Questionnaire for the study (Italy):

Examining visitor perceptions of geological features at thermal tourism sites.

(The case of Terme San Giovanni in the Siena clay lands of Tuscany)

F. Ugolini, A. Chrobak, D. Pearlmutter, A. Raschi Institute of Biometeorology – National Research Council In collaboration with Department of Geology, Pedagogical University of Cracow (Poland)

B

Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev (Israel)

Dear sir / madam,

Rapolano Terme and Terme San Giovanni are located on the North-East edge of the area of the Crete Senesi, famous for the beauty of the landscape, mainly due to the spectacular morphology. However, the area is also rich in relevant geological features. Nearby the spa for instance, there are travertine caves, hot springs, but also other things: a fissure ridge with travertine formation (Montagnola) and a depression where a CO₂ lake forms every night (Bossoleto).

We invite you to answer some questions in order to help us evaluate these resources for tourism exploitation, and promote geotourism (tourism related to the knowledge of geomorphological – land form / geological features for those people interested in observing and gaining knowledge.

 Gender: □Male □Female Age: Town where you live: About You: □ I am a visitor (e.g. tourist) □ I deliver tourist services (e.g. accordance) 		Š			
4. Are you interested in geography □Yes □ No □ Not so much □ I do:		ndscape knov	wledge?		
5. You are here (only one option): □ alone □ with your family/partner □ with your friend/s □ with your colleague/s					
6. How many days are you going t ☐ one ☐ two ☐ less than a week ☐ more than a week ☐ other:	o stay here (or	nly one optio	on)		
7. Reasons to be here			· · · ·		
	Very important	Rather important	Little important	Not important	I don't know
To learn new things	1	1	1	1	
To relax and rest					
To escape from the daily life routine					
To have fun					
To meet people with similar interests					
and hobbies					
To travel with friends and my family					
To explore new places					
Suggested by my family and friends					
8. Which of these activities have y allowed) □ Biking □ Hiking □ Excursions to towns/villages □ Excursions to cultural monumer □ Excursions to natural sites □ Horse riding □ Birdwatching □ Nature photography □ Other:	nts		f Crete Sene	si? (more tha	n one option is
 9. Which of these land forms / get than one option is allowed) □ Badlands □ Haddoks land forms 	ological elemo	ents have yo	u seen in the	e area of Cret	e Senesi (more

10. What would you like to know more in depth about the area of Crete Senesi (only one option) Agriculture		Faults Soil erosion Quarries Thermal water springs					
□ Travertine quarry of Campo Muri □ Bossoleto Sign □ Artesian well with thermal water □ Montagnola □ Archeological excavations in Campo Muri □ None of them 12. Though you have not visited them, on the basis of the description given in the table and by the interviewer, try to assess the attractiveness (Scientific/ Cognitive/ Aesthetic) of the features for geotourism purpose Quarry Bossoleto Geyser Fissure ridge Archeological excavations does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general		Agriculture Food History Geology & Land forms Thermal water	now more in o	depth about th	e area of Cre	te Senesi (only on	e option)
Quarry Bossoleto Geyser Fissure ridge Archeological excavations does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general	12.	Travertine quarry of Ca Bossoleto Sign Artesian well with therr Montagnola Archeological excavatio None of them Though you have not vi interviewer, try to assess	mpo Muri mal water ns in Campo sited them, o	Muri on the basis of	the descriptio	on given in the tal	-
the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general		geotourism purpose	Quarry		Geyser	Fissure ridge	
is well known but it does not match popularity among public is quite popular is very well known by general							
match popularity among public is quite popular is very well known by general		, ,					
is very well known by general	matc	h popularity among					
	is qu	ite popular					
Γ							
I don't know	I don	't know					

13. Now, even though you have not visited them, on the basis of the description given in the table and by the interviewer, try to assess the accessibility of the features for geotourism purpose

	Quarry	Bossoleto mofette	Geyser	Fissure ridge	Archeological excavations
is hidden, hard to locate					
is difficult to access but					
visible from a short					
distance					
is accessible only in					
special occasions					
is quite popular					
is highly visible and					
accessible					
I don't know					

Travertine quarry of Campo Muri. The oldest travertine dates back to ~25 thousand years ago. Location: 700 m northwards from the spa



Bossoleto Sign. Natural scientific laboratory due to CO₂ springs. Here, scientists study the effects of high atmospheric CO₂ concentrations on ecosystem. Every night a CO₂ lake forms, and disappears at daytime.

Location: right side of the street going toward the spa, 150 m eastwards far from the spa.



Artesian well of thermal water. Hot water comes out at about 40 °C. This water is characterized by high concentration of carbonate.



Montagnola. It is a travertine fissure ridge about 10 m high and 250 m long with active formation of travertine.

Location: 20-200 m from the spa (south-eastwards)



Archeological excavations in Campo Muri date back to Etruscans and Romans. Location: 700 m northwards from the spa



	Very	Rather	Little	Not	I don't
Accessibility	important	important	important	important	know
1 Local transport					
2 Bicycle routes					
3 Hiking trails					
4 Roads					
☐ I don't know					
□ Nothing to improve					
☐ Internet ☐ Maps ☐ Books, magazines, etc. ☐ Tourist office ☐ Hotel/Restaurant ☐ Friends/people ☐ Personal experiences ☐ Other					
 If you received information about □ Complete, exhaustive □ Brief and concise □ Basic □ Bad 		·	-		
☐ Complete, exhaustive☐ Brief and concise☐ Basic	d you suggest f	for each geolo	gical elemen		Nt. /
□ Complete, exhaustive□ Brief and concise□ Basic□ Bad	d you suggest f	f or each geol o Tery I	gical elemen Rather	Little	Not
☐ Complete, exhaustive ☐ Brief and concise ☐ Basic ☐ Bad Which means of information would	d you suggest f V imp	f or each geol o Tery I	gical elemen Rather		
☐ Complete, exhaustive ☐ Brief and concise ☐ Basic ☐ Bad Which means of information would 1 Informative panels in each element	d you suggest f V imp nt site	f or each geol o Tery I	gical elemen Rather	Little	Not importa
☐ Complete, exhaustive ☐ Brief and concise ☐ Basic ☐ Bad Which means of information would 1 Informative panels in each element 2 Information on Apps for mobile of	d you suggest f V imp nt site	f or each geol o Tery I	gical elemen Rather	Little	
☐ Complete, exhaustive ☐ Brief and concise ☐ Basic ☐ Bad Which means of information would 1 Informative panels in each element	d you suggest f V imp nt site	f or each geol o Tery I	gical elemen Rather	Little	
☐ Complete, exhaustive ☐ Brief and concise ☐ Basic ☐ Bad Which means of information would 1 Informative panels in each element 2 Information on Apps for mobile of	d you suggest f V imp nt site	f or each geol o Tery I	gical elemen Rather	Little	

Notes:

Thank you very much for the collaboration.

Questionnaire for the study (Slovakia):

Examining the tourism value of geological landscape features: The case of Kúpele Vyšné Ružbachy - Slovakia

A. Chrobak, F. Ugolini, D. Pearlmutter, A. Raschi

Institute of Geography, Department of Geology, Pedagogical University of Cracow (Poland)

In collaboration with

Institute of Biometeorology – National Research Council (Italy)

&

Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev (Israel)

Dear sir / madam,

Kúpele Vyšné Ružbachy are located on the North-East edge of the area of the Spiš Region, famous for the beauty of the landscape, mainly due to the spectacular morphology. However, the area is also rich in relevant geological features. Nearby the spa for instance, there are travertine craters, springs, waterfalls, etc.

We invite you to answer some questions in order to help us evaluate these resources for tourism exploitation, and promote geotourism (tourism related to the knowledge of geomorphological – land form / geological features for those people interested in observing and gaining knowledge (The researcher, 2009).

Gender: □M	ale □Female						
Age:							
Town where y	ou live:						
Country							
•		••••••					
About You:							
☐ I am a visito	r (e.g. tourist)						
☐ I deliver tou	rist services (e.g. accommodation, restaurants)						
Are you intere	sted in geography and earth/landscape knowled	lge?					
ПУес П Мо Г	l Not so much □ I don't know						
_165 _116 _	Trotto mach = raon tratow						
)):	ere (rate which of the reasons is the most in	ірогіа	111 101	you	(6) 01	1101 111	прог
	Knowledge		1 -	l -	T .	I	
To increase r	ny knowledge	1	2	3	4	5	6
To relax and	Relaxation	1	2	3	4	5	6
To relax and	Escape	1			4	<u> </u>	0
To escape fro	om the daily life routine	1	2	3	4	5	6
The state of the s	Enjoyment						1
To have fun		1	2	3	4	5	6
	Friendship						I
To meet peophobbies	ble with similar interests and	1	2	3	4	5	6
To travel wit	h friends and my family	1	2	3	4	5	6
	Sense of Wonder					_	
To explore n	•	1	2	3	4	5	6
Because my	amily and friends suggested me to come here	1	2	3	4	5	6
Vous euro houro	(shaqqqqqmly on a mayyan).						
□ alone	(choose only one answer):						
	family/partner						
□ with your	· -						
□ with your							
□ with your	coneague/s						
How many o	lays are you going to stay here (choose only	one a	nsw	er):			
□ one							
□ two							
□ less than a	week						
☐ more than	a week						
□ other:							

Tourism-Geotourism in Spiš Region

Spiš Region are famous for their gentle hills, river valleys and gorges due to the specific geological background.

3.	W	nich of these activities have you	practic	ed in the	area of Spiš Reg	ion during your	stay? (sele	ct more
	tha	n one option if needed)						
		Biking						
		Hiking						
		Excursions to towns/villages						
		Excursions to cultural monuments						
		Excursions to natural sites						
		Horse riding						
		Birdwatching						
		Nature photography						
		Thermal bath/cures						
		Other:						
4.	W	hich of these land forms / geolog	gical ele	ements ha	ve vou seen in th	ne area of Spiš R	egion duri	ng your
		aying? (select more than one opt			,	•	O	03
		Gorges		,				
		Landslides						
		Faults						
		Single rocks						
		Quarries						
		Thermal water springs						
		1 0						
5.	W	hat would you like to know mor	re in de	pth about	the area of Spiš	Region (Choose	only one	option)
		Agriculture		r		8 (·	· r ,
		Food						
		History						
		Geology & Land forms						
		Thermal water						
		Flora and fauna						
6.	A	ccessibility	YES,	it was	YES, it was	YES, but it	No	
		you used these kind of ways?		good	satisfactory	was not good		
		al transport						
		rcle routes						
		ing trails						
	Roa							
			1					
7	TA	Thich of the following manns of		Verv	More or	Little	Not	I don'

7. Which of the following means of Information would you improve in the area of Spiš Region	Very important	More or less important	Little important	Not important	I don't know
1 Informative panels in important landscape					
sites					
2 Information on Apps for mobile devices					
3 Virtual tour					
4 Guided vehicular/hiking tours					
5 Leaflets in all tourist places (visitor centres,					
hotels, agritourism etc.)					
6 Scenic flights					

Geotourism in Kúpele Vyšné Ružbachy?

Nearby the Kúpele Vyšné Ružbachy there are important natural elements and witnesses of ancient activities linked to the geology of this area.

Crater Travertine lake. The unique formation, the biggest and only one of its type crater in Slovakia filled mineral water.

Location: eastern part of the spa, close to the Switzerland houses.



CO₂ Crater. Dry travertine crater. Dangerous because of the extraction of CO and fumaroles Location: north-east part of the spa



White House. Dominant White House was opened in 1931. It's a copy of one of the Monte Carlo palaces. The building is perfectly composed to the travertine background.

Location: central part of the area of Kúpele Vyšné Ružbachy



Waterfall. It is a travertine waterfall raised every year, located on the slope below the Water Crater Location: 30 m below the Water Crater



Mineral spring. The area of the Kúpele Vyšné Ružbachy, because of its gological background is full of mineral springs. This is one of the examples. Location: the southern part of the spa



8	Which of these geologic	cal natural elemen	ts have vou	visited/seen?		
	☐ Crater Travertine Lake		,			
	□ White House	-				
	□ CO ₂ Crater					
	□ Waterfall					
	☐ Mineral Spring					
	□ None of them					
9	. Now, even though you		-			ic/ Cognitive/
	Aesthetic) and accessib	-	area for geo	tourism purpose	2	
	Attractiveness (Choose	_				
	☐ The area does not m		-	-		
	☐ The area is known o					
	☐ The area is well kno	-	ils but it doe	s not interest to t	the general publi	С
	☐ The area is quite pop		11.1: -			
	☐ The area is very wel☐ I don't know	i known by genera	i public			
			`			
	Accessibility (Choose of	-				
	☐ The area is remote: i			l		
	☐ The area is close to a			-	nain routes)	
	☐ The area is accessibl	•	transport (train or bus)		
	☐ The area is accessibl☐ The area is accessibl☐	•	na trail			
		e by a marked mki	ng tran			
[Specifically:	Custon	White	CO Custon	Waterfall	Mineral
		Crater travertine lake	House	CO ₂ Crater	vvateriaii	Spring
-	Attractiveness	travertine rake	House			Spring
-						
	does not match the					
•	does not match the interest of the general					
	does not match the interest of the general public					
-	does not match the interest of the general					
	does not match the interest of the general public is known only to a few					
	does not match the interest of the general public is known only to a few public					
	does not match the interest of the general public is known only to a few public is well known but it					
	does not match the interest of the general public is known only to a few public is well known but it does not match					
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public					
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular					
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by					
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public					
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public	Crater	White	CO ₂ Crater	Waterfall	Mineral
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know	Crater travertine lake	White House	CO ₂ Crater	Waterfall	Mineral Spring
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know			CO ₂ Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate			CO ₂ Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but			CO ₂ Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but visible from a short			CO2 Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but visible from a short distance			CO ₂ Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but visible from a short distance is accessible only in			CO2 Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but visible from a short distance is accessible only in special occasions			CO ₂ Crater	Waterfall	
	does not match the interest of the general public is known only to a few public is well known but it does not match popularity among public is quite popular is very well known by general public I don't know Accessibility is hidden, hard to locate is difficult to access but visible from a short distance is accessible only in			CO ₂ Crater	Waterfall	

I don't know

10. How important are the following items for attracting tourists in your opinion

	Very	More or less	Little	Not	I don't
Attractiveness	important	important	important	important	know
1 Landscape of the area					
2 Information about natural/geological					
elements nearby					
3 The activities the guests can access					
4 The existence of traditional food					
5 The proximity to major cities and their					
monuments					
6 The effectiveness of local transport					
7 Other aspects					

Means of information	YES	NO	I don't know
1 Informative panels in each element site			
2 Information on Apps for mobile devices			
3 Virtual tour			
4 Guided tour			
5 Leaflets			

11. Which means have you used to know about this area in general (select more than one option if needed)

(select	more man one opnon ir needed)
	On site material (posters, panels, leaflets)
	Internet
	Maps
	Books, magazines, etc.
	Tourist office
	Hotel/Restaurant
	Friends/people
	Personal experiences
	Other
	I haven't searched for any information
12. If you 1	received information about the area, how was it:
(Choos	e only one option for each element)
	Complete, exhaustive
	Brief and concise
	Basic
	Bad

Thank you very much for the collaboration.

Notes: