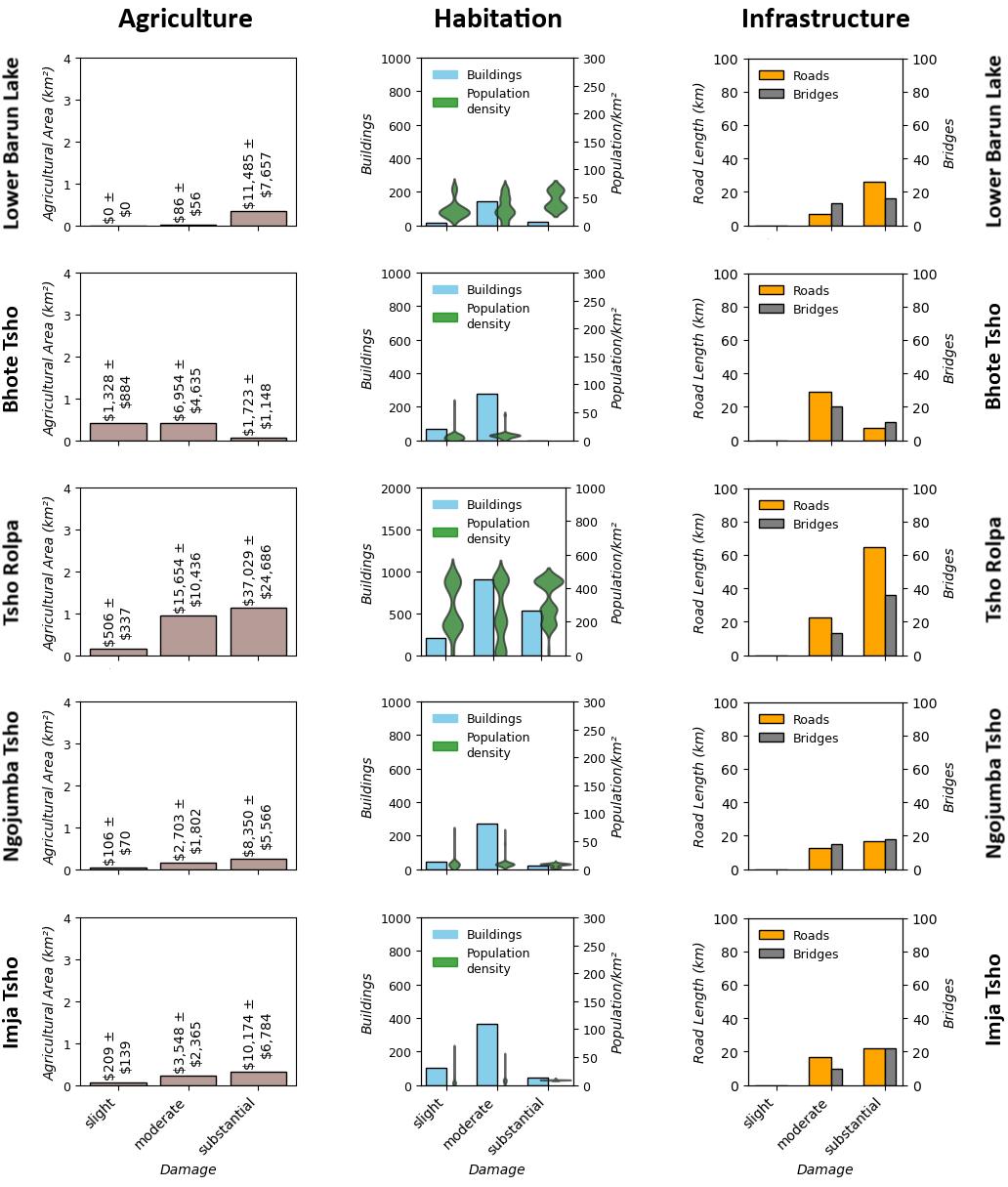


**Figure S1:** The differences between a simulation run with the baffle opening in 3500s (left) vs. an opening time of 3000s (right). The larger volume coupled with the shorter opening time does not lead to a significantly different simulation result (see orange circles). Both simulation results are depicted in ParaView 5.8.1.



**Figure S2:** Downstream impact of a low-magnitude GLOF in 2040 under the SSP2 scenario. The potential damage is based on depth-damage curves (Huizinga et al., 2017; Chen et al., 2022), the financial impact is based on lower and upper cost per m2 of agricultural land in this region (Huizinga et al., 2017), and the population forecasts are provided by Wang et al. (2024). Note the different scale of the Y-axes in the habitation plot for Tsho Rolpa.