

Ghaggar River Would Remains a Potential Threat to Panchkula Township

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The recent examples of cloudbursts and flash floods in the Shivalik hills and Kishtwar in J and K, Manali on Beas River shows that the cloudbursts are occurring next door and their frequency is ever increasing. In one of the reports of Down-To-Earth Magazine, 26 cloudbursts occurred in seven months of 2021 in four northern Himalayan States of India. The increasing intensity of cloudbursts has been attributed to climate change. The bridges were washed away and river protection works failed to provide any protection in view of very high magnitude of river floods. If you try to encroach upon the territories of the mighty rivers, they would teach you a lesson sooner or later. God forbidden, if such a cloudburst happens in the hilly catchment area of Ghaggar River or a torrential rain cause huge landslide which may block river flow temporarily when breach, the settlements of the Panchkula township located along its banks may face unprecedented damage. Such examples are many which happened during the recent times.

Ghaggar is perhaps the only river which does not reach the sea. The entire runoff is absorbed in the sandy tracts of Rajasthan. Through large number of tributaries, emanating from the lower Shivaliks, it pass through Himachal Pradesh then Haryana (via Panchkula) then Punjab again Haryana and Rajasthan where it cause extensive damage to land and infrastructure. At the top above Panchkula, Ghaggar River has two main tributaries one coming from Kalka / Parwanoo side and other from the Morni side and both join near ChandiMandir.

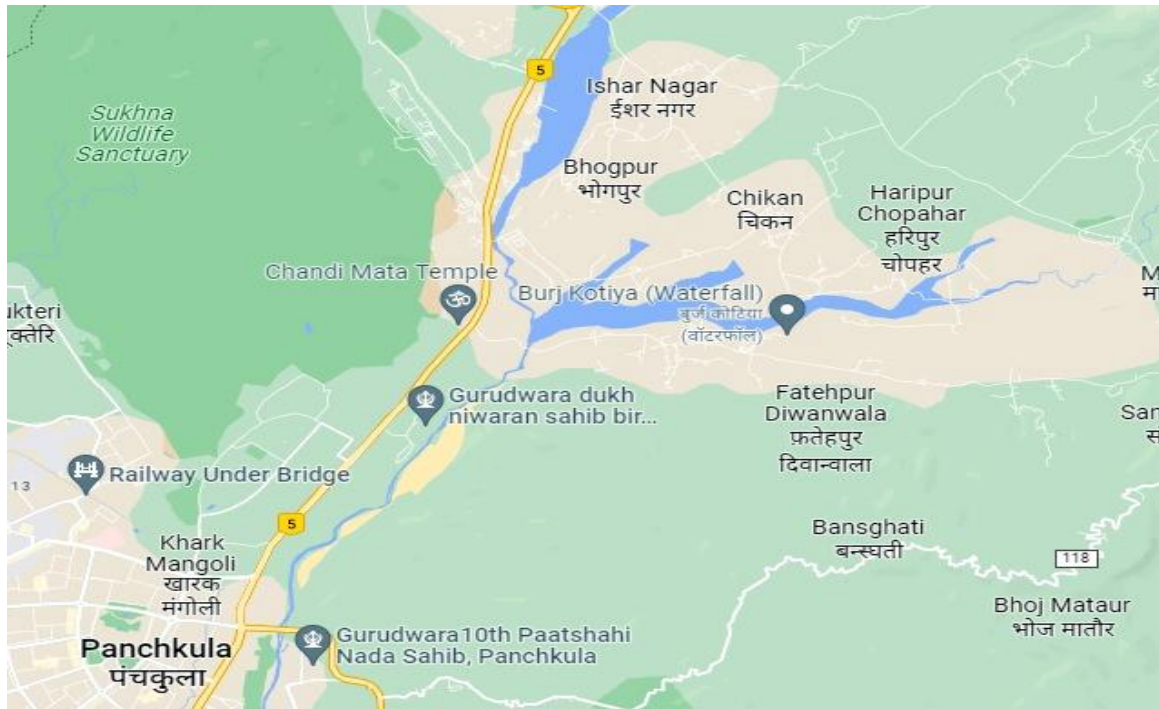
The tributary from Parwanoo side has been blocked by an earthen dam with a masonry spillway near Amravati Enclave. The height of this dam was restricted due to the presence of settlements in its peripheral area above the dam. The storage capacity is limited and risks of its rapid siltation are high. This is mainly because the widening of highway to Shimla in lower area has produced lot of erodible debris which flows down every monsoon and enters the reservoir area of this dam reducing its storage capacity. Such dams constructed in Punjab Shivaliks have pre-maturely silted and Sukhna Lake rapid siltation is one of the examples.

The second main tributary of Ghaggar comes from Morni side where above the Haryana state boundary it divides into two drainage lines and both meet near Bariser village at the boundary of Haryana and Himachal Pradesh. Both of these drainage lines originate from lower Shivalik Hills of Himachal Pradesh and brings huge runoff from degraded forests and private lands devoid of adequate vegetation cover. The drainage line density is very high and no major conservation projects have operated in these watersheds. As both the drainage lines meet near Bariser village, Ghaggar River passes through a very narrow gorge and open up near village Chhamla where there is a low height bridge over the Ghaggar River. Thereafter Ghaggar follows a tortuous path up to Thapli Village and then with 10 km straight run it reaches ChandiMandir Junction Point and takes a left turn and ultimately pass under Nada Sahib Bridge to lower areas of Panchkula and settlements along its banks. Since Panchkula is located along both of its banks, the high intensity floods in the catchment area would always remain a potential threat to the Panchkula town. The area from Chamla upto Thapli is prone to landslides. One huge landslide damaged road to Morni some time back.

The main bridge on Nada Sahib Road has always been under threat and its pillars were exposed earlier also and sudden drop below the bridge has been controlled by crate-wire filled stone drops which were never stable.

The chances of landslides are there and if any large land slide in heavy rainfall may block the flow of Ghaggar river temporarily and as this block burst, flash flood would occur and may damage to infrastructure in Parchkula township. Ghaggar River would remain a potential threat to Panchkula Township particularly in view of frequent cloudbursts in the Shivalik hills and future impacts of climate change. It is widely held that rivers do not forget their way and take over territories if encroached.





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