

# Cumbria Green Investment Plan – the contribution of Natural Capital

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# Natural Capital Accounting - Introduction



Answer these key questions to...

...generate these natural capital accounting outputs

What natural capital assets are owned, or managed, or depended on?

- **Natural Capital Asset Register** - Registry of all natural capital assets owned / managed / dependent on

What flows of benefits do the assets produce?

- **A statement of physical flows** - Benefits, both for the organisation and for wider society, in physical metrics

What is the value of the benefits and to whom do they accrue?

- **A benefit valuation statement** - in monetary terms where possible

What does it cost to maintain the natural capital assets?

- **A schedule of maintenance costs** - Relevant activities and their costs

What's the net impact on natural capital?

- **A natural capital balance sheet** - Sum of natural capital benefits over time vs the sum of costs to maintain the natural capital assets in a condition that generates the benefits

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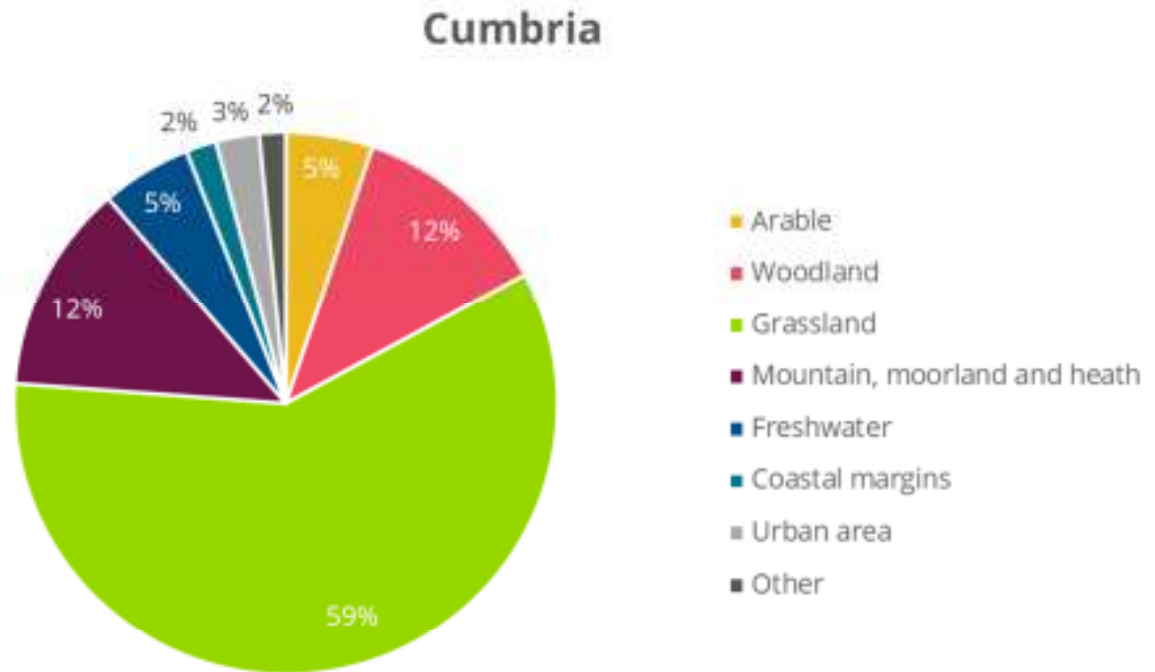
eftec

# Cumbria Natural Capital Baseline



## Asset Register

- Full coverage of analysis area
- 5m resolution map grid



Source: efttec & Countryside (in prep) NW Region Baseline Natural Capital Account. Produced for United Utilities.

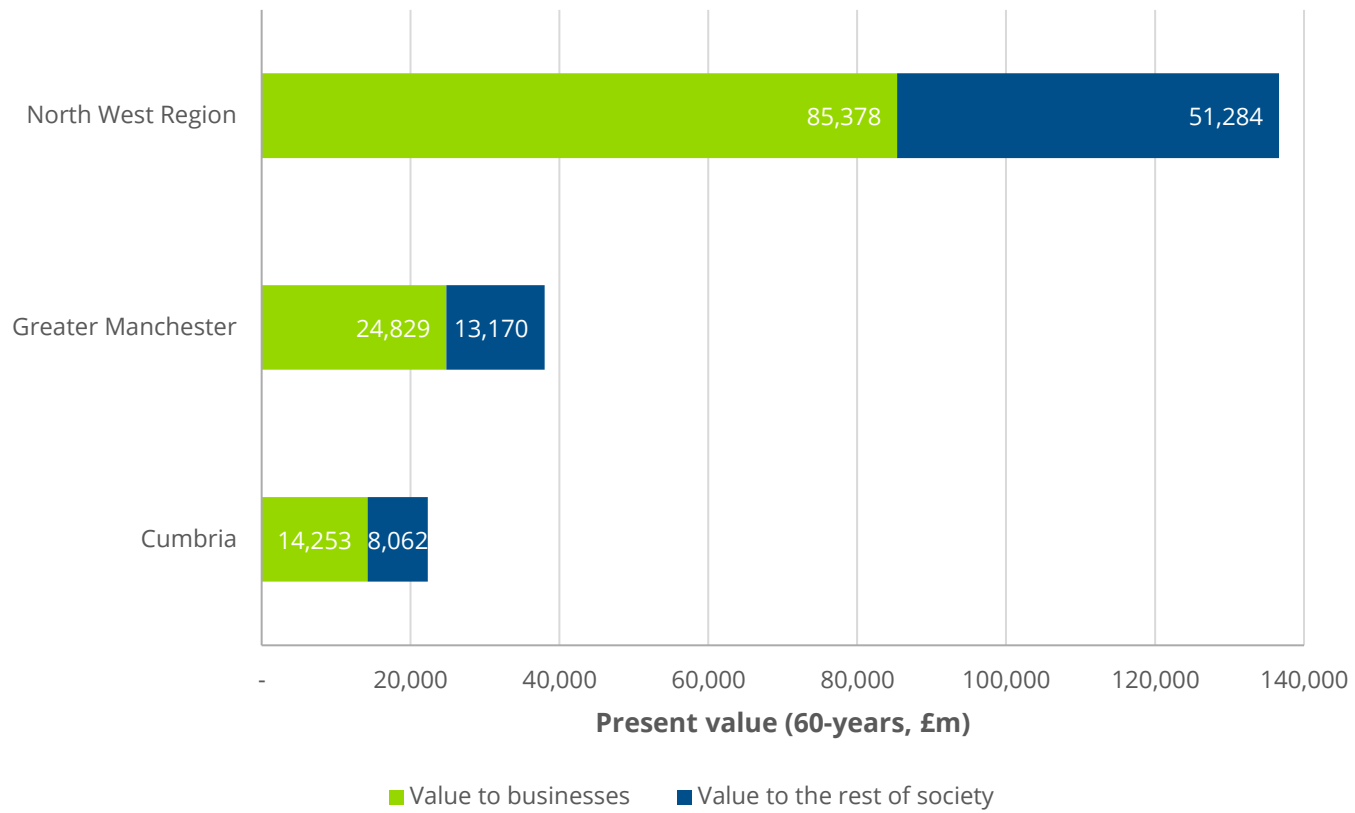
Present value 60-years, £m	Valuation metric	Value to businesses	Value to the rest of society	Total
<b>Asset values (monetised)</b>				
Food provision	Arable income	470		470
	Livestock income	3,265		3,265
Fishing	Value of landings by vessels 10m and under	0.00		0.00
Timber	Value of softwood removals	191		191
Renewable energy	Resource rent value of hydropower	5		5
Water availability	Resource rent value of tidal and surface water abstractions for public water supply	52		52
	Ecosystem provision value of groundwater for public and private drinking water and agriculture benefits	8		8
Minerals	Ex-works sales value of sand and gravel	99		99
	Ex-works sales value of crushed rock	804		804
Tourism	Domestic tourism expenditure attributed to natural capital	9,392		9,392
Air quality regulation	Value of PM2.5 removal by woodland		961	961
Carbon sequestration	Value of CO <sub>2</sub> e sequestered in habitats		3,144	3,144
Recreation	Adult recreation welfare value (under 3 hours)		1,624	1,624
	Sporting income	-		
Physical health	Avoided medical treatment costs		839	839
Water quality	Welfare of avoiding deterioration in rivers		1,602	1,602
	Welfare of avoiding deterioration in lakes		11	11
<b>Total gross asset value</b>		<b>14,287</b>	<b>8,181</b>	<b>22,467</b>
<b>Asset values (non-monetised)</b>				
Water Supply	Water abstraction at source (i.e., production): 238 million m <sup>3</sup>			
Flood risk management	Annual average additional woodland soil water storage capacity: 24 million m <sup>3</sup>			
Recreation	Children recreation visits (under 3 hours): 5 million visits			
Biodiversity	Total SSSI area: 106,600 ha			
Education				
Volunteering				
Mental health				

## Interpretation

- The account measures and values a wide range of benefits
- It is one of the most detailed natural capital accounts developed in the UK, in terms of:
  - Fine scale spatial mapping
  - Large regional area covered
  - Range of benefits valued
- The largest benefits are tourism expenditure, and other key business benefits are agricultural production and minerals
- The largest benefits to wider society are recreational welfare, carbon sequestration and physical health



## Cumbria Baseline NC Account



## Green Natural Capital investment options

- Land use change to management carbon emissions, sequestration and storage:
  - Maintain peatland carbon storage
  - Restore peatland to halt emissions
  - Reduce carbon-intensity of livestock production
  - Sequester carbon into the natural environment through increased tree cover and soil restoration
- These measures have wider implications:
  - Reduce nutrient pollution pressure on water supplies
  - Access to new ELMs schemes
  - Carbon credit trading opportunities
  - Landscape and tourism
  - A more sustainable (premium?) farm product

# Thank you

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