

EN1991-1-5

Thermal actions

Opterećenje od ekstremnih temperatura

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(Uticaj ekstremnih temperatura)

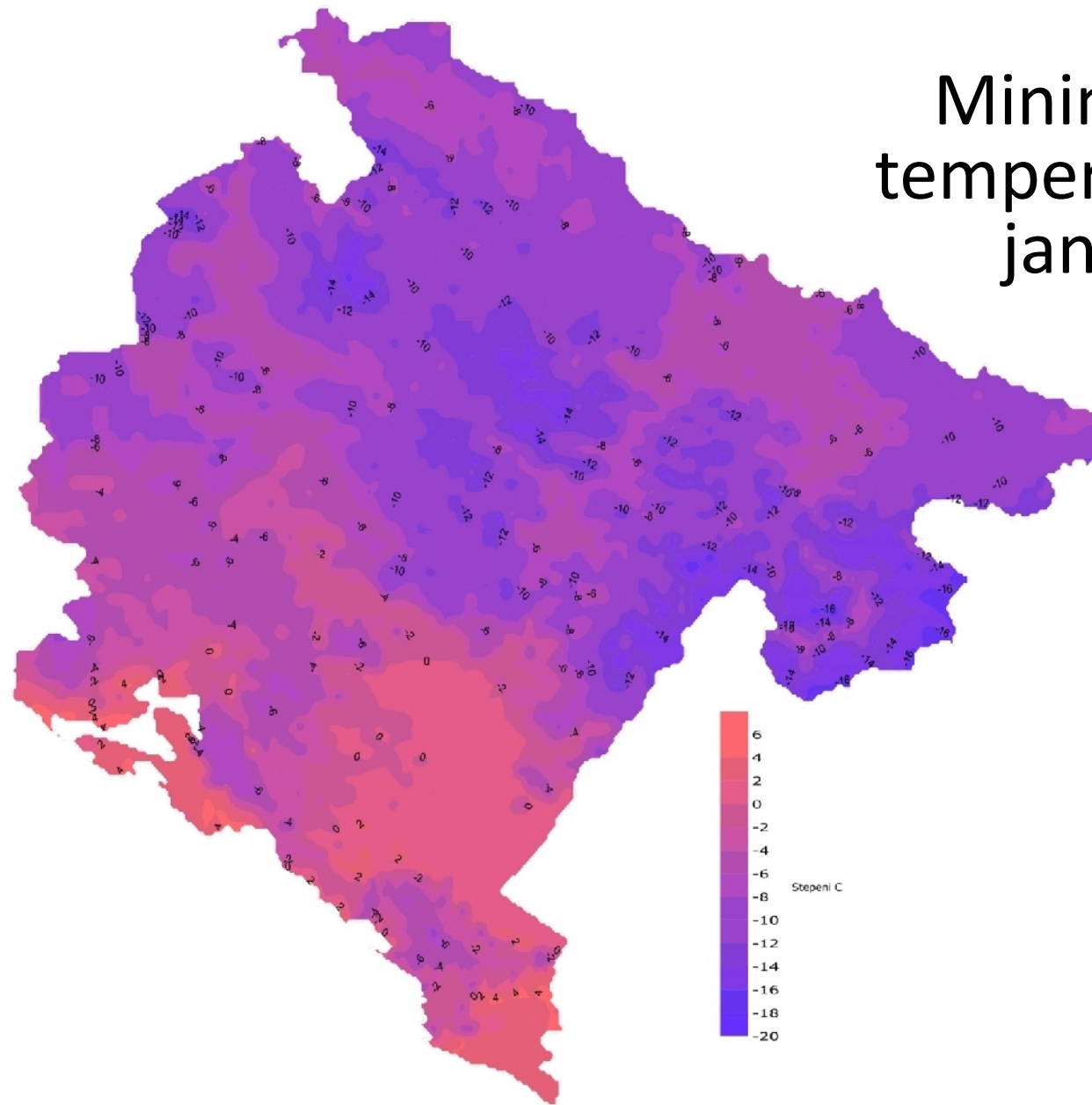
- Maximum and minimum air temperature
- Probability of being exceeded p other than 0.02

$T_{max,p}$ and $T_{min,p}$

If the value of maximum (or minimum) shade air temperature, $T_{max,p}$ ($T_{min,p}$), is based on an annual probability of being exceeded p other than 0.02, the ratio:

- for T_{max} : $T_{max,p} = T_{max} \{k_1 - k_2 \ln [- \ln (1-p)] \}$
- for T_{min} : $T_{min,p} = T_{min} \{k_3 + k_4 \ln [- \ln (1-p)] \}$

Minimalne temperatue za januar



8.-9. oktobar 2013.

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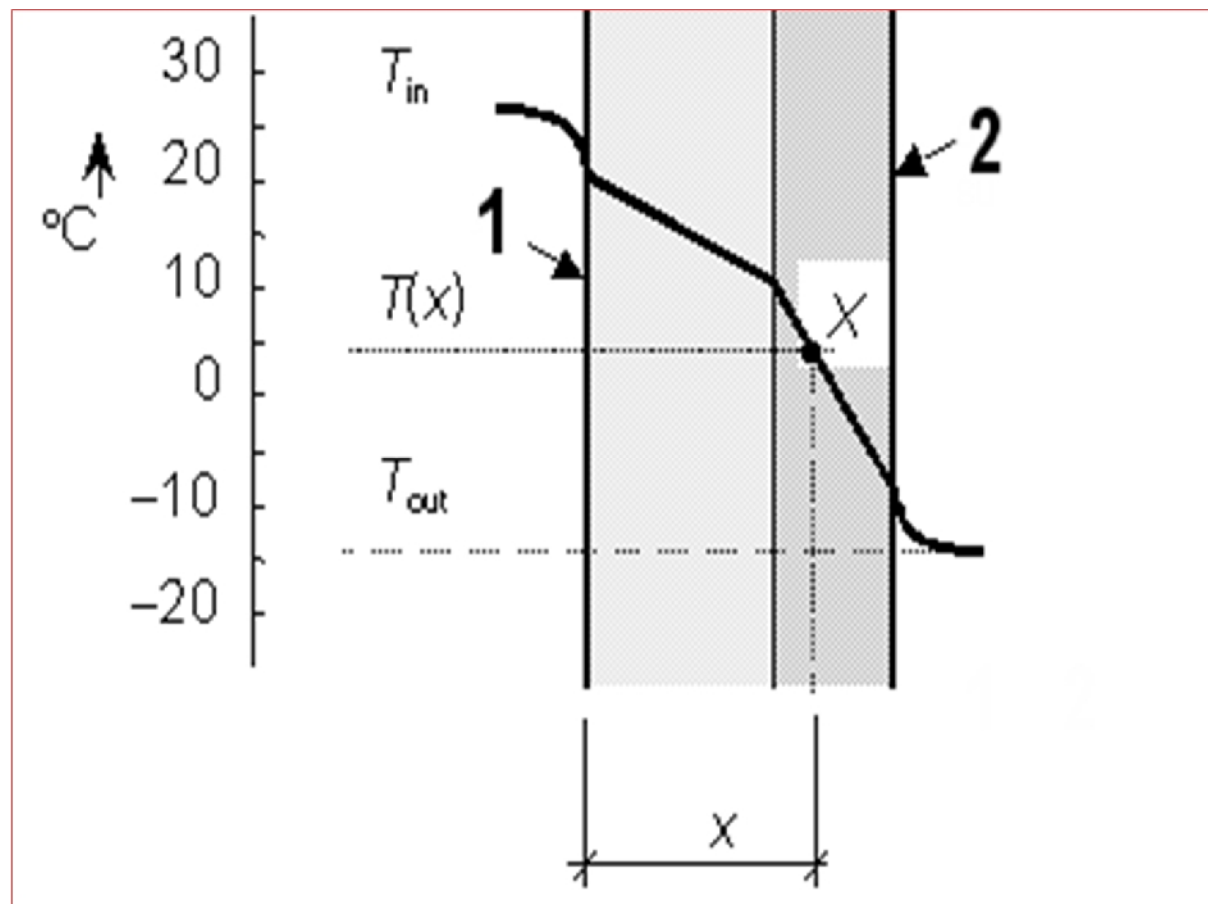
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Koeficijetni

- Tmax (Tmin) is the value of maximum (minimum) shade air temperature with
- an annual probability of being exceeded of 0.02:
- $k1 = (u,c) / \{ (u,c) + 3,902 \}$
- $k2 = 1 / \{ (u,c) + 3,902 \}$
- $k3 = (u,c) / \{ (u,c) - 3,902 \}$
- $k4 = 1 / \{ (u,c) - 3,902 \}$
- where:
- u,c are the mode and scale parameters of annual maximum temperature distribution. The parameters u and c are dependent on the mean value μ and the standard deviation σ of type I extreme value distribution:
- For Tmaximum $u = \mu - 0,57722 / c$
- $c = 1,2825 / \sigma$
- For Tminimum $u = \mu + 0,57722 / c$
- $c = 1,2825 / \sigma$

Toplotna prevodljivost

- T_{out} – referentna spoljna temperatura
- T_{in} – referentna unutrašnja temperatura



Regresija za Tmax / zona 1

SUMMARY OUTPUT for Tmax Zone 1								
Regression Statistics								
Multiple R	0.449							
R Square	0.202							
Adjusted R Square	0.069							
Standard Error	1.648							
Observations	8.000							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	4.12	4.12	1.52	0.26			
Residual	6	16.30	2.72					
Total	7	20.42						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	39.93	0.63	63.43	0.00	38.39	41.47	38.39	41.47
X Variable 1	0.00	0.00	-1.23	0.26	-0.01	0.00	-0.01	0.00
RESIDUAL OUTPUT					PROBABILITY OUTPUT			
Observation	Predicted Y	Residuals	Standard Residuals		Percentile	Y		
1	39.93	0.77	0.51		6.25	37.40		
2	39.93	-1.33	-0.87		18.75	37.70		
3	39.92	-0.12	-0.08		31.25	38.60		
4	39.92	-2.52	-1.65		43.75	39.80		
5	39.91	-0.01	0.00		56.25	39.90		
6	39.90	2.70	1.77		68.75	40.40		
7	39.86	0.54	0.35		81.25	40.70		
8	37.74	-0.04	-0.03		93.75	42.60		

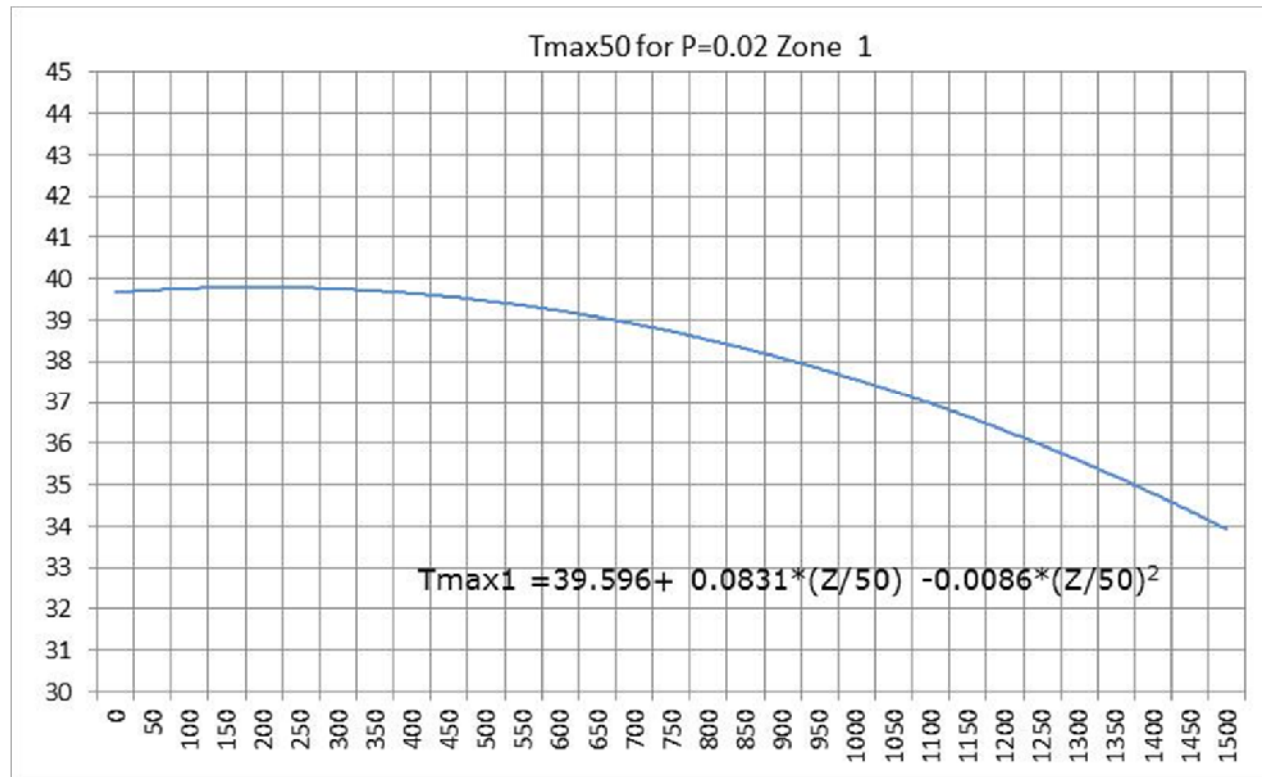
Regresija za Tmax /zona 2

SUMMARY OUTPUT for Tmax Zone 2								
Regression Statistics								
Multiple R	0.978							
R Square	0.956							
Adjusted R Square	0.947							
Standard Error	0.545							
Observations	7.000							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	32.38	32.38	108.86	0.00			
Residual	5	1.49	0.30					
Total	6	33.87						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	43.85	0.33	131.46	0.00	42.99	44.71	42.99	44.71
X Variable 1	-0.01	0.00	-10.43	0.00	-0.01	0.00	-0.01	0.00
RESIDUAL OUTPUT								
	Predicted Y	Residuals	Standard Residuals		PROBABILITY OUTPUT Percentile	Y		
Observation								
1	43.64	-0.44	-0.88		7.14	38.40		
2	43.53	0.37	0.74		21.43	38.50		
3	43.51	-0.01	-0.01		35.71	40.10		
4	39.70	0.50	1.01		50.00	40.20		
5	39.65	0.45	0.90		64.29	43.20		
6	39.34	-0.84	-1.68		78.57	43.50		
7	38.44	-0.04	-0.08		92.86	43.90		

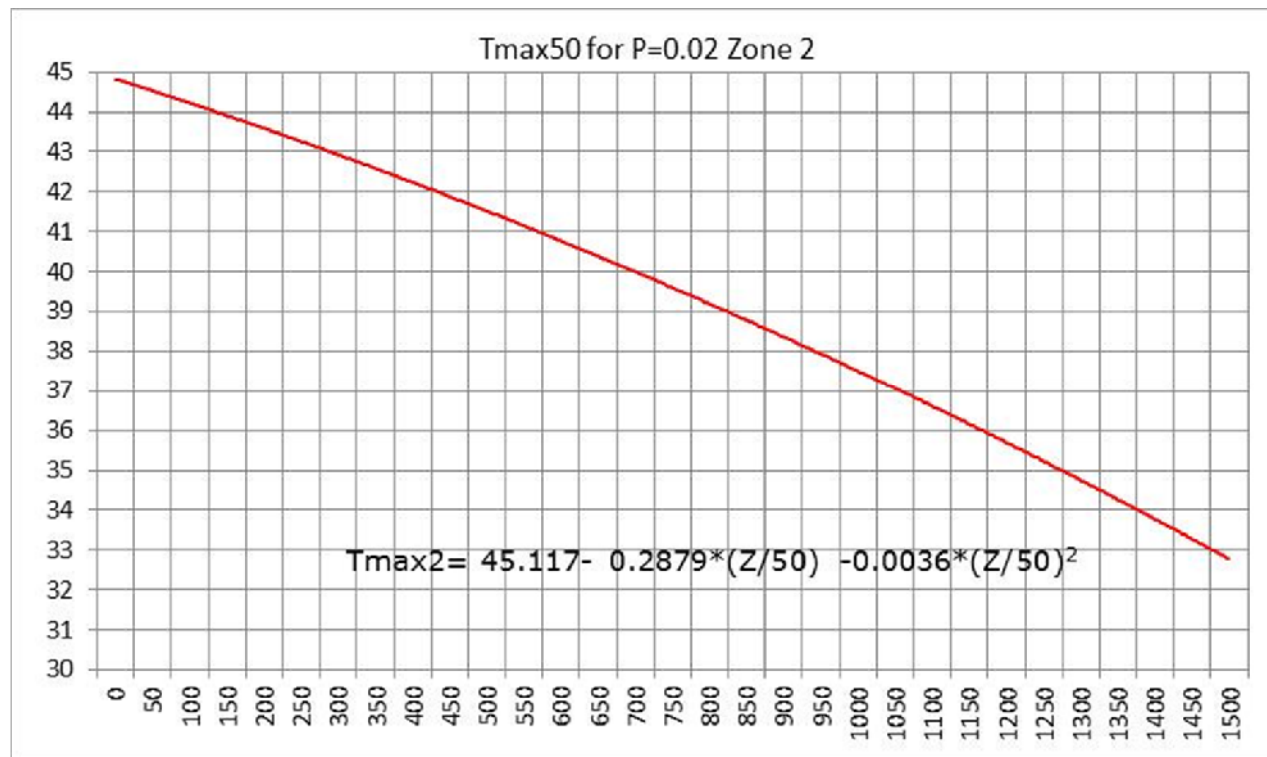
Regresija za Tmin /zona 2

SUMMARY OUTPUT for Tmin							
Zone 2							
Regression Statistics							
Multiple R	0.907						
R Square	0.823						
Adjusted R Square	0.787						
Standard Error	3.196						
Observations	7.000						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	1	236.958	236.958	23.205	0.005		
Residual	5	51.059	10.212				
Total	6	288.017					
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%
Intercept	-10.741	1.954	-5.496	0.003	-15.765	-5.717	-15.765
X Variable 1	-0.018	0.004	-4.817	0.005	-0.027	-0.008	-0.027
RESIDUAL OUTPUT				PROBABILITY OUTPUT			
Observation	Predicted Y	Residuals	Standard Residuals		Percentile	Y	
1	-11.321	0.221	0.076		7.143	-27.500	
2	-11.602	1.402	0.481		21.429	-23.900	
3	-11.672	-1.528	-0.524		35.714	-23.600	
4	-21.982	-1.618	-0.555		50.000	-17.500	
5	-22.105	4.605	1.578		64.286	-13.200	
6	-22.948	-4.552	-1.561		78.571	-11.100	
7	-25.371	1.471	0.504		92.857	-10.200	

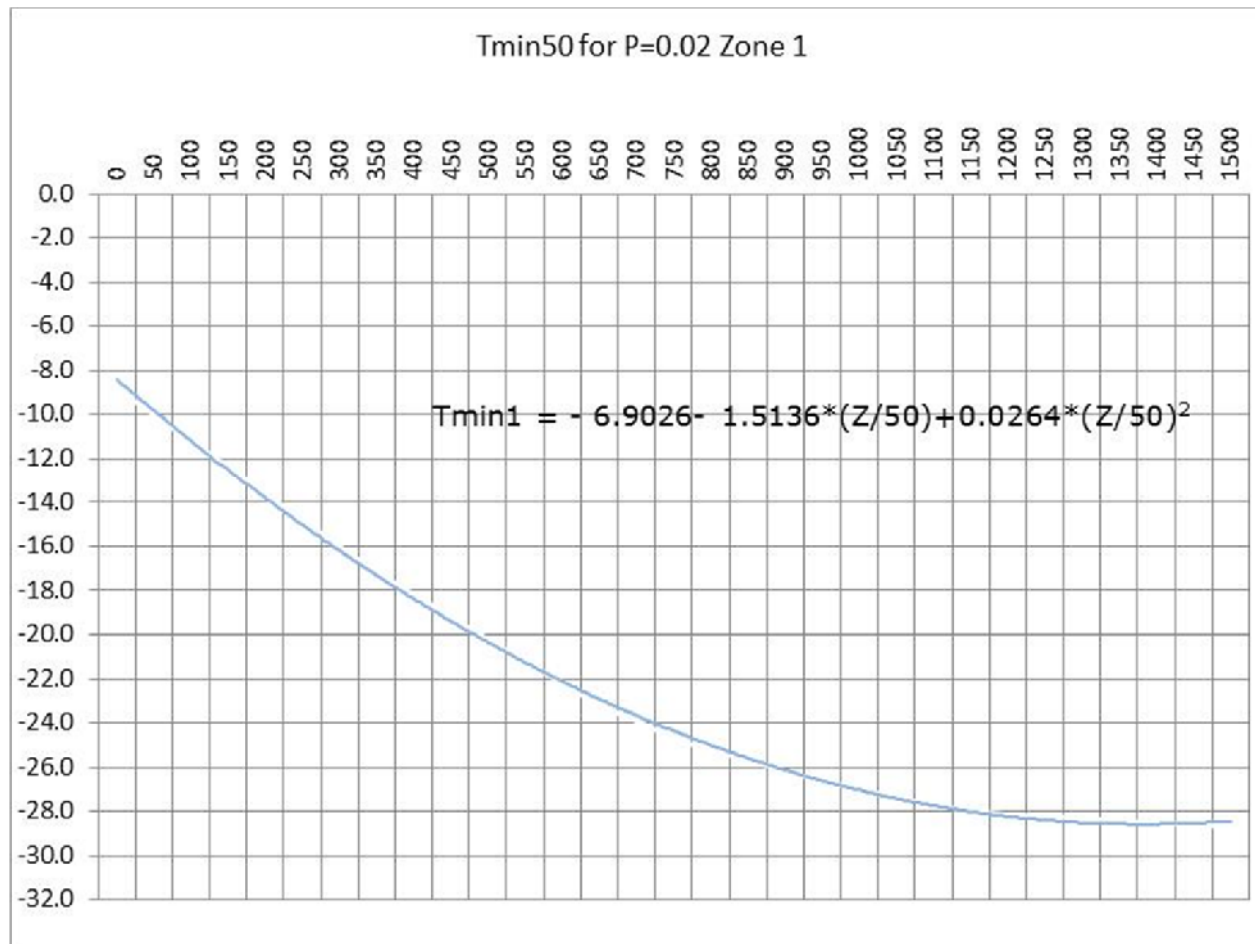
Tmax za P=0.02 za zonu 1



Tmax za P=0.02 za zonu 2



Tmin za P=0.02 za zonu 1



Tmin za P=0.02 za zonu 2

