

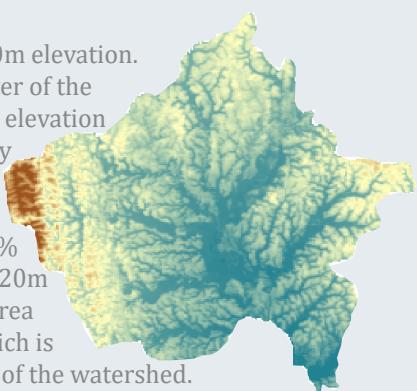
Logang Watershed

Watershed K-98

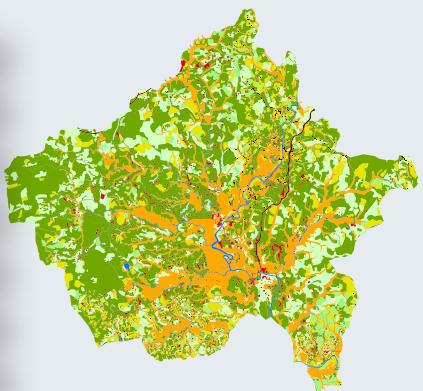
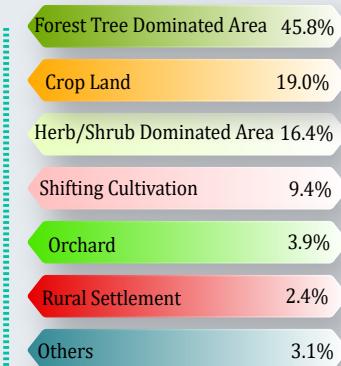


The Logang sub-watershed (K-98), located in the 02 no Chengi and 01 no Logang Union under the Panchhari Upazila of Khagrachhari District, encompasses 26 paras and covers approximately 2,982 hectares of land. It is home to over seven thousand people, with communities consisting of the Chakma, Marma, and Tripura ethnic groups. The overall literacy rate is 88.6%, yet opportunities for higher education are very limited. Farming is the main occupation, and the average monthly income is 15,178 taka, which is relatively low. About 84.2% of the houses are katcha (made from mud, bamboo, and straw), and almost 64% of households use solar electricity systems. There is a noticeable scarcity of drinking water and a prevalent incidence of diseases.

Only 16.1 % area lies below 50m elevation. The valley situated in the center of the sub-watershed has the lowest elevation in the region. Most of the study area lies between 75-90m (35.7%) and 90-105m (38.3%) elevation. About 7.14% of the area lies between 105-120m elevation. Only 2.86% of the area lies above 120m elevation which is situated in the western region of the watershed.

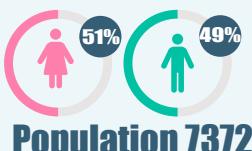


● <70
● 100
● 120
● >160



Total 13 types of land use have been identified within the K98 watershed

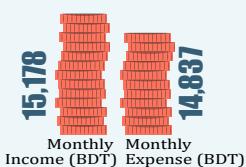
Demography



Demography

Male 90% Female 87%
Average literacy rate 88.6%

Economy



WASH



Literacy

Male 90% Female 87%
Average literacy rate 88.6%

Economy



Poverty

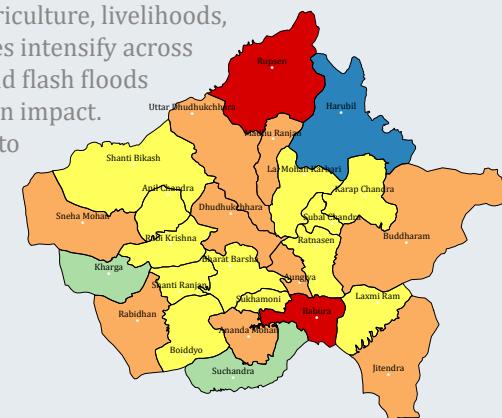


Climate Change

Climate Change Induced Hazards



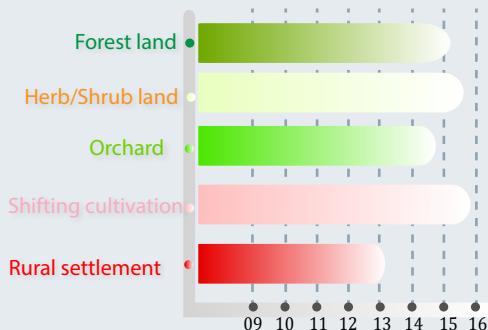
Nine climate hazards threaten Logang watershed agriculture, livelihoods, ecosystems, and biodiversity. Drought and heat waves intensify across most paras. Erratic rainfall, lightning, river floods, and flash floods increase in frequency and severity, ranking highest in impact. Hail storms, cold waves, and landslides occur at low to moderate intensity.



Watershed Degradation

Land Degradation Status

In K 98, land degradation is prominent in Shifting Cultivation (15.96%), Herb/Shrub (15.58%), and Forest Tree areas (15.38%), impacting ecological balance.



Cause of Degradation

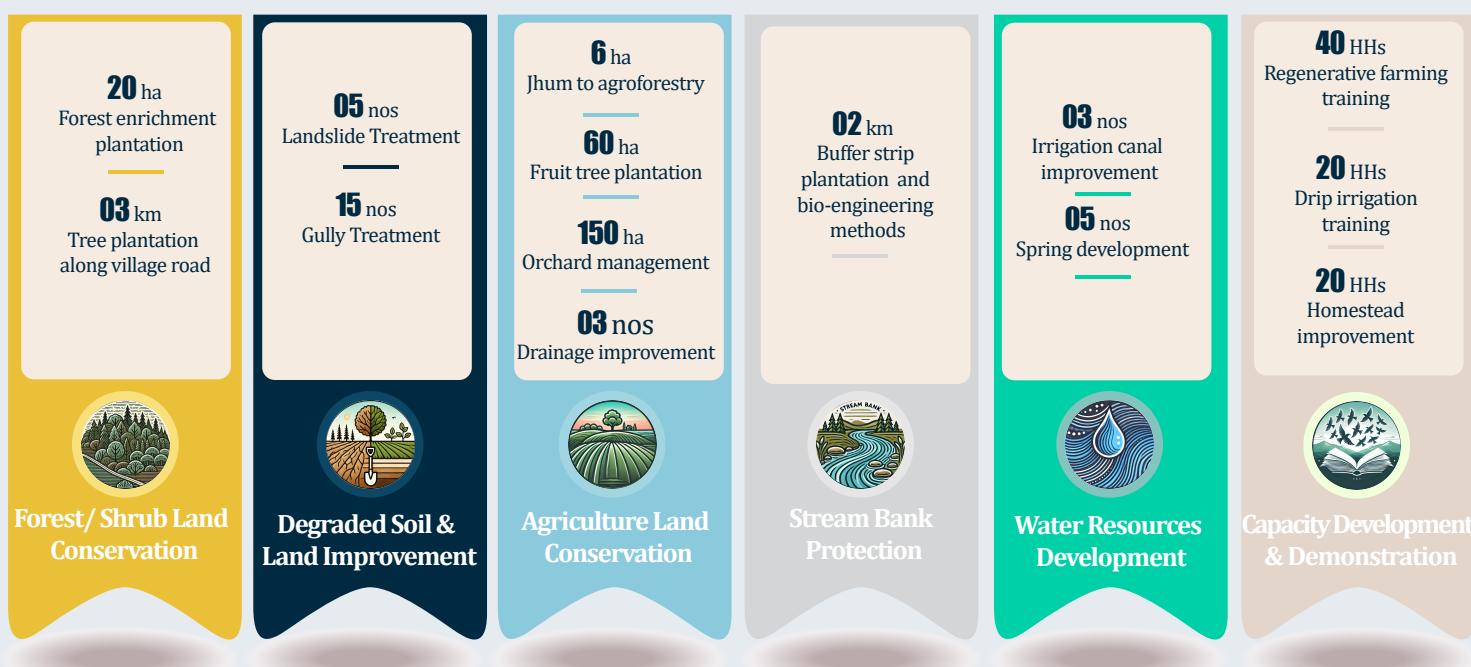
- Jhum cultivation with short rotation
- Improper crop management
- Overgrazing
- Deforestation & overharvesting of trees
- Lack of vegetation cover
- Climate Change
- Overuse of inorganic fertilizers

Degradation Process

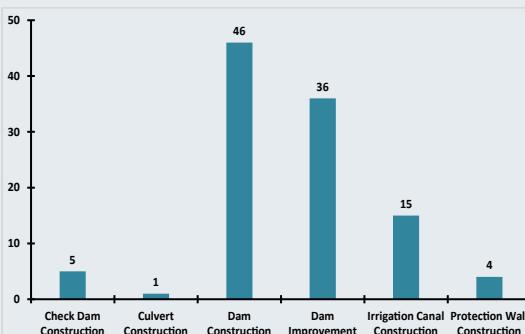
- Reduction of vegetation cover
- Quality and species composition change/diversity decline/monoculture plantation
- Soil erosion/landslides
- Surface sealing/hard pan development
- Waterlogging
- River bank erosion

Watershed Conservation

Conservation measures focused on enhancing ecological resilience as well as improving livelihood quality of the local community were identified and categorized into 6 classes.



Watershed Management Infrastructures



Watershed conservation interventions in Logang include Dam Construction (46) and Dam Improvement (36) being the most implemented, followed by Irrigation Canal Construction (15), aimed at enhancing water storage and distribution. In addition to these, other watershed conservation measures have been identified to further boost water availability, agricultural productivity, and overall ecosystem health. Measures such as Check Dam Construction, Culvert Construction, and Protection Wall Construction will help control runoff, reduce soil erosion, and protect critical infrastructure. Together, these interventions will significantly benefit the local community by ensuring year-round water access, improving crop yields, and reducing vulnerability to climate-induced hazards. These integrated efforts promote sustainable livelihoods and strengthen resilience in the Logang region.