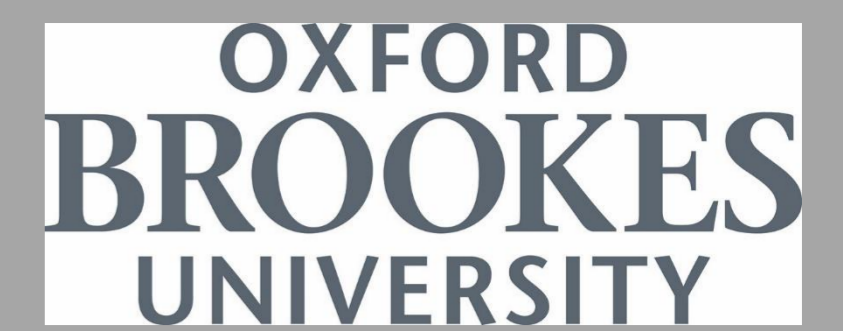


A study into how stakeholders value geodiversity within Malta's coastal environment

by Louise Foulger

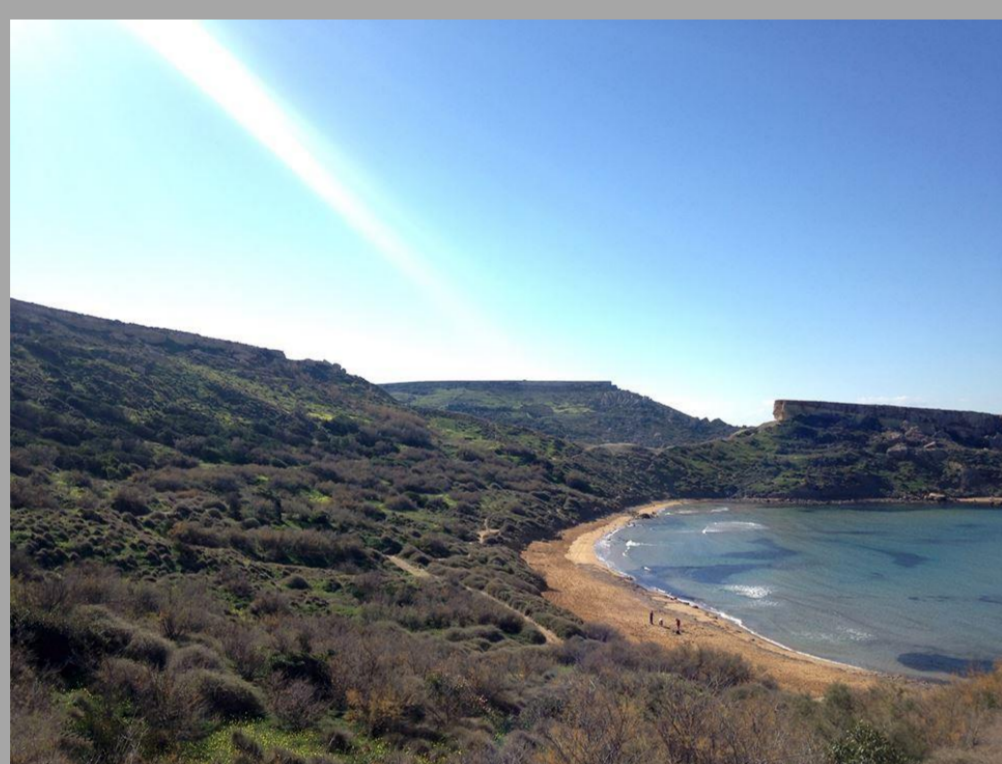


This research is about geodiversity. It takes the case study of coastal landscapes in Malta to consider the way that geodiversity is valued and how it might be conserved. Geodiversity refers to the variety of geological (rocks, fossils, minerals), geomorphological (landforms and processes) and soil features (Gray, 2004). Conservation is crucial to protect the value that tourists and locals hold for places and geodiversity. This research concentrates on five main place-based values; Functional, Appearance, Cultural, Research, and Educational. Coastal environments were explored as 96% of all accessible coastline in the Malta being developed and 21% of its total coastline no longer retains its natural features (Deidun, 2010; MEPA, 2006; Anderson & Schembri, 1989). The need for the Maltese people to protect their geodiversity is enhanced by the fact that global tourists specifically travel to the island to visit its coastal environments. There is no previous research into people's values of geodiversity in Malta.

The objective was to identify stakeholder views of Malta's geodiversity. This resulted in the following aims (1) discover the values stakeholders associate with geodiversity (2) discover the threats stakeholders notice to geodiversity (3) discover conservation needs recognised by stakeholders. The research contrasted the views of locals and residents, female's vs males and identified site specific differences.

Methods:

52 semi-structured interviews were carried out with tourists and locals. Participants were selected using an opportunity sampling method, selecting participants who were available on the day the researcher was present at each location. Interviews were carried out in teams of two, with one scribe and one interviewer. All interview responses were transcribed. A selective coding approach adapted from Löfgren (2013) was used for each site. Participant's responses were then categorised and later themed. Transcripts were also colour coded to decipher between anthropocentric and ecocentric perceptions of nature. To discover males and females opinions of geodiversity, the interviewer used these coded transcripts to discover the higher majority of individuals who had anthropocentric or ecocentric opinions. Tally charts were used for participant's responses to decipher between locals, tourists and gender.



	Il-Majjistral Nature & History Park	Golden Bay	Ghajn Tuffieħa
Value			
Aesthetics	2 4	4 8	5 6
Cultural	2	1 2	1
Functional	2	2	4 1
Educational	1	1 1	1
Research			1
Threat			
Construction	•	••	••
Littering	•	••	••
Off road biking	••		•
Pollution	••		••
Exploiting limestone	••		•
Tourism	••	•	••
Not enough investment	•		•
Climate change	•	•	•
Salt weathering	•	•	••
Lack of management	•	••	•
Lack of education		•	
Sea level rise	•		•
Erosion		•	••
Using foreign building materials			•
No threats	•	••	••
Conservation need			
Education	•	••	•
Prevent cars coming to area	••		•
Prevent bikes coming to area			•
Volunteers	•		
Signage	••	••	•
Better management and conservation	•	••	
Improve walkways	•	•	
Government funding	•	•	
Local funding			•
Recycle/remove dilapidated buildings	•	•	•
Improve maps	•		
Improve visitors centre	•		
Leave the environment alone	•		•
Prevent construction		••	
Clean up the beach		•	••
Restrict tourists		•	•
No conservation need	•	••	••
Remove sea grass		•	
Remove signs			•
More parking		•	
Improve roads coming to area			•
Patrols along beach			•
Limit deck chairs on beach			•
Input swimming flags			•
Input litter bins			•
KEY:			
• = TOURIST			
• = LOCAL			

Table 1: Table showing the value, threat and conservation need noticed by tourists and locals at the three locations

Discussion:

There is significant difference between males and females opinions of nature in Malta. Such findings have never been found in previous studies. **Male locals and tourists had greater ecocentric views than females.** The majority of females valued Malta's geodiversity in an anthropocentric manner. **Contrasting ecocentric and anthropocentric views occurred at Il-Majjistral and Golden Bay.** Tourists at Golden Bay highlighted many anthropocentric ideas as to what more could be done to conserve the areas geodiversity. For example tourists suggested the removal of derelict buildings and improve walkways. **Tourists and locals identified different values associated with each location** which shows that social identity within a location has a huge impact on peoples respect for geodiversity.

Conclusions:

This research highlighted modifications the island could undertake to enhance its geodiversity, and the values people hold towards certain locations in Malta. The islands coastal environments must be protected in order to protect tourists and locals aesthetic value of abiotic nature, as well as for its cultural, functional, educational and research values. The research found that tourists and locals identified different values associated with each location and males have a more ecocentric opinion of nature in Malta than females, which contradicts previous studies.

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