



**The Wildland Research Institute**



## Research opportunities and needs linked to wilderness areas

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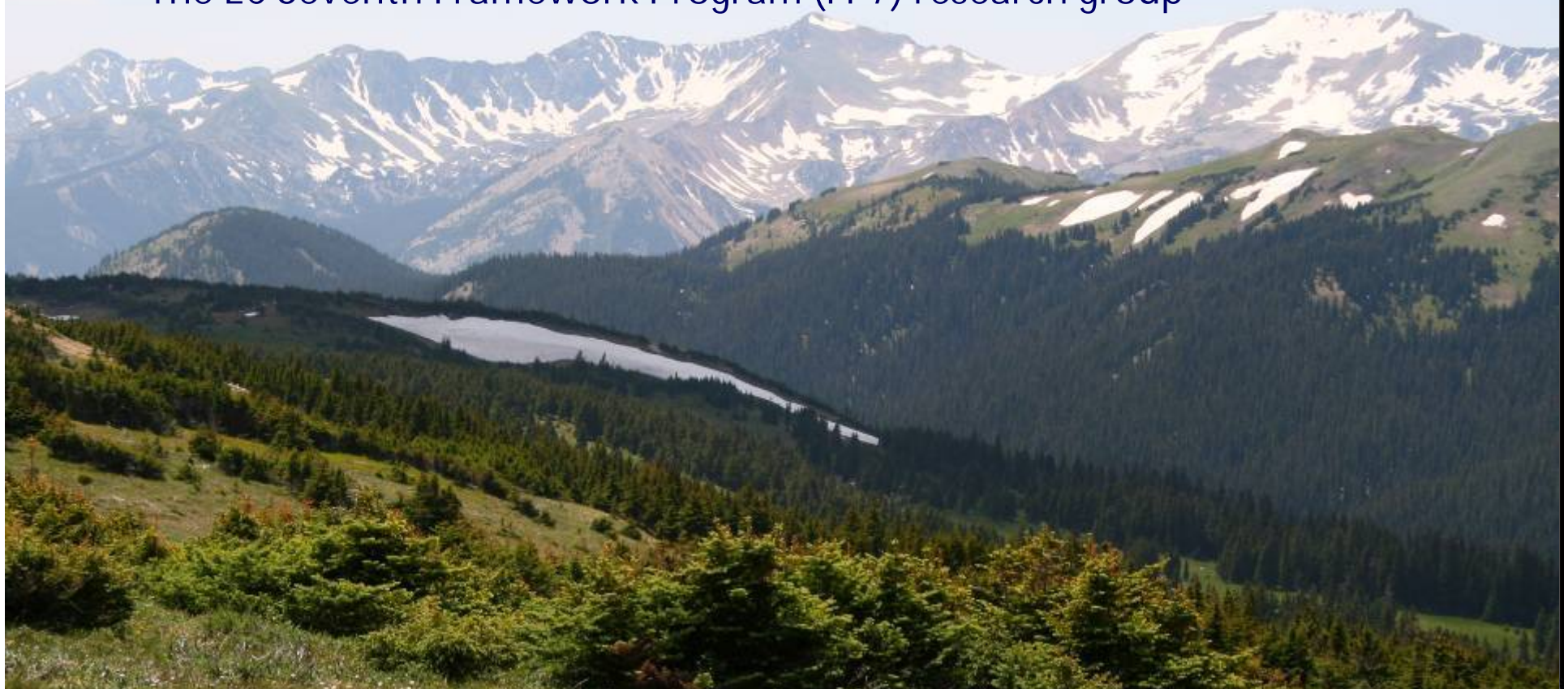
9th Europe's Wilderness Days  
Borjomi-Kharagauli National Park, Georgia





## Summary

- Our experiences with the Scottish study
- Research questions that have emerged from the Scottish report
- Why the Wildland Research Institute is interested in wilderness
- The EC Seventh Framework Program (FP7) research group





## Review of status and conservation of wild land in Europe

Report commissioned by the Scottish Government in response to the EU resolution on Wilderness in Europe, Feb. 2009, and the Prague Conference. May 2009

### Conclusions

1. "Wilderness" or "wildland" are not common words across Europe
2. There is a widespread legislative framework for wilderness across Europe  
– 27/44 countries incorporate IUCN Categories
3. IUCN Category Ia & b protected areas occur in 36/44 European countries
4. The land area in IUCN Category I areas is 20,920,839Ha = 0.87%
5. There is also wilderness in the highly protected (core) zones of National Parks
6. Much more wilderness could be designated across Europe



## National protected area system legislation in Europe IUCN Categories I-V (VI)

### Countries

Albania, Armenia, Austria,  
Azerbaijan, Belarus, Bosnia  
Herzegovina, Bulgaria,  
Croatia, Czech Republic,  
Estonia, Georgia, Germany,  
Hungary, Iceland, Latvia,  
Macedonia, Moldova,  
Poland, Portugal, Romania,  
Russia, Serbia, Slovakia,  
Slovenia, Spain, Sweden,  
Ukraine

### Example



### Article 3. Categories of Protected Areas 1. Protected Areas categories are as follows:

- State Nature Reserve
- National Park
- Natural Monument
- Managed Nature Reserve
- Protected Landscape
- Multiple Use Area

*Law of Protected Areas System, March 7, 1996 N 136 Georgia*

**27/44 countries incorporate IUCN Categories in their protected area legislation**

## IUCN Category I types in protected area legislation

### Countries

#### Strict Nature Reserve

*Albania, Belgium, Croatia, Estonia, Finland, Latvia, Lithuania, Macedonia, Serbia, Slovenia*

#### State Nature Reserve

*Azerbaijan, Georgia, Italy, Russia*

#### National Nature Reserve

*Czech Republic, France, Ireland, Slovakia*

#### Absolute Nature Reserve Area

*Greece*

#### Scientific Reserve

*Moldova, Romania*

#### State Reserve

*Armenia*

#### Nature Reserve

*Bulgaria, Iceland, Poland, Sweden, Ukraine*

#### Reserve

*Belarus*

### Example

#### Section 12

#### Strict Nature Reserves

The designation and objectives of a strict nature reserve shall be prescribed by law if the site is at least 1,000 hectares in size, and otherwise by decree. A strict nature reserve can only be established on State-owned land.

A strict nature reserve should hold significance as a means of safeguarding undisturbed natural development, or for scientific research or education.

*Nature Conservation Act 1996, Finland*

Many protected area types for IUCN Category I – none of which are “wilderness”



## IUCN Category I protected areas

	IUCN Category			IUCN Category			IUCN Category	
	la	lb		la	lb		la	lb
Albania	2		Georgia	20		Norway	1866	1
Armenia	6		Germany			Poland	1	
Austria	3		Greece	5		Portugal	18	5
Azerbaijan	15		Hungary			Romania	77	
Belarus	2		Iceland	2		Russia	73	
Belgium			Ireland	75		Serbia	7	1
Bosnia Herzegovina			Italy	115		Slovakia		607
Bulgaria	1	54	Latvia	4		Slovenia	6	50
Croatia	2	81	Liechtenstein		9	Spain	6	35
Cyprus	1	1	Lithuania	6		Sweden	1792	120
Czech Republic		10	Luxembourg		34	Switzerland	1	
Denmark	6	7	Macedonia	4		Turkey	518	
Estonia	29	857	Malta	3	65	UK		
Finland	20	6	Moldova	5		Ukraine	23	
France	37		Netherlands					

CDDA 2009

**IUCN Category Ia & b occur in 36/44 countries across Europe**



## IUCN Category I protected areas by area (Ha)

	IUCN Category				IUCN Category				IUCN Category		
	la	lb	%		la	lb	%		la	lb	%
Albania	4,800		0.17	Georgia	188,559		2.71	Norway	615,182	1,914	1.91
Armenia	102,685		3.45	Germany				Poland	1,995		0.01
Austria	1,133		0.01	Greece	3,495		0.03	Portugal	27,065	6,206	0.36
Azerbaijan	196,464		2.27	Hungary				Romania	310,232		1.31
Belarus	81,023		0.39	Iceland	7,968		0.08	Russia	17,240,685		1.01
Belgium				Ireland	20,929		0.3	Serbia	159	37	>0
Bosnia Herzegovina				Italy	60,985		0.2	Slovakia		96,328	1.97
Bulgaria	1,463	75,553	0.69	Latvia		24,439	0.38	Slovenia	208	6,998	0.36
Croatia	2,935	33,266	0.64	Liechtenstein		1,307	8.17	Spain	7,312	40,163	0.09
Cyprus	3,331	23,884	2.94	Lithuania	37,068		0.57	Sweden	218,396	335,399	1.23
Czech	17,227		0.22	Luxembourg		3,511	1.36	Switzerland	17,032		0.41
Denmark	1,730	14,597	0.38	Macedonia	12,855		0.51	Turkey	108,086		0.14
Estonia	6,671	197,210	4.53	Malta	104	7,637	24.5	UK			
Finland	160,021	127,842	0.85	Moldova	19,378		0.57	Ukraine	441,249		0.73
France	6,123		0.01	Netherlands							

CDDA 2009

**The area in IUCN Category I protected areas is 20,920,839Ha = 0.87%**

## Core zones of IUCN Category II National Parks by protected area legislation

### Countries

Armenia, Austria, Azerbaijan, Belarus, Czech, Estonia, France, Georgia, Hungary, Italy, Latvia, Lithuania, Macedonia, Moldova, Romania, Serbia (16/44)

### Core zone type

*full protection area, integral nature reserve, natural zone, natural strict protection zone, reserve zone, special protection zone, strict protection zone, strict reserve zone, wilderness protection zone*

### Example

Article L331-16  
Areas known as "integral nature reserves" may be introduced to a national park in order to ensure greater protection of certain areas of fauna and flora for scientific purposes.

Specific constraints may be enacted by the decree which institutes them.

Integral nature reserves are established while taking into account the living nature and character of the area.

*Environmental Code, France*

Zoning protects natural values in National Parks





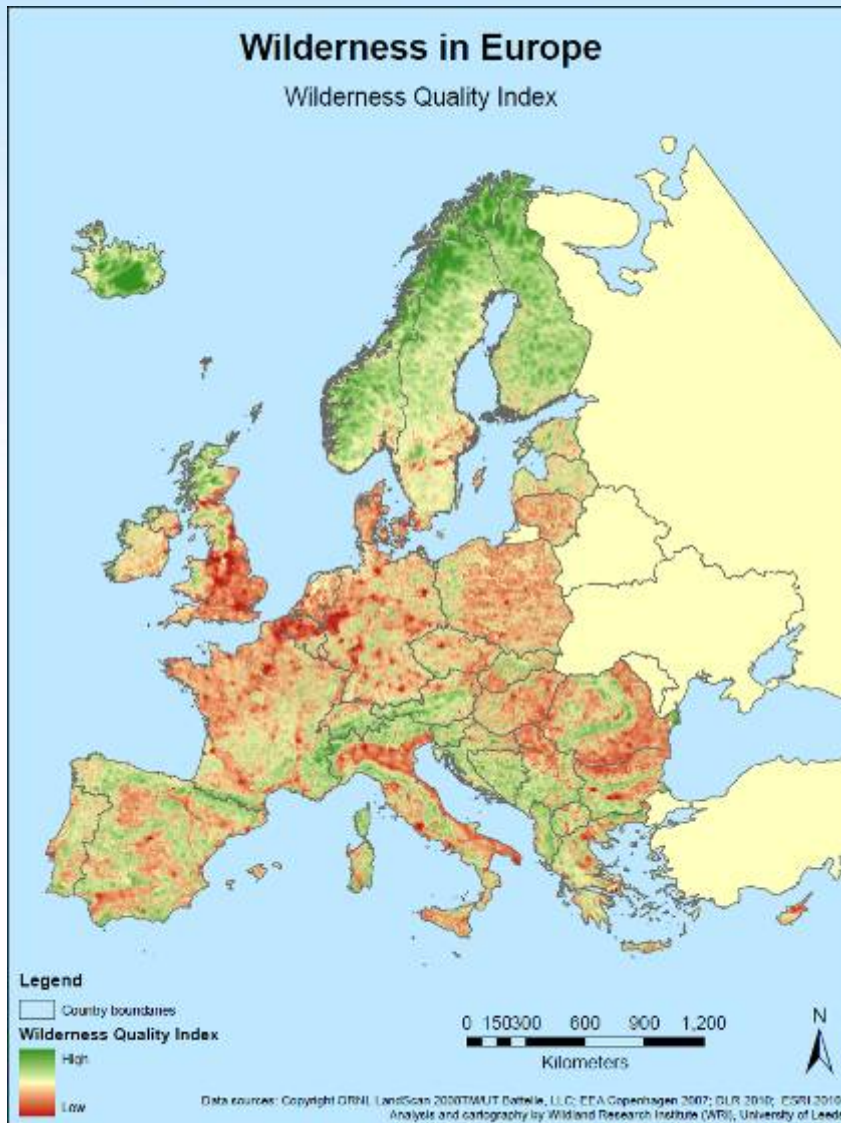
## IUCN Category II protected areas

	IUCN Category II				IUCN Category II				IUCN Category II		
	No.	(Ha)	%		No.	(Ha)	%		No.	(Ha)	%
Albania	14	17,231	0.6	Georgia	4	71,849	1.03	Norway	29	2,679,294	8.27
Armenia	2	178,002	5.98	Germany	14	962,326	2.7	Poland	15	203,120	0.65
Austria	7	92,216	1.1	Greece	19	70,767	0.54	Portugal	1	69,592	0.76
Azerbaijan				Hungary	5	220,318	2.37	Romania	13	318,894	1.34
Belarus	2	159,097	0.77	Iceland	3	1,119,203	10.87	Russia	36	8,582,378	0.5
Belgium	9	306,971	10.06	Ireland	6	59,171	0.85	Serbia	2	58,200	0.75
Bosnia Herzegovina				Italy	22	1,414,330	4.69	Slovakia	9	317,890	6.51
Bulgaria	3	193,047	1.73	Latvia	46	405,689	6.24	Slovenia	1	83,808	4.13
Croatia	8	8,615	0.15	Liechtenstein				Spain	62	833,047	1.65
Cyprus	14	16,031	1.73	Lithuania	5	156,949	2.41	Sweden	21	698,083	1.55
Czech Rep	4	83,190	1.05	Luxembourg	2	51,807	20.03	Switzerland			
Denmark	9	12,264	0.28	Macedonia	3	112,988	4.44	Turkey	342	840,788	1.08
Estonia				Malta	4	194	0.61	UK			
Finland	34	884,480	2.62	Moldova				Ukraine	8	49,209	0.08
France	5	261,319	0.48	Netherlands	22	135,305	3.26				

CDDA 2009

The land area in IUCN Category II areas is 21,727,662Ha = 0.91%

How much wilderness is there in National Park core zones?

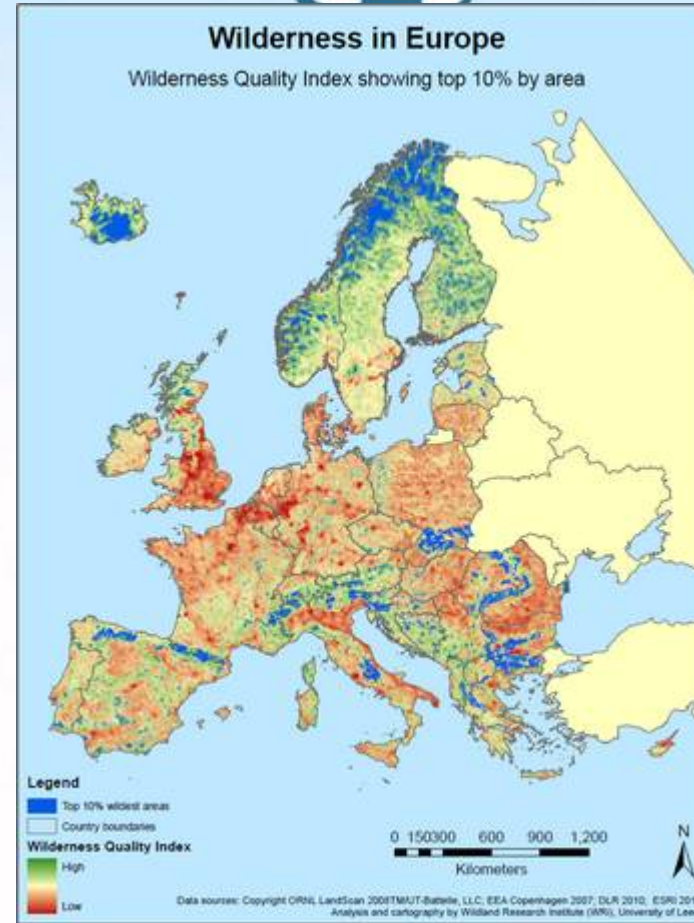
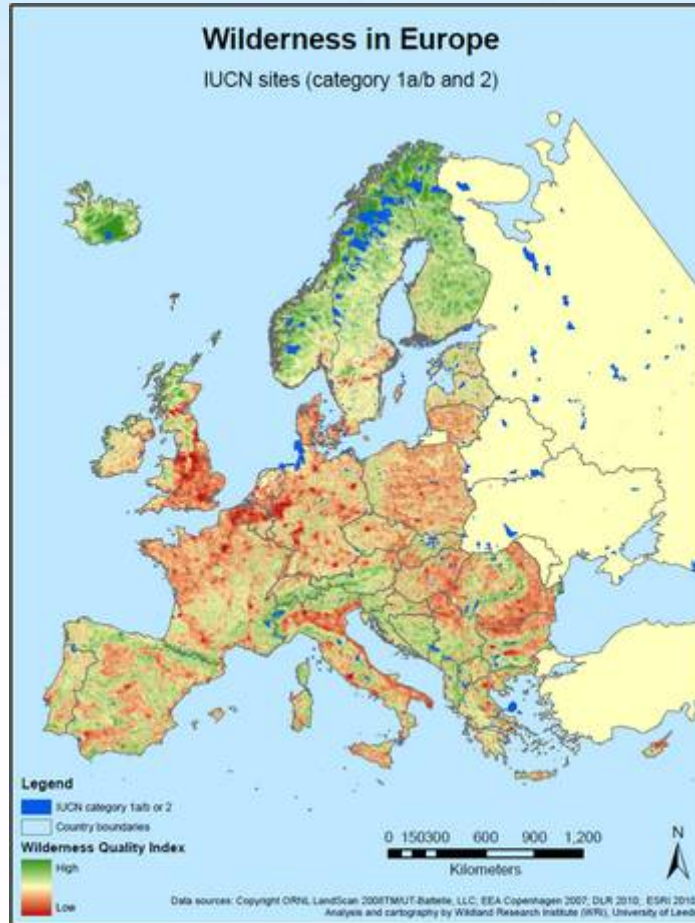


## Mapping the WILDERNESS CONTINUUM

A multi-criteria evaluation approach was used to combine continuous datasets describing a range of wilderness attributes and conditions, in generating maps that show the spatial variability and geographical patterns in wilderness quality across Europe. The datasets include:

population density, land cover/use, transport and accessibility, and topography

## IUCN protected areas and the top 10% WQI



**Much more wilderness could be designated across Europe**

## Research questions that have emerged from the Scottish report

To be effective, a wilderness law must specify which uses it permits and which it excludes"

*Cyril F. Kormos & Harvey Locke in "A handbook on International Wilderness Law and Policy", Cyril Kormos, ed., 2008*

***Does Europe need wilderness legislation when IUCN Category I types exist in national protected area legislation?***

"natural processes", "natural state", "undisturbed natural development", "natural resources", "natural areas", "natural ecosystems", "biocenosis" but NOT "wilderness" or "wildland"

***Should there be a common European language for wilderness?***

Highly protected/strict core zones in National Parks can define wilderness areas

***How much wilderness is there in National Parks?***

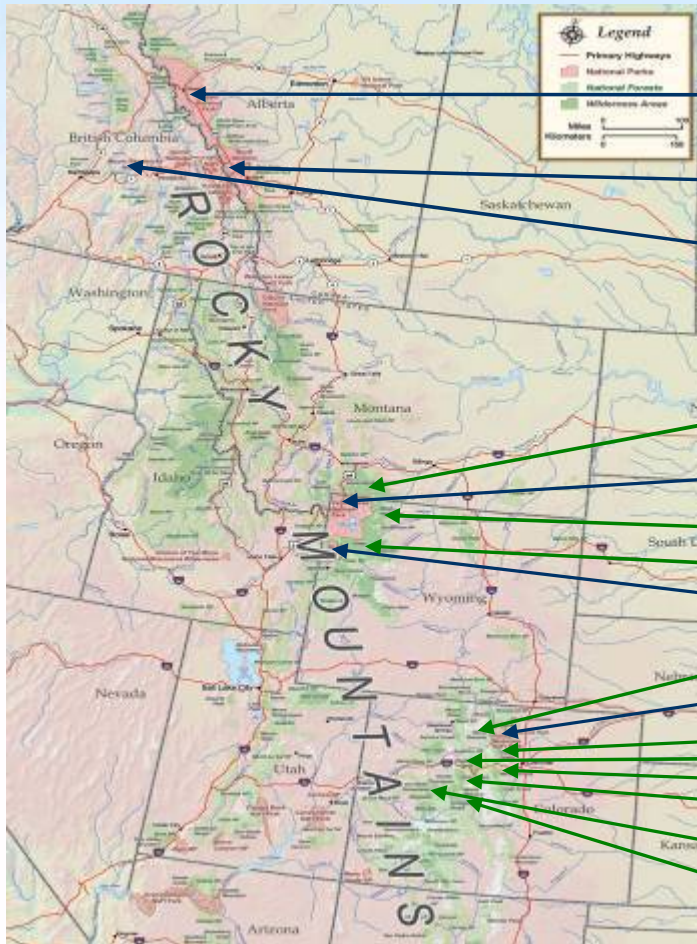
***Is it better to designate wilderness areas in National Parks, not just zone?***

***Can wilderness be better protected in National Parks rather than as isolated areas?***

IUCN Category I is ecosystem area protection primarily based on non-intervention

***Can IUCN Category I protected areas be used to identify the PRIMARY HABITATS across the different Biogeographical areas of Europe?***

## Why we like wilderness (1) - walking the Rockies 2003 & 2008



**Jasper National Park**

**Banff National Park**

**Mount Revelstoke National Park**

**Beartooth Absaroka Wilderness**

**Yellowstone National Park**

**North Absaroka Wilderness**

**Teton Wilderness**

**Grand Teton National Park**

**Never Summer Wilderness**

**Rocky Mountain National Park**

**Indian Peaks Wilderness**

**Eagles Nest Wilderness**

**Mount Evans Wilderness**

**Holy Cross Wilderness**

**Hunter-Frying Pan Wilderness**

**Collegiate Peaks Wilderness**



Why we like wilderness (2)

*European wilderness is:*



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What we have

*"Wilderness" in Britain is. Confusing!!*

*People no longer know what wild is!!*

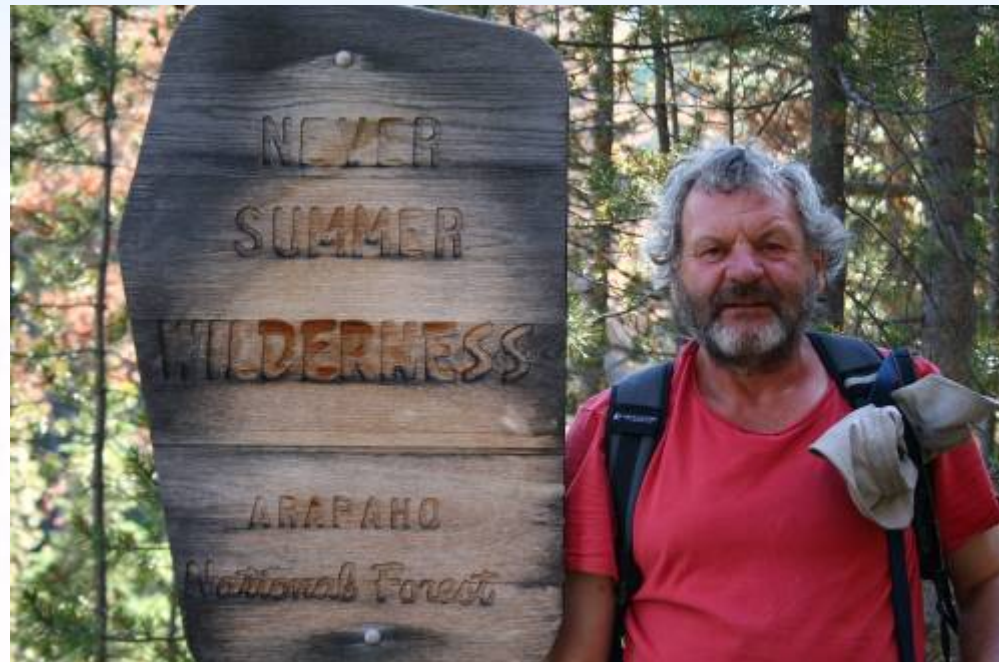


*They just see overgrazed land and farm animals*

Why we are interested

Why is the WRI interested in wilderness?

We like it!!!  
We don't have any  
We want some!







## Wilderness research agendas in the EU

### EU Resolution

- *value and benefits of wilderness protection*
- *climate change and human intervention in managing wilderness*

### Prague Conference

#### Policy development

- *ensure existing legislation protecting wilderness is monitored and enforced effectively*
- *means by which links with neighbouring countries can more effectively support protection of wilderness and wildland areas outside EU boundaries*

#### Further work and information needs

- *definition of wilderness and wild areas*
- *register of wilderness*
- *map wilderness areas in Europe*
- *scientific rationale underpinning the linkage between wilderness and delivery of societal benefits*
- *prospective restoration of wild natural habitats and processes*
- *value of non-extractive economic, social and environmental benefits of wilderness*

Slow progress

## Seventh Framework Programme for Research

### FP7

- EU's main instrument for funding research in Europe
- runs from 2007 to 2013 with a budget of € 50.5 billion
- 4 specific programmes
  1. Cooperation
  2. Ideas
  3. People
  4. Capacity



### Cooperation

- collaborative research
- six themes

### Theme 6 – Environment (including Climate Change)

- objective to promote the sustainable management of both the man-made and the natural environment and its resources
- budget is € 1.8 billion



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A wilderness research consortium

PAN Parks has assembled a consortium of potential researchers and specialists to apply to the EU 7th Framework Programme for funding of wilderness related research:

Institute of Biometeorology (IBIMET), Firenze, Italy

Vienna University of Technology, Austria

ECO Institute, Klagenfurt, Austria

Wildland Research Institute, Leeds University, UK

Leeds Metropolitan University, UK

University of Natural Resources and Applied Life Sciences Vienna, Austria

Rzeszow University, Poland

Tartu University, Estonia

University of Lisbon, Portugal

E-Tour, Sweden

Metsähallitus, Finland

Staatsbosbeheer, Netherlands



## FP7 Theme 6 Work Programme 2011

### Sub-Activity 6.2.1 Conservation and sustainable management of natural and man-made resources and biodiversity

*Two potential research opportunities.*

Behaviour of ecosystems, thresholds and tipping points (ENV.2011.2.1.4-2)

*Natural resource and biodiversity managers will be provided with:*

- *methods to assess ecosystem services*
- *develop management strategies*
- *communicate with policy makers*
- *insights into the behaviour of major ecosystems under realistic conditions*

*The expected impact is a better use of ecosystems and the protection of biodiversity.*

Improved comprehension of the utility of the concepts of value of biodiversity (ENV.2011.2.1.4-3)

*Analysis of alternative ways to improve biodiversity policy making and governance at local, national and global scales.*

Submission of proposals by 18 November 2010

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Wilderness research in Europe

What would your wilderness research priorities be ?

