

Natural Capital Noving the Needle



The Problem



Liquid fresh water

Enclosed farmland The World's Water Woodlands and scrub Acid, calcareous and 9% neutral grasslands 3074240 ha Mountains, moorlands **64%** 22725116ha and heaths 703522 ha **Built-up areas** and gardens 881362 ha Urban green and blue areas 651194 ha 1% Freshwaters and wetlands Marine 514128 ha <1% Other, including bare ground All water on, in, and above the Earth 72056 ha <1% Coastal margins eta source: loor Shikiomano Fresh-water lakes and river 107271 ha

Marine & coastal margins indicators

92

100

Nutrient & chemical status % of coastal and estuarine waters with good chemical status Including uPBTs (ubiquitous, persistent, bioaccumulative, toxic substances) **Excluding uPBTs** Coastal Coastal 0 Estuarine Estuarine 0

River Basin Plan

https://www.usgs.gov/media/images/all-earths-water-a-single-sphere The State of Natural Capital, Natural England 2024





Some **3 million tonnes** of topsoil are lost in the UK each year. Globally, **24 billion tonnes** are lost annually, **3.4 tonnes** for every adult and child on the planet. Soil health and soil life are vital for farming. Soil organic matter (carbon), both alive and dead, aids water storage, nutrient cycling and chemical buffering of pollutants. It helps to bind particles and reduce soil erosion. Soil erosion has been estimated to affect **17% of arable land** in England and Wales (Cranfield University, 2000). Production losses due to soil erosion have been estimated at around **£40 million per year** in England and Wales (Graves and others, 2015). Bare soil is more prone to both erosion and compaction. Compaction of soil from poor management, results in less infiltration of rainwater and more run-off, impacting on aquifer replenishment and flood risk.

https://www.theglobaleducationproject.org/earth/agriculture-food/world-fertilizer-consumption-by-region https://tracextech.com/soil-carbon/ The State of Natural Capital, Natural England 2024





Annual carbon dioxide (CO²) emissions worldwide from 1940 to 2023 (in billion metric tons)



- It is estimated that USD6.2 trillion of climate finance is required annually between now and 2030, and USD7.3tn by 2050, to deliver Net Zero – a total of almost USD200tn*
- Carbon credits \$909bn (Reuters)
- BNG units (UK only) **£135-£274mn** pa (DEFRA) and could be up to **£500mn pa**
- **\$520bn** negative impact on US business from climate change (Zurich)
- Total carbon stock of soils globally **3,000 Giga Tonnes**
- Restore or create more than **500,000 ha of wildlife-rich habitat** in England by 2042
- Defra commitment of £140m to develop Natural Capital and Ecosystem Assessment (NCEA) programme
- Environmental Land Management Scheme (ELMS) worth **£2.4bn** in UK annually (DEFRA)



Grappling the Problem



Custodians of the Land — The Real Market



A Solution?



Introducing

Harrier is a Land Tech solution for "integrating data, science and innovation for better use of land."

(Geospatial Commission: Finding Common Ground 2023):

- Digital
- Data led
- Instantaneous
- Makes diverse land data comparable
- Accessible and flexible
- Usable everyday

Watch the video

		Privacy	Ierms & Conditions Inve	estors			<u> </u>	
	Home Load	Save	Save As Sear	rrch for location or Reset	postcode Q	Located me 🥹 Compass	Ø	Create your
	Choose Metric		Choose Year		Compare data over	30 year period		
_	Carbon Stock		2024	•				
Satellite	Carbon Stock B Land Types Pie Chart Forecasting Reset Land Dato		2024 Modify Map I Compare Benchmarking Land Type Key Amenity Grassland Arable Bare Grand Bracken Bare Grand Built-up Area Caravas Canavas Conferous Woodland Dataset Model	a a	Current Data Set Great Steak 00 00 00 00 Lank Types Predicted Data Set (30 Carters Steak 00 00 Lank Types	Yeor Period)		Amenity Grassland 000.000 Tons
			Defunct Hedge Dry Dirkh Felled Woodland Fence Grassland, Rough Hedge S. Trees Improved Grassland Indoct Hedge Marsh / Marshy Grassl Mixed Woodland Natural Rock Exposure Parkland / Scattered Tr Semi-Improved Grassl Probable / Private Gar	land es frees land rden	000 000 000 Land Types			
iected	Deselect O		 Road Running Water 					
I Ref 123.456.78	oodland					_		_
ock	000.00%							
rx.	000.00%							
	000.00%							
lue	£0000.00							
ne	0000m²							
(8) rofile AR View	Chart Load							



"I had already realized that because every tough decision came down to a probability, then certainty was an impossibility — which could leave me encumbered by the sense that I could never get it quite right. So rather than let myself get paralyzed in the quest for a perfect solution, or succumb to the temptation to just go with my gut every time, I created a sound decision- making process — one where I really listened to the experts, followed the facts, considered my goals and weighed all of that against my principles. Then, no matter how things turned out, I would at least know I had done my level best with the information in front of me."



Let your data soar.