



GOVERNMENT OF PAKISTAN
PRIME MINISTER'S OFFICE
NATIONAL DISASTER MANAGEMENT AUTHORITY
ISLAMABAD



F. No. 787/NDMA/IA&PD/2024

Islamabad the 27 Aug 2024

Subject: **Infrastructure Advisory 04/24 – Post-Collapse Mahandri Bridge and Landslide Recommendations**

1. Following the **recent collapse and rebuilding of the Mahandri Bridge and landslide on nearby mountain** composed of loose soil, there remains a heightened risk of future incidents due to on-going monsoon flow and potential landslides in the area. For better future preparedness immediate measures are required to ensure the stability and safety of the rebuilt bridge and the surrounding environment.
2. The following picture depicts the high risk area in Mahandri Bazar.



Figure 1 Mahandri Bazar

3. In light of existing hazard, **the following recommendations are to be ensured** by Khyber Pukhtunkhwa Government, and its line departments including PDMA, District Administration/DDMA and Municipal Administration:

a. **Bridge**

- (1) Readjusting the location and alignment of the bridge and increasing the height above maximum flood level.
- (2) To achieve the required elevation, inclined approaches may be incorporated in the design in addition to riprap on abutment to mitigate scouring effect.
- (3) Stone pitching may be carried out around the abutments to prevent soil erosion in addition to water ingress in Mahandra Bazar during flood scenarios.

b. **Water Flow Path**

- (1) Desiltation is recommended at the area marked in Figure - 2 in order to increase the capacity of the water channel. This will result in smooth merging of both streams in addition to preventing turbulence at point A marked on the map.
- (2) Restricting new construction in high-risk prohibited zone identified as landslide prone area

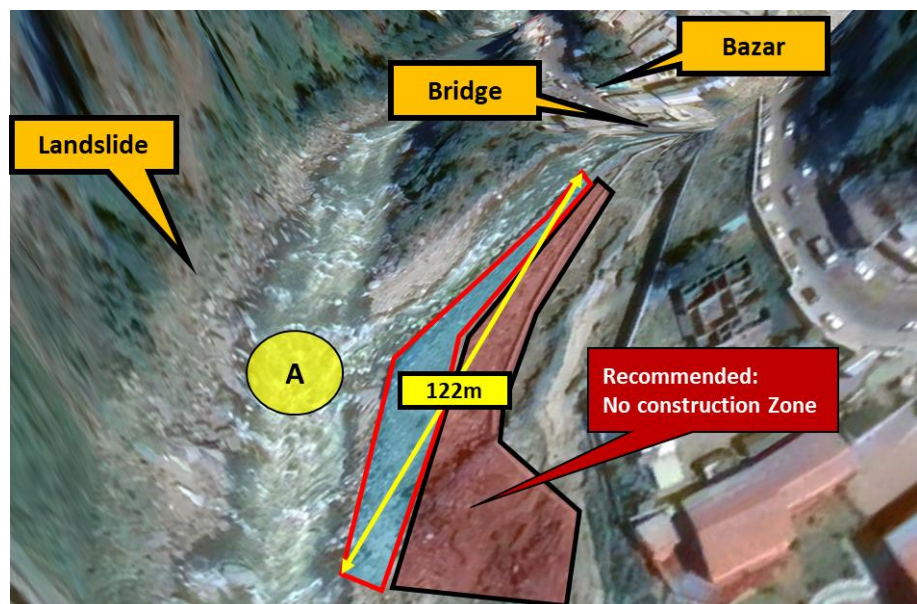


Figure 2 Recommended Water Flow Path

c. **Land Slide**

(1) 200m of stone pitching is recommended from 34°41'43.03"N, 73°34'31.88"E to 34°41'37.53"N, 73°34'30.95"E at the foothill in-order to mitigate soil erosion induced by water flow. Construction of stepped retaining wall to hold back soil and prevent slope failure

(2) Shotcreting is recommended in most landsliding prone area with height as per wedge formed on site.

4. The concerned departments are instructed to follow the flood alert advisories issued from time to time on NDMA Website, <http://www.ndma.gov.pk/advisories> and NDMA Mobile Application.