water

Supplementary Materials

Table 1. Calibration of rainfall distribution uniformity in different rainfall intensity.

Rainfall intensities (mm/h)	Uniformity coefficient (%)	Average rain intensity (mm/h)
60	86.17	61.75
90	90.41	91.51
120	85.74	122.4
Average	87.44	

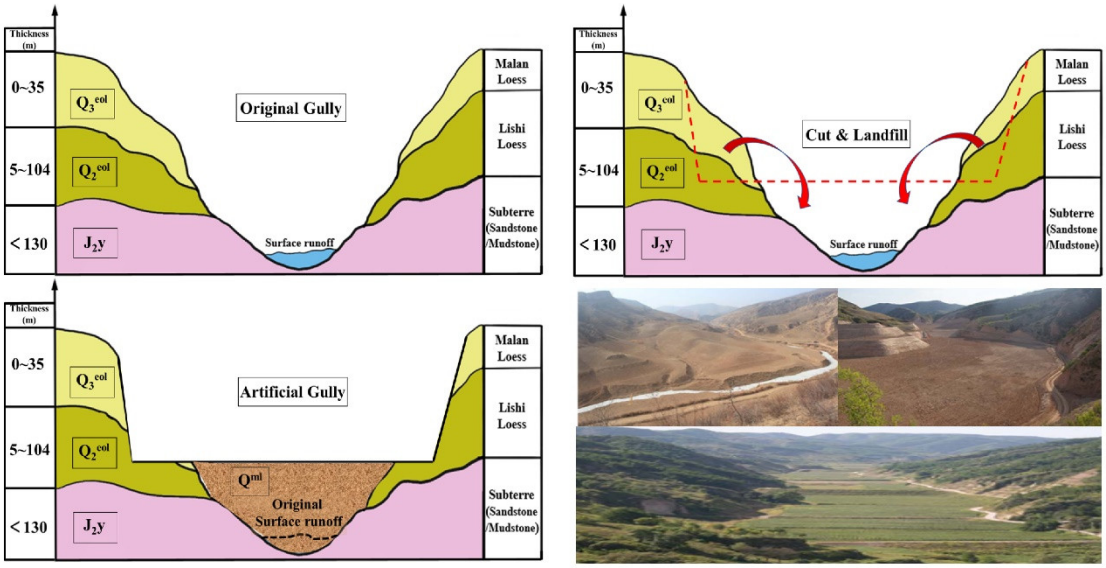

Figure S1. Primary process of GLC.



Figure S2. Pure coarse sand experiments. (a) Soil flume fill with pure coarse sand; (b) Performance testing.

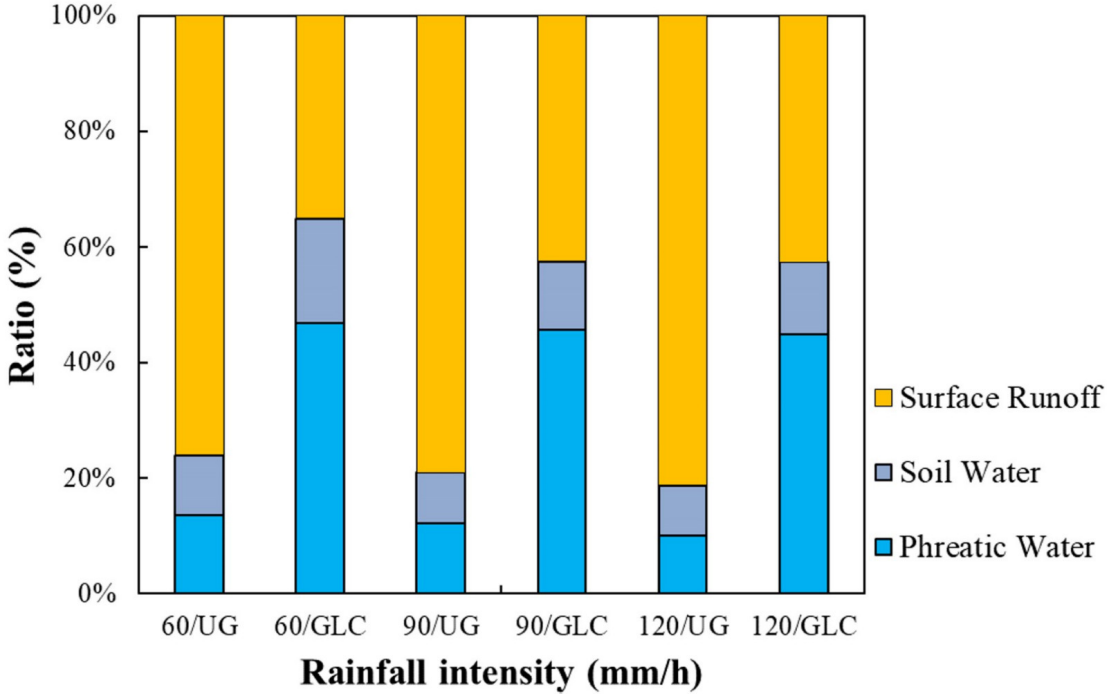

Figure S3. Water balance components ratio under different rainfall intensities.

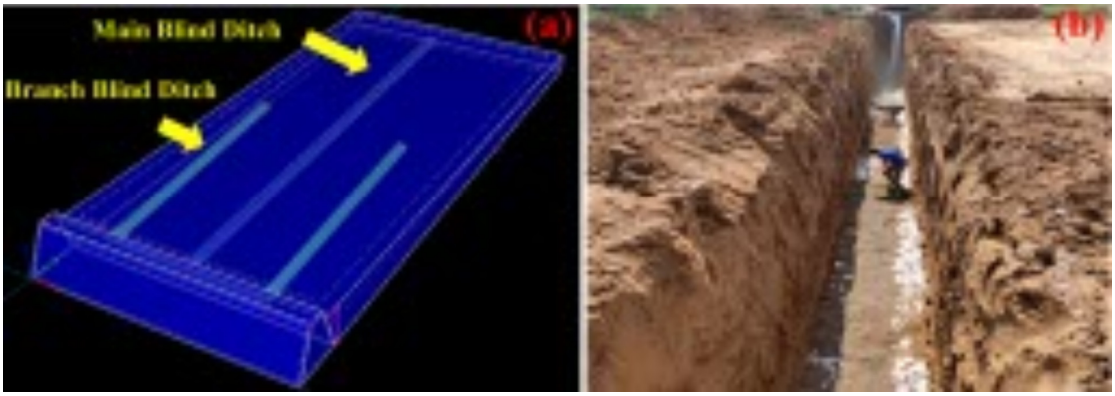

Figure S4. Field simulation and demonstration. (a) Simulation of GLC with the blind ditch in Yangjuangou sub-basin by HYDRUS-3D; (b) Demonstration of the blind ditch in Yangjuangou sub-basin.

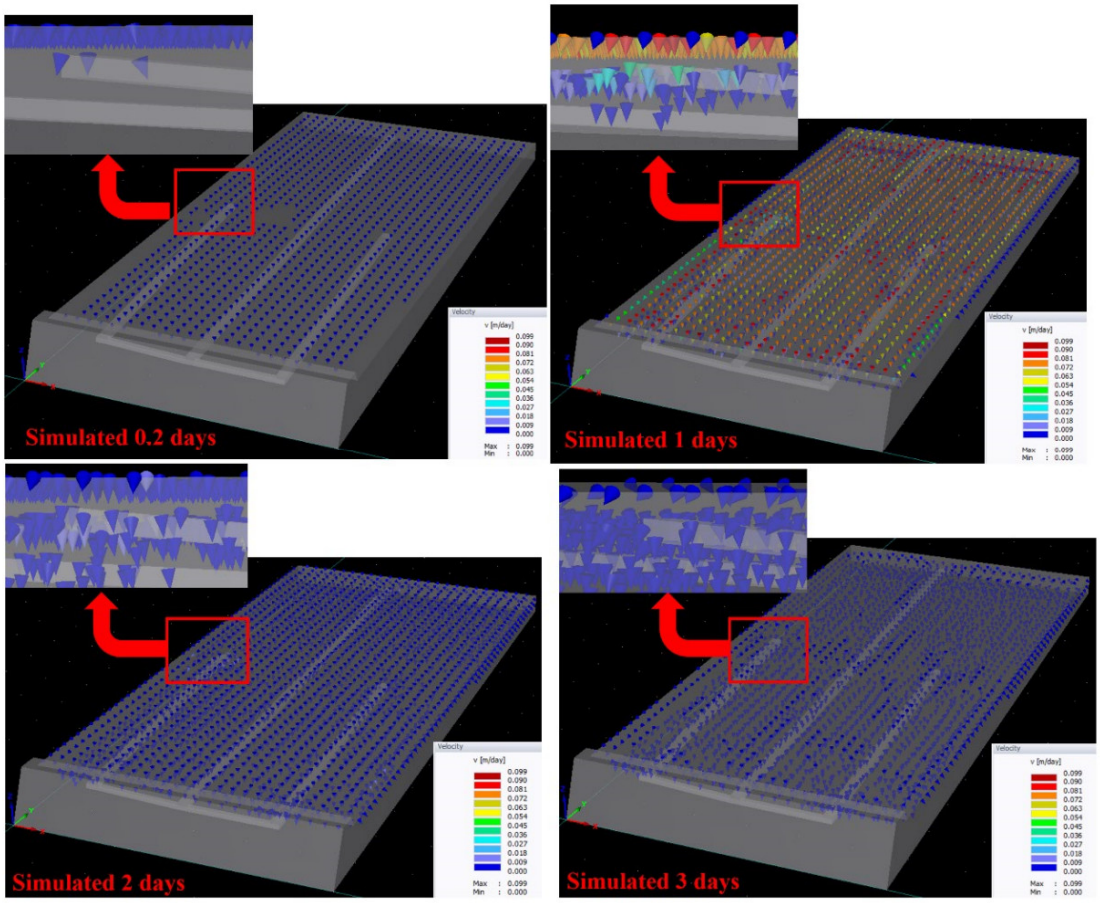

Figure S5. Compensation of water velocity vector in different simulation periods.

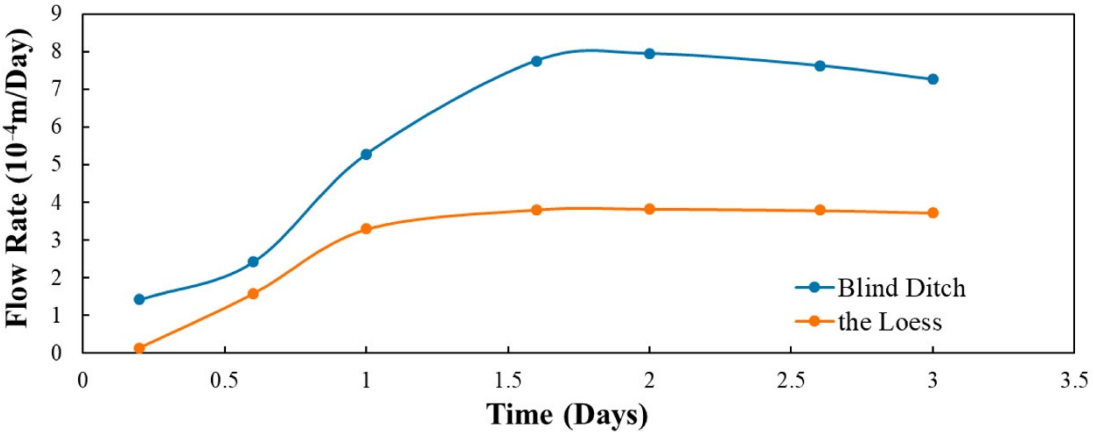

Figure S6. Flow rate at the junction of blind ditch and the loess.