

Supplementary Material A – Assessment criteria for Scientific and Additional Values applied to loess geomorphosites, modified from Bollati et al. (2017).

Scientific Value (SV)		
RGmP	0	Poor/None representativeness of a morphogenetic system
Representativeness of (paleo)Geomorphological Process	0,33	Discrete representativeness of a morphogenetic system
– <i>A in Table 1</i>	0,67	Good representativeness of a morphogenetic system
	1	Exemplar representativeness of a morphogenetic system
RGP	0	Poor/None representativeness of a geological process
Representativeness of Geological process	0,33	Discrete representativeness of a geological process
– <i>A in Table 1</i>	0,67	Good representativeness of a geological process
	1	Exemplar representativeness of a geological process
EE	0	Representativeness without any educational value
Educational Exemplarity	0,33	Representativeness with poor educational value
– <i>A in Table 1</i>	0,67	Representativeness difficult for non-experts
	1	Representativeness with excellent educational value
Gd	0	1 lithology, 1 main landform
Site Intrinsic Geodiversity	0,50	1 lithology, n-landforms
	1	n- lithologies, n-landforms
GI	0	Without production or scientific divulgation
Geohistorical importance	0,33	Low frequent topic for scientific research
– <i>A in Table 1</i>	0,67	Relevant topic for scientific research
	1	Fundamental for the development of Earth Sciences in general
ESR	0	Without any connection with the biologic element
Ecologic support role	0,33	Presence of interesting flora and fauna
	0,67	The geo(morpho)logical features condition the ecosystems
	1	The geo(morpho)logical features determine the ecosystems
In	0	Essential geo(morphological) elements are not preserved
Integrity	0,50	Essential geo(morpho)logical elements are just preserved
	1	Essential geo(morpho)logical elements are intact
Ra	0	Frequent also at level of the study area
Rareness	0,50	Rare at level of the study area, abundant at national level
	1	Rare at national level
Additional Values (AV)		
Cu	0	Any cultural feature in the surroundings
Cultural value s.s.	0,50	Presence of cultural features not correlated with geo(morpho)logical features
– <i>B in Table 1</i>	1	Presence of cultural features correlated with geo(morpho)logical features
Ae	0	Not relevant
Aesthetic value	0,50	Strong contrasts in landforms, lithologies and colours, spatial limited
– <i>C in Table 1</i>	1	Strong contrasts in landforms, lithologies and colours
SEc	0	Element without exploitation or insertion in an economic area (Not touristic)
Socio-Economic value	0,33	Element with exploitation or insertion in an economic area (Not touristic)
– <i>D in Table 1</i>	0,67	Element inserted in an economic-touristic area
	1	Element inserted in an economic-touristic circuit

Supplementary Material B – Assessment criteria for Potential for Use and the Spatial Accessibility applied to loess geomorphosites, modified from Bollati et al. (2017).

POTENTIAL FOR USE (PU)	TA Temporal Accessibility		0,25 0,5 0,75 1	Only in summer Except in winter Except in rainy days All over the year			
	SAc Spatial Accessibility		0,2 0,4 0,6 0,8 1	On foot, Expert Excursionists* On foot, Touristic/Excursionist* On foot for numerous group, because difficult access for bus Allowed to means of transportation Allowed to means of transportation, access also to disables			
	Vi Visibility		0 0,2 0,4 0,6 0,8 1	Not observable or great difficulties in observing it Just visible or with special tools (artificial lights, ropes..) Reasonable visibility but limited by vegetation Good visibility but with need of moving to improve it Good visibility for all geo(morpho)logical elements Excellent visibility for all geo(morpho)logical elements			
	Se Services		0 0,33 0,67 1	Hotels and services far from 25 Km Hotels and services far from 10 - 25 Km Hotels and services far from 5 - 10 Km Hotels and services far from 5 Km			
	NT Number of Tourists		0 0,50 1	Few Medium Abundant			
	SA Sport Activities		0 0,50 1	None Yes, not correlated with geo(morpho)logical features Yes, correlated with geo(morpho)logical features			
	LC Legal Constraints		0 0,33 0,67 1	Total protection, prevented use Protection, limited use Under protection but with few or any prevention for use No protection or limitation in use			
	UGI Use as Geoheritage related Interest		0 0,50 1	No divulgation or use Use in academic ambit With divulgation and use as geo(morpho)site			
	UAI Use of the Additional Interests		0 0,50 1	Any divulgation or use Use of additional interests Naturalistic or cultural paths already started			
	SGs Geo(morpho)sites in the Surroundings		0 0,50 1	Any sites in the study area Sites in the neighbourhood but not genetically correlated Sites in the neighbourhood and genetically correlated			
	*CALCULATED ACCESSIBILITY (CA) (ONLY FOR ON FOOT ITINERARIES)	Ti Tipology	0	Any traces	GM Ground Material	0	Ice
			0,2	Traces		0,2	Snow
0,4			Path	0,4		Coarse debris coverage	
0,6			Mule tracks	0,6		Medium debris coverage	
0,8			Dirt road	0,8		Fine or soil debris coverage	
1			Paved road	1		Bed rock or dirt/paved road	
SI Sloping		0	Yes	SM Slope Material	0	Fractured rock, soils, snow and ice	
		1	No		1	Rocks and coherent deposits	
SI Slope Inclination		0	> 61°	St Steepness	0	High	
		0,25	51°-60°		0,5	Medium	
		0,5	41°-50°		1	Low-null	
		0,75	31°-40°				
		1	<30°				
TI Tourist Information		0	No	WSP Water/Snow on path	0	Yes	
		1	Yes		1	No	
Wi Width		0	<30 cm	DC Degree Of Path Conservation	0		
		0,25	30-50 cm		0,3	Very bad	
		0,5	50-100 cm		3	Fairly good	
	0,75	100 cm	0,6		Good		
	1	>100 cm	7		Excellent		
			1				
HI Human Interventions	0		Present and increasing vulnerability				
	0,33		Absent				
	0,67		Present not influencing				
	1		Present and reducing vulnerability				

Supplementary Material C – Equations used to calculate the macrocriteria of *PGmfs* (SV, AV, PU, SIn, EIn), modified from Bollati et al. (2017).

EQUATIONS		
SV-Scientific Value	$SV = (GM+PgM+EE+Gd+GI+EI+OI+In+Ra)$	0-8
AV-Additional Values	$AV = (Cu+Ae+SEc)$	0-3
GV-Global Value	$GV = (SV+AV)$	0-11
IU-Index of Use	$IU = EE+ Ae$	0-2
Potential for Use s.s.	$PUss = (TA+Vi+Se+NT+SA+LC+UGI+UAI+SGs)$	0,25-9
PPU-Partial potential for Use	$PPU = (PUss+IU)$	0,25-11
CA-Calculated Accessibility*	$CA = (Ti+St+Sl+Wi+GM+WSP+SI+SM+DC+HI+TI)$	0-11
AFc-Accessibility Factor (on foot)	if $SAC \leq 0.4$; $AFc = (CA/11)*0,5$	0-0,5
AFs-Accessibility Factor (other)	if $SAC \geq 0.6$; $AFs = SAC$	0,6-1
PU-Potential for Use (on foot)	$PUc = PPU + AFc$	0,25-12
PU-Potential for Use (other)	$PU_s = PPU + AFs$	0,25-12
SIn-Scientific Index	$SIn = (GM+PgM+GI)/3$	0-1
EIn-Educational Index	$EIn = [EE+Ae+(A_{Fc/s})]/3$	0-1
TS-Total Score	$TS = GV+PUc/s$	0,25-23