Topography indicator TOP (project regions)

Costes, G. / ASTERS, Lüthi, R., Rapp, M. and Haller, R. / Swiss National Park

Summary Representation of ecological networks at lower altitude and the topographic influence on dispersal axes. Altitude and slope are classified from 0 to 10 and combined within the topography indicator. It is one of the indicators belonging to the continuum suitability indices CSI (consisting of LAN, POP, FRA, TOP, ENV and INF).

Legend

10	6	2
9	5	1
8	4	0
7	3	

1   Data

We used the most accurate national or regional digital elevation models available (Table 1).

Table 1: Overview on digital elevation models used

Dataset	Country / region	Year (created)	Year (updated)	Source
Digitales Geländemodell (DGM) Österreich	Austria		2015	Land Kärnten - data.ktn.gv.at
IGN RGE ALTI 25m	France		2016	Institut national de l'information géographique et forestière
SwissALTI3D	Switzerland		2018	Federal office of topography swisstopo
ASTER Global Digital Elevation Model GDEM V2	Italy, Germany, Slovenia		2011	NASA et al. (2011)

2   Processing and classification

Slope was calculated after defining the projection and spatial extent. Both slope and altitude grids were reclassified based on the classification scheme in Table 2. The topography indicator is the sum of their average values:

$$TOP = 0.5 * value_{altitude} + 0.5 * value_{slope}$$

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Table 2: Classification scheme

Altitude (m a.s.l.)	Indicator Value (0-10)		Slope (°)	Indicator Value (0-10)
-1500	10		≤ 30°	10
1500-1675	9		30-40°	7
1675-1850	8		40-45°	5
1850-2025	7		> 45°	3
2025-2200	6			
2200-2375	5			
2375-2550	4			
2550-2725	3			
2725-2900	2			
> 2900	1			

3   References

NASA, METI, AIST, Japan Spacesystems, U.S./Japan ASTER Science Team 2011, ASTER Global Digital Elevation Model V002.