

## THE WILDERNESS CONCEPT

*"..a wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognised as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."*

U.S. Wilderness Act (September 3, 1964)

*"A large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition."*

World Commission on Protected Areas (1992)

### INTRODUCTION

To the overseas visitor to Jordan the idea of deserts being areas of untrammelled wilderness is an appealing one. Deserts are so alien to Europeans that the desert landscape has a powerful impact. A desert experience is bound up in the concept of wilderness. This is not a treatise on wilderness. Here we make the assumption that any work carried out in Jordan will be either (a) follow up work or (b) preparation to provide a case study. We realise that the concept is perceptual, has different components with different people, and that it represents one end of a continuum:



As Roderick Nash (1982) stated: "One man's wilderness may be another's roadside picnic ground" and whether or not an area is termed 'wilderness' depends "not so much on what wilderness is but what men think it is."

We therefore make the assumption that wilderness should retain "*its primeval character and influence*" and that it be protected and managed in such a way that it "*appears to have been affected primarily by the forces of nature.*" U.S. Wilderness Act (1964). We also distinguish between "True Wilderness" and "Apparent or Perceived Wilderness", which can be assessed both from maps, air photographs satellite images as well as from ground truthing through student analyses. In assessing a degree of wilderness we need to take into account the following elements, all of which are mappable:

- remoteness from population
- remoteness from population by public transport
- remoteness from mechanised access
- apparent/perceived naturalness (lack of human artefact)
- biophysical/ecological naturalness
- carrying capacity

In the same breath we may well talk about a wilderness area being managed or maintained 'sustainably', whether this is for:

- maintaining the ecosystem
- protecting specific species
- protection from erosion
- benefit to the national economy
- benefit to the local economy
- purposes of tourism

### Conservation or Preservation?

The U.S. National Parks used to have a slogan: "Our National Parks - to Preserve, Use and Enjoy". The principal was sound but the practice if carried out to the letter produced sterility. Preservation of a habitat or landscape keeps it as it is and, in the US 'Category A' system, this meant removing any resident population and, so-to-speak, 'pickling' the landscape *'for the benefit and enjoyment of future generations.'* Conservation allows for natural change as well as recognising that Man is a part of the natural world. Conservation today employs more **inclusive** approaches such as:

#### Conservation - with - Development

In recognising Man as an integral part of the ecosystem there are a number of factors that are affecting change. E.g. (a) climate change (desertification; water supplies); (b) introduced species (e.g. water buffalo at Azraq Wetland); (c) pollution (esp. plastic litter); (d) habitat fragmentation (owing to human activity & exploitation); (e) species exploitation (use of wildlife resources affects flora & fauna as well as residents who rely on the natural resources for survival); (f) natural resource extraction (e.g. limestone core stones, minerals)

#### Community conservation

Promoting biodiversity and sustainable land use by empowering local people to manage and conserve natural resources within the social, cultural and the economic contexts of their communities. ([www.communityconservation.org](http://www.communityconservation.org))

#### Using biodiversity values for the benefit of local communities (e.g. agro-forestry)

**Biosphere Reserves** - 'living laboratories' for testing out & demonstrating integrated management of land, water and biodiversity. Each reserve has three functions: (a) Conservation function; (b) Development function (economic and human development which is socio-culturally and ecologically sustainable); (c) Logistic function (providing support for research, education and information exchange).

([www.unesco.org/mab/nutshell.htm](http://www.unesco.org/mab/nutshell.htm))

#### Core and Buffer Zones

Improving the livelihoods of local people alongside the conservation of natural resources in and around protected areas.

#### Protected Area Corridors

Rather than isolating wildlife within defined protected areas this approach allows for the movement of wildlife through areas while at the same time maintaining biodiversity and allowing sustainable economic and socio-cultural development.

## REFERENCES:

Nash, R. (1982) *Wilderness and the American Mind*. Third Edition. Yale University Press, New Haven. [See Prologue and Chapter 13]

<http://www.geog.leeds.ac.uk/conferences/wildbritain/position.doc> "Wilderness Britain?" A very useful position statement on 'wilderness' arising from discussions in the first three seminars on Wilderness Britain held at Leeds University.

<http://www.geog.leeds.ac.uk/conferences/wildbritain/newsletter3.doc> "Wild land ecology and habitat conservation" Wilderness Britain? Social and Environmental Perspectives on Recreation and Conservation. Newsletter No.3. includes an excellent article by James Fenton (Ecologist, National Trust for Scotland)

<http://www.ccg.leeds.ac.uk/teaching/wilderness/introduction.html> "Exploring environmental decision making using Internet GIS: Deciding where the wildest and most remote places are in Britain" by Steve Carver, Andy Evans & Richard Kingston. An excellent introductory exercise.

## TASK H7: Investigating Wilderness

This task may be treated either as a photo-based study or as a field study (Field Unit H1). Within our study area there are several sites that may lend themselves to this:

- **Hamzah Camp** - The Royal Astronomical Society's desert station.
- **Jawa** - the Iron Age hill complex to the north of Tal Al-Rimah.
- **Al-Dahek** - the extensive desert area close to the Saudi Arabian border (See Task H3).
- **Burq'a** - the Nabatean/Roman dam and fort east of Safawi
- **Burqaia** - the open desert rangeland surrounding the lone tree once visited by the Prophet Mohammad.

### TASK TITLE:

*To what extent may the Study Area (Name) be termed 'wilderness' and how should this be maintained for future generations?*

### QUESTIONS FOR INVESTIGATION (QFI):

1. What is the function of this landscape? (see 'Discussion' below)
2. What are its main values in terms of (a) physical landscape; (b) vegetation cover; (c) human land use?
3. What is its current status: (a) completely natural; (b) highly influenced by Man; (c) somewhere between the two extremes?
4. What are the pressures on this landscape (physical and human/economic)?
5. Should the area be (a) left to its own devices; (b) managed; (c) zoned?
6. How should future management be carried out?

### STEPS:

#### A: Preparation

1. Complete the attached Questionnaire (Sheet A - in Excel File) and analyse results within the group to arrive at your own definition of 'wilderness'.
2. Study the topographic map and population data sheet to complete the Assessment Data Sheet (B- in Excel File).
3. Discuss how best to present the data once gathered (e.g. mapping, graphs, histograms, field sketches, annotated photos etc). It is important to do this BEFORE going in to the field to ensure as wide a range of methods as possible.
4. Discuss which statistical methods could be employed in the analysis (e.g. means, modal classes, median values, standard deviation, Spearman's Rank, chi-squared, nearest neighbour etc). It is important to do this BEFORE going in to the field to ensure as wide a range of data as possible.

#### B: In the Field

1. Complete Landscape Evaluation Sheets for a number of selected sites within the study area (see the Excel files on this CD)
2. Prepare and annotate field sketches of views selected to highlight key wilderness elements. Think of the data in terms of layers from the ground upwards: 1. Rocks; 2. Soils; 3. Geomorphic features; 4. Vegetation; 5. Man-made features; as well as less tangible elements e.g. 'area inaccessible to sheep', 'area suffering from trampling', 'buildings screened by trees' etc
3. Prepare an annotated transect to show the various layers mentioned above. Remember to include a scale!

4. Take photographs to support your presentation and conclusions.
5. Depending upon your reasons for study carry out at least one more detailed investigation. E.g. Biologists - vegetation quadrat survey; Geographers - footpath erosion measurements, visitor counts; Artists - sketches and paintings (artists were very influential in the designation of the first National Parks in the USA); Walkers - try walking estimated distances in varying terrain to see whether they match Naismith's Rule. There's something for everyone!

### C: Analysis

1. Pool the data collected by all students.
2. Discuss the results and issues - see below

## DISCUSSION

1. Before coming to any conclusions students should consider the **functions** of the land in question and therefore the degree to which the land should be managed or left to its own devices. E.g.

- |   |   |
|---|---|
| (a) water catchment   | (g) wildlife conservation                                   |
| (b) sheep grazing   | (h) mass tourism  |
| (c) timber growth   | (i) eco-tourism (incl. camping, climbing, walking)          |
| (d) soil conservation   | (j) Protected Area (national park, national monument, SSSI) |
| (e) land conservation (e.g. against fluvial or coastal erosion) | (k) Other...?   |
| (f) flood control   |   |

2. What elements determine this as a wilderness area? (see QFIs 2 - 3)

3. What pressures are currently being brought to bear on this landscape? (e.g. tourism, grazing, natural processes (e.g. glacial, marine or, marine processes), economic development, global warming, changing sea levels etc) (see QFI 4)

4. Having assessed the data students should consider the following statements (hypotheses) for wider discussion:

- (b) This 'Wilderness' meets the criteria of the US Wilderness Act.
- (c) 'Wilderness' is a positive element in the Jordanian landscape.
- (d) 'Wilderness' is about diversity (large areas are needed to support diversity and create space for mega flora and fauna).
- (e) 'Wilderness' should be managed (restricted access; zoning; removal of exotic species; re-introduction of species etc.)
- (f) Where damaged, 'Wilderness' is unrecoverable in ecological terms, but is recoverable in aesthetic terms; (or can it be re-created if natural ecosystems are replaced, restored or reconditioned? Or can it be re-created if left to nature?)
- (g) Is there scope for inclusive conservation here? (see notes above)
- (h) 'Wilderness' is more about the management of people than nature.

4. Consider QFIs 5 and 6 in readiness for every student's personal assessment and conclusions.

## THE WILDERNESS CONCEPT: ASSESSMENT SHEET A

Each statement says that "Wilderness....." Consider all of them and enter your scores between +3 and -3:

	-3	to	+3	SCORE	COMMENTS
<b>NATURAL ELEMENTS</b>	1	can be less than 100km <sup>2</sup>	can be a large area (100's of Sq.Km)		
	2	has high relief	has low relief		
	3	represents a single landscape type	contains a variety of landscape types		
	4	consists of climax vegetation	consists of mixed vegetation		
	5	contains only indigenous species	contains introduced species		
	6	has low biodiversity	has high biodiversity		
	7	has no wild/dangerous mammals	has wild/dangerous mammals		
	8	has moderate weather conditions	has extreme weather conditions		
<b>PERCEPTUAL ELEMENTS</b>	1	feels close to habitation	feels remote		
	2	feels like home	feels different to home		
	3	feels noisy	feels peaceful		
	4	feels stressful	feels relaxing		
	5	looks 'ugly'	looks 'nice'		
	6	requires day-to-day clothing	requires protective clothing		
	7	requires no First Aid to be carried	requires First Aid to be carried		
	8	will be easy to move through	will be difficult to move through		
<b>HUMAN ELEMENTS</b>	1	is close to centres of population	is remote from centres of population		
	2	allows unlimited public access	allows no public access		
	3	can be entered by car	is only accessible on foot		
	4	possesses cultural/historical remains	has no cultural/historical remains		
	5	contains man-made constructions	contains no man-made constructions		
	6	is used for agriculture	is unused for agriculture		
	7	is used by extractive industry	is unused by extractive industries		
	8	contains industrial activity	has no industrial activity		
<b>MORAL ELEMENTS</b>	1	is wanted by local people	is not wanted by local people (NIMBY)		
	2	requires management	requires no management		
	3	is a MAN thing	is a NATURE thing		
	4	can be measured	cannot be measured		
	5	is a place	is in the mind		

**TOTAL:**

NB: The resultant figure is meaningless on its own until compared and analysed with the views of others.

## WILDERNESS AREA ASSESSMENT SHEET B

**Use the topographic map and the population data sheet to complete this basic information for the study area. If there are more than one entry point complete two or more sheets.**

1 How far is the entry point from the nearest main road?	<input style="width: 90%;" type="text"/>	Km
2 As the crow flies how far is the entry point to the nearest significant settlement?	<input style="width: 90%;" type="text"/>	Km
3 How far is this by road?	<input style="width: 90%;" type="text"/>	Km
4 As the crow flies how far is the entry point from central Reykjavik?	<input style="width: 90%;" type="text"/>	Km
5 How far is this by road?	<input style="width: 90%;" type="text"/>	Km
6 Approx. how many people live within: 20km	<input style="width: 90%;" type="text"/>	
7 Approx. how many people live within: 50km	<input style="width: 90%;" type="text"/>	
8 Approx. how many people live within: 100km	<input style="width: 90%;" type="text"/>	
9 Approx. how many people live within: 150km	<input style="width: 90%;" type="text"/>	(300km radius = est. max driving for a day out)
10 How far is it from the entry point to the mid-point of the area?	<input style="width: 90%;" type="text"/>	(25km = reasonable distance a walker might trek)
10 Use Naismith's Rule to calculate how long it would take you to walk from the entry point to the centre of this area (see calculation below)	<input style="width: 90%;" type="text"/>	
11 What is the lowest elevation within the study area?	<input style="width: 90%;" type="text"/>	metres
12 What is the highest elevation within the study area?	<input style="width: 90%;" type="text"/>	metres
13 How would you describe this area (0 = Very flat thru' 5 = Very mountainous)	<input style="width: 90%;" type="text"/>	
14 Do there appear to be any man-made constructions within the study area?	<input style="width: 90%;" type="text"/>	YES/NO
15 If so, what:	<input style="width: 100%; height: 40px;" type="text"/>	
16 What would you say are the main characteristics/attractions of this area?	<input style="width: 100%; height: 40px;" type="text"/>	

### CALCULATION FOR NAISMITH'S RULE

Distance from entry point to central point:

How long would this take to walk at 5km per hour?

How much would you have to ascend?

For every 300m of ascent add 30 mins to B to give a new total (= B + [C ÷ 10]):

How much would you have to descend?

For every 300m of descent add 15 mins to D to give a new total (=D+ [E ÷ 20]):

Time in hours and minutes:

<b>A.</b>	<input style="width: 90%;" type="text"/>	<b>Km</b>	
<b>B.</b>	<input style="width: 90%;" type="text"/>	<b>mins</b>	15 Km
<b>C.</b>	<input style="width: 90%;" type="text"/>	<b>metres</b>	180 mins
<b>D.</b>	<input style="width: 90%;" type="text"/>	<b>mins</b>	250 metres
<b>E.</b>	<input style="width: 90%;" type="text"/>	<b>metres</b>	205 mins
<b>F.</b>	<input style="width: 90%;" type="text"/>	<b>mins</b>	150 metres
<b>G.</b>	<input style="width: 90%;" type="text"/>		212.5 mins
			<b>3hrs 32.5 mins</b>

### EXAMPLE:

15 Km
180 mins
250 metres
205 mins
150 metres
212.5 mins
<b>3hrs 32.5 mins</b>