

Table 3: Application of selection criteria in sites under examination

Scoring Criteria	Gravity co-efficient (%)	Score	Stip Dumpsite	Score	Kumanovo Dumpsite	Score	Sveti Nicole	Score	Sveti Nikole, Meckuevci – Arbanci	Score	Karbinci	Score	K'shanje - 1	Score	K'shanje - 2	Score	Stip (quarry)	Score	Cesinovo (quarry)	Score	Kocani, Iktibanja, Presalec	Score	Krupiste
A. GEOLOGICAL - HYDRO-GEOLOGICAL CRITERIA		25%	9,44	8,27	9,54	8,73	9,61	9,48	9,24	7,99	9,51	8,00											
A1. Permeability of the underlying layer of the CWMF	20%	10	very small permeability	7	semipermeable	10	very small permeability	10	very small permeability	10	very small permeability	10	very small permeability	10	very small permeability	7	semipermeable	10	very small permeability	10	very small permeability	10	very small permeability
A2. Tectonic structure as a permeability factor	18%	10	No fractures	8	Fractured formations with some plasticity	10	No fractures	10	No fractures	10	No fractures	10	No fractures	10	No fractures	8	Fractured formations with some plasticity	10	No fractures	10	No fractures	10	No fractures
A3. Position of hydrant works- Great water works	10%	10	none in area	10	none in area	10	none in area	10	none in area	9	used streams upstream	10	none in area	10	none in area	9	used streams upstream	10	none in area	3	The nearest water body is the irrigation canal running about 800 m SE of the site		
A4. Usage of underground water	10%	10	no use	10	no use	10	no use	10	no use	6	irrigation	10	no use	10	no use	6	irrigation	10	no use	6	irrigation		
A5. Ground Erosion - stability of the slope	10%	10	<10%	10	<15%	10	<10%	10	<15%	10	<10%	10	<15%	10	<10%	10	<15%	10	<10%	7	<10%		
A6. Active Tectonics	5%	10	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m	8	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m	10	Distance> 1000m		
A7. Protection of surface waters	7%	5,5		6,5		5,5		7,5		5,5		6,5		5,5		6,5		5,5		6,5		5,5	
A7a. Type and use the main recipient	50%	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	rural area	8	irrigation
A7b. Distance waste facility - Recipient	50%	3	< 1 km	3	around 2 km	3	< 1 km	7	around 5 km	3	< 1 km	5	< 2 km	3	< 1 km	4	about 3 km	3	< 1 km	5	about 3 km	3	< 1 km
A8. Protecting underground water	10%	8,5		9,5		9,5		9,5		9,5		9,5		9,5		9,5		9,5		9,5		9,5	
A8a. Due to infiltration	50%	10	(A1+ A2) / 2	7,5	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	7,5	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2
A8b. Due to supply via surface waters	50%	7	below 7 km from highly permeable area	4	above 1 km from highly permeable area	9	below 8 km from highly permeable area	10	above 9 km from highly permeable area	4	above 1 km from highly permeable area	9	below 4 km from highly permeable area	3	below 1 km from highly permeable area	9	below 8 km from highly permeable area	7	below 7 km from highly permeable area	9	below 8 km from highly permeable area	9	below 8 km from highly permeable area
A9. Geomorphology of Area	10%	10		10		10		9,4		10		9,4		10		9,4		10		8,2		10	
A9a. Hydrological characteristics	60%	10	< 100 acres	10	< 100 acres	10	< 100 acres	9	> 100 acres	9	> 100 acres	10	< 100 acres	10	> 100 acres	10	< 100 acres	10	< 100 acres	9	> 100 acres	9	> 100 acres
A9b. Configuring surfaces and slope protection	40%	10	<10%	10	<10%	10	<10%	10	<10%	10	<10%	10	<10%	10	<10%	10	<15%	10	<15%	10	<10%	10	<10%
A10. Covering demands	5%	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	8	Simple waterproof layer	7,15	Simple waterproof layer
B. ENVIRONMENTAL CRITERIA		22,5%	8,79	8,36	7,54	6,77	7,78	6,51	8,24	7,21	6,86	6,94											
B1. Green areas, Ecological characteristics, Landscape	20%	10	existing dumpsite, brushwood	10	existing dumpsite, brushwood, no ecological importance	10	ordinary ecological features	1	ordinary ecological features	10	ordinary ecological features	10	ordinary ecological features	10	ordinary ecological features	10	minimum ecological importance	10	minimum ecological importance	10	minimum ecological importance	5	Semi natural grassland and shrubs and steppe vegetation
B2. Visual isolation	25%	10	not visible	5	Visible from road and nearby settlements	5	Visible from road	5	Visible from road	5	Visible from road	2	Visible from village	5	Potentially visible from road	2	Visible from the surrounding areas	5	Visible from road	5	Visible from road	5	Visible from road
B3. Annoyance by smells	20%	6		10		6		7,5		6		8,5		7,5		6,5		6		8,5		6	
B3a. Distance recipient	50%	7	2 km from closest settlement	10	more than 3 km from closest settlement	7	more than 2 km from closest settlement	5	No settlements in the radius of 3km	5	more than 1,5 km from closest settlement	5	more than 1,5 km from closest settlement	5	more than 1,5 km from closest settlement	3	more than 1,5 km from closest settlement	7	more than 2 km from closest settlement	7	more than 2 km from closest settlement	7	more than 2 km from closest settlement
B3b. Winds	50%	5	interim statement	10	more than 3 km from closest settlement	5	interim statement	10	No settlements in the radius of 3km	5	favourable winds	5	interim statement	10	favourable winds	10	favourable winds	5	interim statement	10	favourable winds	10	favourable winds
B4. Annoyance from biogas	20%	8,4		8,5		10		9		8		9,4		8		7,1		8,4		9,4		8,5	
B4a. Dissemination through the air	40%	6	equal to B3	10	equal to B3	6	equal to B3	7,5	equal to B3	5	equal to B3	5	equal to B3	8,5	equal to B3	7,5	equal to B3	6	equal to B3	8,5	equal to B3	8,5	equal to B3
B4b. Dissemination through the subsurface	60%	10	(A1+ A2) / 2	7,5	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2	9,4	(A1+ A2) / 2	9,4	(A1+ A2) / 2	5,4	(A1+ A2) / 2	10	(A1+ A2) / 2	10	(A1+ A2) / 2
B5. Annoyance during access	15%	9,4		9,4		8		8,8		4		8		9,4		8		5,9		8,8		6	
B5a. Annoyance from traffic	30%	8	primary road	8	primary road	8	primary road	8	primary road	8	primary road	8	primary road	8	primary road	8	primary road	4	primary road	4	primary road	4	primary road
B5b. Annoyance settlements	70%	10	no crossing through settlements	10	no crossing through settlements	10	no crossing through settlements	10	No Crossing through settlements	10	no crossing through settlements	10	no crossing through settlements	10	no crossing through settlements	5	Crossing through settlement / primary roads	6	Crossing the ring road settlement	10	no crossing through settlements	10	no crossing through settlements
C. LAND PLANNING CRITERIA		22,5%	8,35	7,28	8,15	6,95	6,49	7,48	7,48	7,00	6,48	6,87											
C1. Distance from settlements	30%	6	Closest houses in more than 2 km	4	No residential areas in the vicinity. Scattered houses at about 1 km to the north.	6	No settlements are present in the radius of 2 km.	8	No settlements in the radius of 3,5km	4	No settlements in the radius of 1,5km	4	Pavshench'i village – 1,500m to the west.	4	The closest settlement is the village of Sarchievo 1.8 km to the west.	4	Spanchevo village is located at about 700-1000 m south east	4	No settlements or individual houses are present in radius of 1km	6	No settlements or individual houses are present in radius of more than 2km		
C2. Agricultural activity	10%	9	Heaths	3	small plots of cultivated land	7	Pasture	3	mostly wheat	7	Pasture	7	rice fields	4	Pasture	3	rice fields	3	Low cultivation activities – mostly small private vineyards	1	Highly productive agricultural land / irrigated		
C3. Forage activity within < of 1.000m	4%	5	Limited breeding activity	10	Lack of farming	5	Limited breeding activity	10	Lack of farming	10	Lack of farming	5	Limited breeding activity	5	Limited breeding activity	3	Intensive sheep and cow grazing in the surrounding area	5	Limited breeding activity	3	intensive sheep and cow grazing		
C4. Industrial activity	6%	10	No industrial activity	10	No industrial activity	10	No industrial activity	10	No industrial activity	10	No industrial activity	10	No industrial activity	10	No industrial activity	10	the closest industrial facilities are located at about 3.5 km to the south-east	10	No industrial activity	10	No industrial activity	10	No industrial activity
C5. Proximity to conflicting uses	15%	9		8,5		9		9,5		7,25		8,5		8,5		8,5		8,5		9		9	
C5a. Area protection and high forest	25%	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area	10	No forests close to the area
C5b. Landscape protection area	25%	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent
C5c. Tourist zone	25%	6	As distance from settlements	4	As distance from settlements	6	As distance from settlements	8	As distance from settlements	4	As distance from settlements	4	As distance from settlements	4	As distance from settlements	4	As distance from settlements	4	As distance from settlements	6	As distance from settlements	6	As distance from settlements
C5d. Archaeological site	25%	10	non existent	10	non existent	10	non existent	10	non existent	5	The closest archaeological site Bargaia (Byzantine fortified town from 4th-6th century) is located about 2 km to the east	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent	10	non existent
C6. Tendency to residential/ tourist development	20%	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency	10	Low tendency
C7. Network access to the final area	15%	10		10		10		9,5		6		10		10		10		10		6		10	
C7a. Type of network	50%	10	Good access	10	Good access	10	Good access	10	Good access	5	No paved road to the proposed area. Only the local dirt road approx	10	There is a road leading to the site	10	There is a road leading to the site	10	No restrictions	10	No restrictions	5	Dirt road in poor condition with high inclinations. The road is narrow, especially for big trucks	5	New opening
C7b. Necessary access projects	50%	10	existing access	10	existing access	10	existing access	9	improvement of around 0 - 1 km	7	improvement of around 1,5 km	10	existing access	10	existing access	10	existing access	10	existing access	7	improvement of around 1,5 km	7	improvement of 1-2 km
D. OPERATIONAL CRITERIA		15,0%	3,56	3,80	5,36	5,26	5,82	5,60	5,28	5,18	5,8	8,00											
D1. Climatic conditions	10%	2,6		5		2,6		7,2		5		8		3		5		8		5		5	
D1.a. Elevation	40%	5	around 350 m	5	around 450 m	5	around 400 m	3	around 600 m	5	around 350 m	3	around 500 m	5	around 400 m	5	around 450 m	5	around 450 m	5	around 450 m	5	around 400 m
D1.b. Exposure to winds	60%	1	Great	5	Great	1	Great	10	small	5	Moderate	1	Moderate	5	Moderate	10	Moderate	5	Moderate	5	Moderate	5	Moderate
D2. Adequacy of the available area - Expansion Capabilities	60%	3	Small land availability	3	Small land availability	6	Sufficient land availability	6	Sufficient land availability	6	Sufficient land availability	6	Sufficient land availability	6	Sufficient land availability	6	Sufficient land availability	6	Sufficient land availability	10	Sufficient land availability	10	Sufficient land availability
D3. Adequate cover material	30%	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m	5	around 500 - 2000m
E. FINANCIAL CRITERIA		15,0%	6,24	7,53	5,02	7,27	6,28	6,22	6,52	7,42	7,33	6,88	5,46										
E1. Size/magnitude of infrastructure works	35%	5	Large due to the fact that it is a former dumpsite and stability issues should be dealt with	5	Large due to the fact that it is a former dumpsite and stability issues should be dealt with	7	Moderate as it is a undulated and mildly sloped area with moderate excavations needs	10	minimum excavation needs	7	Moderate as it is a undulated and mildly sloped area with moderate excavations needs	7	There are a couple of hills that could be used to lay one of the waste slopes.	7	Moderate as it is a undulated and mildly sloped area with moderate excavations needs	7	Moderate as it is a quarry with moderate excavations needs	7	Moderate as it is a quarry with moderate excavations needs	5	Hilly with significant interventions needed		
E2. Land Value	20%	9,7		7,9		9,1		9,1		7,9		9,1		9,1		9,1		7,9		7,9		7,3	
E2a = C6: Tendency to residential - Tourism development	70%	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6	10	Equal to C6
E2b = C2: Agricultural activity	30%	9	Equal to C2	7	Equal to C2	7	Equal to C2	7	Equal to C2	3	Equal to C2	7	Equal to C2	7	Equal to C2	7	Equal to C2	3	Equal to C2	3	Equal to C2	3	Equal to C2
E3. Availability networks of common utilities	15%	5	approx 1,5 km	10	less than 500m	3	no grid visible	5	There is no electricity on site. Closest low power supply network 1,5-2km away	3	no grid visible	3	no grid visible	3	no grid visible	7	less than 1 km	10	less than 500m	5	approx 1,5 km	3	Electricity low power grid. High power grid notice on West side 5 km from the location
E4. Estimated cost of transport	30%	6	9 km from Stip and 37 km from Kocani	9	less than 10 km from Kumanovo	1	Less than 40 km from Stip and 62 km from Kocani	4	Less than 35 km from Stip and 36 km from Kocani	6	Less than 14 km from Stip and 30 km from Kocani	5	Less than 26 km from Kumanovo	6	Less than 24 km from Kumanovo	7	Less than 10 km from Stip and 35 km from Kocani	6	Less than 38 km from Stip and 13 km from Kocani	7	Less than 38 km from Stip and 9 km from Kocani	6	Less than19 km from Stip and 22 km from Kocani
TOTAL SCORE		100,0%	7,69	7,28	7,47	7,91	7,17	7,27	7,67	7,46	7,27	7,17											