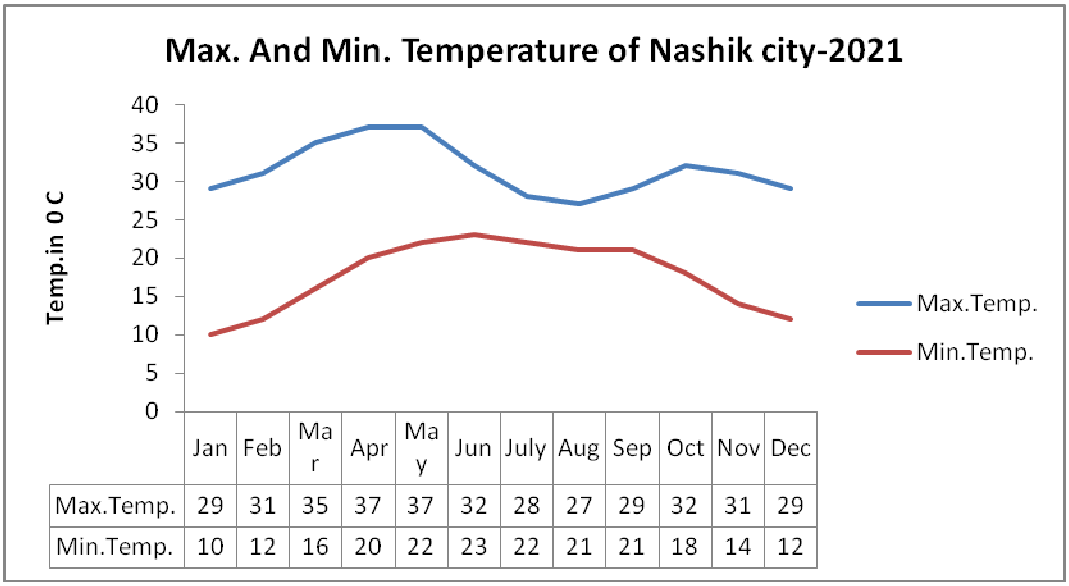


Source: SRTM DEM

Climate:

Nashik city has pleasant climate for most of the year just excluding the hot summer which observed from March to mid-June. The city has semi-arid climate according to Koppen's climatic classification criteria. The period from June to September is the Monsoon season caused by South West monsoon. It gives averagely

about 620 mm. (25 inches) of rain. The city experiences a mild, dry winter season from November to February which are characterized as warm days and cool nights.In general maximum temperature experiences in summer that is near about 42.5^0 C and minimum in winter which is less than 5^0 C. Relative humidity ranges from 43% to 62%. But in recent years it is noticed that the temperature is increasing and the rainfall is decreasing due to industrialization and fast deforestation.



	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Max.Temp.	29	31	35	37	37	32	28	27	29	32	31	29
Min.Temp.	10	12	16	20	22	23	22	21	21	18	14	12

Conclusion

This research is based on secondary data. Research highlighted on the physiographic situation of Nashik city. Physical situation considering the physiography and geology, Drainage and climate of the city. SRTM DEM model and vector map of study area indicates the geographical situation very well. The study area rests the foothill area of the upper Sahyadris on leeward side slope. Hence, its western part is more heighted than the other sides. The Godavari is the master stream gathering the waters of its tributaries which have a fan like drainage pattern. Nashik city has pleasant climate for most of the year just excluding the hot summer which observed from March to mid-June.

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