

Supplementary file

Article

Glacial Lakes in the Nepal Himalaya: Inventory and Decadal Dynamics (1977–2017)

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Table S1. The decadal dynamics of newly emerged and disappeared glacial lakes in Nepal.

Period	Emerged lakes		Disappeared lakes	
	Number	Area (km ²)	Number	Area (km ²)
1977–1987	526	10.06	-	-
1987–1997	187	2.99	99	1.23
1997–2007	345	4.81	73	1.06
2007–2017	293	4.66	238	2.41
Overall change				
1987–2017	511	10.1	102	1.1

Table S2. Total number of newly emerged glacial lakes in different basins by type in between 1987 and 2017. The values in the parentheses indicate the total area (km²) of the respective glacial lakes.

Lake types	Koshi	Gandaki	Karnali	Mahakali	Total
Supraglacial	75(1.18)	56(0.61)	12(0.1)	9(0.07)	151 (1.97)
Pro-glacial	66(2.11)	46(1.37)	67(2.17)	-	179(5.65)
Unconnected	52 (0.79)	17(0.42)	54(0.67)	1 (0.01)	124(1.89)
Non-glacier-fed	33(0.39)	6(0.05)	17(0.15)	-	57(0.6)
Grand Total	225(4.47)	125(2.45)	150(3.10)	10(0.08)	511(10.1)

Table S3. Total number of disappeared glacial lakes in different basins by type between 1987 and 2017. The values in the parentheses indicate the total area (km²) of respective glacial lakes.

Lake types	Koshi	Gandaki	Karnali	Mahakali	Total
Supraglacial	9 (0.14)	-	17(0.2)	2(0.027)	28(0.37)
Pro-glacial	-	-	4(0.08)		4(0.076)
Unconnected	7 (0.05)	3(0.027)	18(0.18)		28(0.26)
Non-glacier-fed	12(0.08)	2(0.014)	28(0.31)		42(0.4)
Grand Total	28(0.28)	5(0.041)	67(0.77)	2(0.027)	102(1.1)

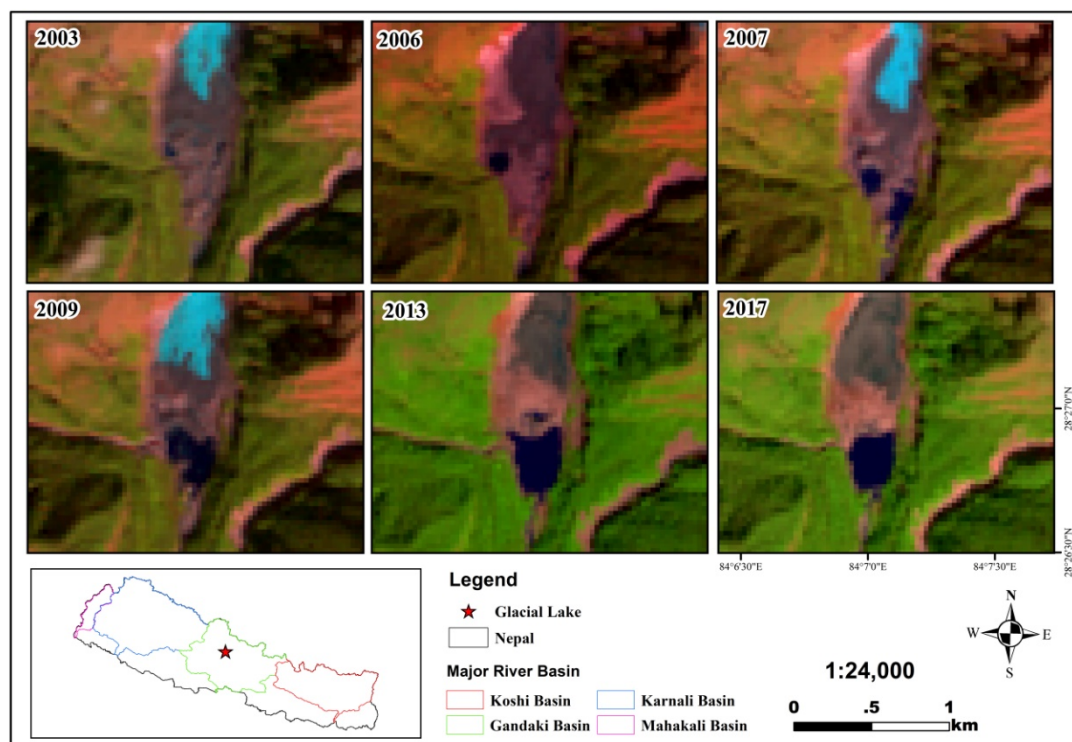


Figure S1. Evolution map of Kawache glacial lake at the lowest elevation (~2456 m) in the Kaski district of Nepal obtained from the Landsat TM imagery from 2003, 2006, 2007 and OLI imagery from 2013 and 2017.