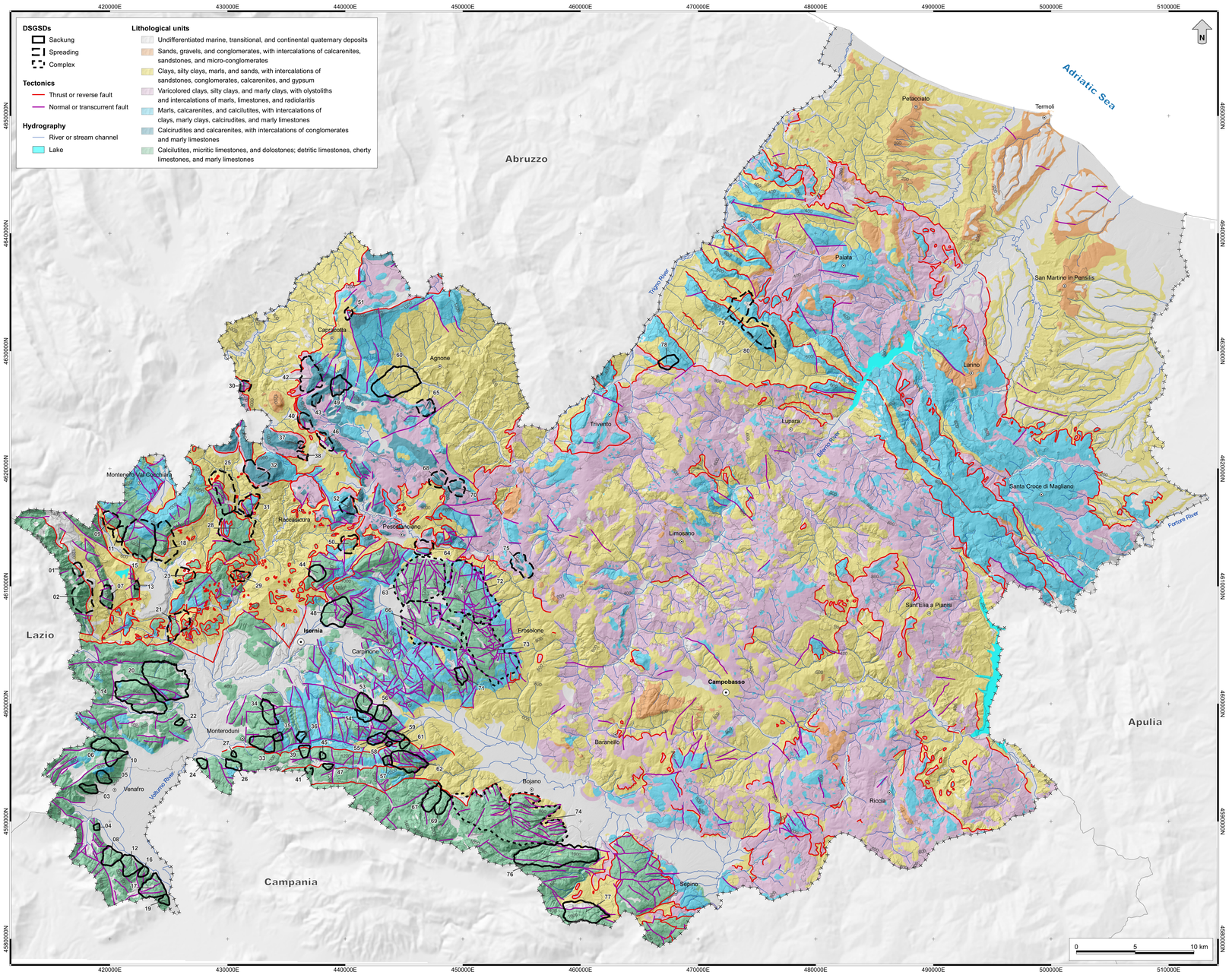
INVENTORY MAP



Deep-Seated Gravitational Slope Deformation in Molise region (Italy): Novel inventory and main geomorphological features

Main Map scale 1:140,000
Auxialiar Map scale 1:500,000
Structural Scheme scale 1:1,000,000

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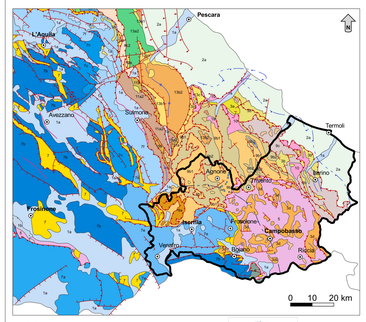
LOCATION MAP AND GEOSTRUCTURAL SCHEME

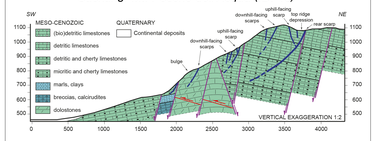


1a Post-orogenic complex
Continental sequences (Holocene-Upper Pleistocene)
1b Potassic volcanites (Pleistocene)
Foredeep (peri-adriatic) sequences
2a Clastic deposits (Lower Pleistocene-Upper Pliocene)
2b Clastic deposits (Upper-Middle Pliocene)
Thrust top basins
3a Clastic deposits (Lower Pleistocene - Upper Pliocene)
3b Carbonate and siliciclastic deposits (Middle - Lower Pliocene)
3c Evaporites and clastic deposits (Lower Pliocene-Messinian)
3d Clastic deposits (Lower Pliocene?-Messinian)
Sannio units
4 Transitional carbonate sequence (Lower Miocene-Lower Cretaceous)
5 Molise (Sannio?) units
Basin sequence (Middle Miocene - Upper Cretaceous)
Lazio-Abruzzi (inner) carbonate platform and transitional sequences
6a Foredeep, siliciclastic (flysch) sequence (Messinian-Tortonian)
6b Meso-Cenozoic, pre-tertigenous, carbonate platform sequence
6c Meso-Cenozoic, pre-tertigenous, carbonate platform sequence
6d Meso-Cenozoic, pre-tertigenous, shelf-margin to slope sequence
6e Meso-Cenozoic, pre-tertigenous transitional (proximal) carbonate sequence
6f Meso-Cenozoic, pre-tertigenous slope-to-basin sequence
Umbria-Marche Units
7a Meso-Cenozoic, pre-tertigenous carbonate platform to basin sequence
7b1 Messinian siliciclastic (flysch) sequence
7b2 Meso-Cenozoic, pre-tertigenous slope sequence
7c Lower Pliocene-Messinian siliciclastic (flysch) sequence
Molise units
8 Slope-to-basin sequence (Middle Miocene-Lower Cretaceous)
8b1 Foredeep, siliciclastic (flysch) sequence (Messinian-Tortonian)
8b2 Basin sequence (Tortonian-Oligocene)
8c Undifferentiated pre-tertigenous basin sequence and foredeep siliciclastic (flysch) sequence
M.it Frentani tectonic melange
9 Chaotic assemblage of Molise and Sicilidi units (Lower Pliocene-Messinian)

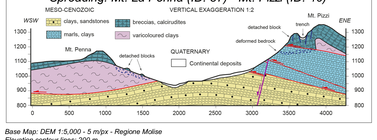
Molise
Buried front of Apennine accretionary wedge
Buried front of Matese and Montagnola
Anticlinal fold
Synclinal fold
Unknown kinematic fault
Normal fault
Reverse fault
Thrust
Lazio-Abruzzi (outer) carbonate platform and transitional sequences
10a Foredeep, siliciclastic (flysch) sequence (Messinian)
10a2 Meso-Cenozoic, pre-tertigenous carbonate platform to basin sequence
La Guardia-Colle Madonna Unit
11a Foredeep, siliciclastic (flysch) sequence (Lower Pliocene-Messinian)
11b Meso-Cenozoic, pre-tertigenous slope-to-basin sequence
Apulian carbonate platform and transitional sequences
12a1 Foredeep, siliciclastic (flysch) sequence (Lower Pliocene)
12a2 Foredeep, siliciclastic (flysch) sequence (Lower Pliocene-Messinian)
12b1 Foredeep, siliciclastic sequence (Lower Pliocene)
12b2 Meso-Cenozoic, pre-tertigenous slope-to-basin sequence covered by Cenozoic ramp sequences
12c Foredeep, siliciclastic (flysch) sequence (Lower Pliocene)

REPRESENTATIVE CROSS-SECTIONS

Sackung: Mt. Pesche dell'Acqua (ID: 48)



Spreading: Mt. La Penna (ID: 37) - Mt. Pizzi (ID: 46)



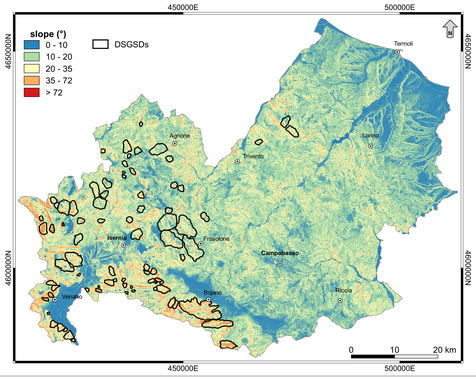
Base Map: DEM 1:5.000 - 5 m/px - Regione Molise
Elevation contour lines: 200 m
EPSG: 32633 WGS84 / UTM zone 33N

LIST AND MORPHOMETRIC CHARACTERISTICS

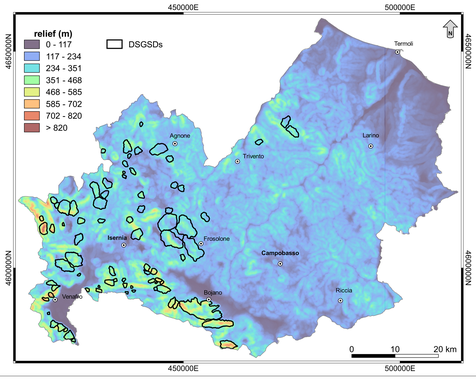
ID	Toponym	Type	Area km^2	H/L	W/L	Mean slope °	Mean relief m	Mean aspect °
01	Mt. Mare	Spreading	0.812	0.474	1.392	27.384	493.284	NE
02	Mt. Marrone	Spreading	3.968	0.346	1.139	30.862	538.886	E
03	Mt. Corno	Sackung	0.856	0.502	0.647	34.576	527.491	E
04	Mt. S. Nazario	Sackung	0.244	0.400	1.067	22.283	222.239	E
05	Mt. S. Croce	Sackung	1.014	0.562	0.714	34.065	555.416	SE
06	Mt. Rimondato	Sackung	1.864	0.283	1.975	25.365	302.269	N
07	Mt. Castelnuovo	Spreading	1.585	0.293	0.549	38.219	492.511	S
08	Mt. Ruta	Sackung	1.933	0.232	1.000	22.348	305.423	NW
09	Mt. Stiacciaro	Spreading	1.702	0.224	0.866	21.180	298.818	S
10	Mt. Grotte	Sackung	1.430	0.299	0.562	23.315	344.551	N
11	Mt. Serrone	Spreading	1.053	0.220	1.016	18.331	279.684	W
12	Mt. Calvello	Sackung	2.205	0.333	1.014	25.267	360.645	NE
13	Mt. Rocchetta	Spreading	0.264	0.780	1.755	38.911	420.193	E
14	Mt. Romano	Sackung	7.894	0.229	1.972	18.388	256.391	S
15	Mt. Castellano	Spreading	7.402	0.206	0.972	19.737	267.369	SW
16	Mt. S. Bernardo	Sackung	0.547	0.444	0.660	28.205	388.558	NE
17	Mt. Alto	Sackung	3.003	0.337	1.114	22.464	311.576	NE
18	Mt. Curvale	Spreading	5.189	0.163	0.623	20.413	339.377	S
19	Mt. Favale	Sackung	0.535	0.407	1.051	25.247	330.563	E
20	Mt. Acerone	Sackung	9.396	0.209	1.429	20.295	279.856	NE
21	Mt. Cervaro	Spreading	3.224	0.169	1.586	15.137	201.914	W
22	Mt. Inferno	Sackung	0.302	0.243	0.636	20.181	242.001	NE
23	Mt. Foresta	Spreading	1.806	0.268	0.819	20.120	304.942	W
24	Mt. Gallo	Sackung	0.565	0.370	0.688	26.152	387.966	N
25	Mt. La Caprara	Spreading	5.179	0.186	2.070	16.160	263.311	E
26	Mt. Manuccione	Sackung	0.896	0.522	1.913	31.274	407.503	N
27	Mt. Novale	Sackung	0.167	0.351	1.003	20.819	291.246	N
28	Mt. Corvino	Spreading	6.415	0.096	0.816	14.322	206.051	NE
29	Mt. Finocchio	Spreading	1.138	0.174	0.749	18.818	252.766	E
30	Mt. Pineta	Sackung	0.761	0.238	1.176	21.397	280.259	SE
31	Mt. Fratta	Spreading	2.970	0.112	0.869	14.193	192.128	SW
32	Mt. Falascoso	Spreading	3.198	0.081	0.645	13.110	191.977	S
33	Mt. Mammone	Sackung	2.225	0.370	1.550	23.557	378.342	SW
34	Mt. Rotondo	Sackung	1.891	0.251	2.509	21.362	310.963	NE
35	Mt. Altone	Sackung	0.461	0.385	0.897	23.390	339.918	E
36	Mt. Longo	Sackung	0.472	0.301	1.082	22.183	273.419	SW
37	Mt. La Penna	Spreading	0.260	0.180	0.950	13.987	269.371	SE
38	Mt. Noce	Spreading	0.507	0.129	0.552	15.350	192.153	S
39	Mt. Lo Monaco	Sackung	0.737	0.385	0.911	25.032	379.897	N
40	Mt. Citasecca	Spreading	1.191	0.195	1.538	16.643	219.180	SE
41	Mt. Puzolo	Spreading	0.281	0.319	1.254	25.454	216.117	NE
42	Mt. Capraro	Spreading	4.132	0.203	1.359	17.079	276.982	W
43	Mt. Le Coste	Spreading	0.606	0.240	1.523	15.980	187.120	SW
44	Mt. Pietrereie	Sackung	1.493	0.277	0.972	19.928	315.909	W
45	Mt. Celara	Sackung	0.233	0.478	1.382	26.215	348.848	W
46	Mt. Pizzi	Spreading	1.273	0.387	2.439	22.020	290.991	SW
47	Mt. Civita	Sackung	0.311	0.382	1.680	22.352	248.447	N
48	Mt. Pesche dell'Acqua	Sackung	4.694	0.222	0.830	16.755	261.358	SW
49	Mt. Cavallerizzo	Sackung	1.958	0.184	1.234	12.771	193.981	S
50	Mt. Peschito	Spreading	1.922	0.123	0.801	15.296	176.159	N
51	Mt. Campo	Spreading	0.511	0.214	1.570	15.575	221.842	SW
52	Mt. Pian di Lago	Spreading	1.544	0.290	1.281	20.285	286.879	E
53	Mt. Il Collicello	Sackung	1.490	0.376	1.080	23.433	355.420	E
54	Mt. La Crocella	Sackung	0.853	0.203	1.123	17.140	236.595	SW
55	Mt. Monte	Sackung	1.066	0.273	0.457	23.733	351.681	SW
56	Mt. Patalecchia	Sackung	1.496	0.433	0.961	27.842	438.867	NE
57	Mt. Serra Caprara	Sackung	0.503	0.214	0.786	17.657	205.588	SE
58	Mt. Lenza	Sackung	0.151	0.454	0.850	24.636	378.981	SW
59	Mt. La Difenzola	Sackung	0.991	0.484	1.897	30.970	474.308	NE
60	Mt. Montarone	Sackung	7.214	0.168	0.597	12.959	195.189	NE
61	Mt. Bosco del Colle di Mezzo	Sackung	0.507	0.507	0.653	31.895	483.771	NE
62	Mt. Colle di Mezzo	Sackung	3.952	0.269	0.834	23.691	334.256	S
63	Mt. Cicchetto	Complex	13.531	0.121	0.902	13.692	190.152	W
64	Mt. S. Onofrio	Spreading	1.703	0.139	1.240	14.203	167.172	N
65	Mt. Lucito	Spreading	1.766	0.172	1.007	17.116	225.897	NE
66	Mt. Colle dell'Orso	Complex	14.079	0.190	1.678	15.197	229.635	SW
67	Mt. Serra Soda	Sackung	2.390	0.335	0.476	26.348	424.484	NE
68	Mt. S. Andrea	Spreading	1.737	0.106	1.164	14.690	186.692	NE
69	Mt. S. Nicola	Sackung	1.514	0.389	0.513	28.523	451.797	NE
70	Mt. Torrevecchio	Spreading	1.594	0.120	1.002	16.652	211.315	E
71	Mt. Monaciello	Sackung	1.061	0.308	1.575	20.645	289.619	SW
72	Mt. La Montagnola	Complex	15.672	0.156	1.497	15.902	229.151	NE
73	Mt. Marchetta	Complex	14.795	0.143	2.145	14.582	203.489	SE
74	Mt. Matese	Complex	29.818	0.194	1.679	24.358	343.349	N
75	Mt. Colle dell'Urcio	Spreading	2.550	0.086	0.642	15.191	202.977	SW
76	Mt. Le Tre Torrette	Sackung	10.417	0.138	0.285	26.944	405.587	N
77	Mt. Mutria	Sackung	5.227	0.427	2.292	28.714	469.828	N
78	Mt. Breccioso	Sackung	1.396	0.205	0.666	14.443	224.713	SW
79	Mt. Marchitto	Spreading	3.351	0.153	0.659	13.164	191.329	NE
80	Mt. Mauro	Spreading	4.012	0.194	2.055	16.399	254.448	NE

GEOMORPHOMETRIC MAPS

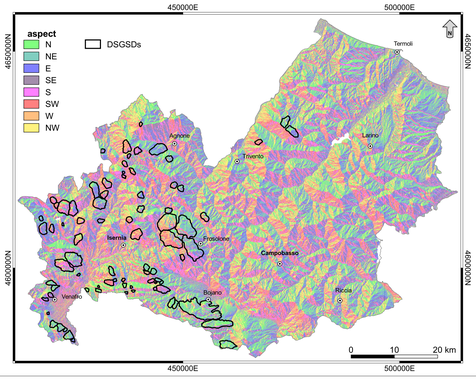
Slope Map



Relief Map

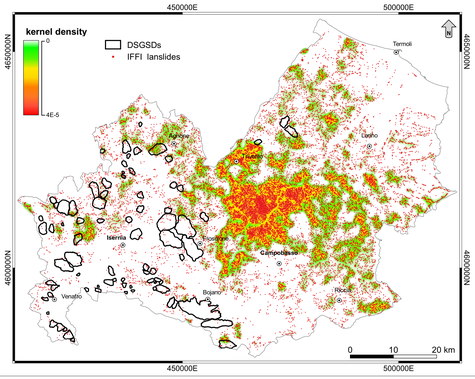


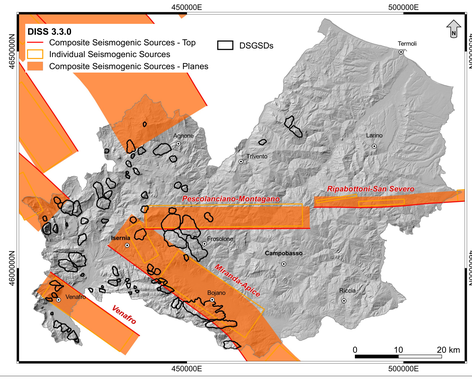
Aspect Map



LANDSLIDES

Density Map



SEISMOTECTONICS

Seismogenic sources