



The State of Sheffield's Wetlands and Waterways

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Sheffield & Rotherham



Sheffield Hallam University



The University Of Sheffield.

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Nature Counts

- Sheffield area; two year partnership project
Heritage Lottery Funded
- 'Citizen Science' & ID training, surveys and monitoring
- Sub-projects: Hedgehog Heroes, Otterly Amazing, True Bluebells
- Weston Park Museum exhibition
- Over 1000 people engaged
- State of Nature 2018 report

State of Nature 2018



- Summarising existing data
 - National datasets & schemes
 - Local groups, records centre
- Adding data, e.g. otters
- Caveats:
 - data availability
 - data resolution
 - recording effort
 - coverage (what, when, where)
- ✓ Habitat-focussed
- ✓ Designated sites
- ✓ Case studies
- ✓ UK Biodiversity Indicators
- ✓ Threats
- ✓ Recommendations
- ✗ Species trends

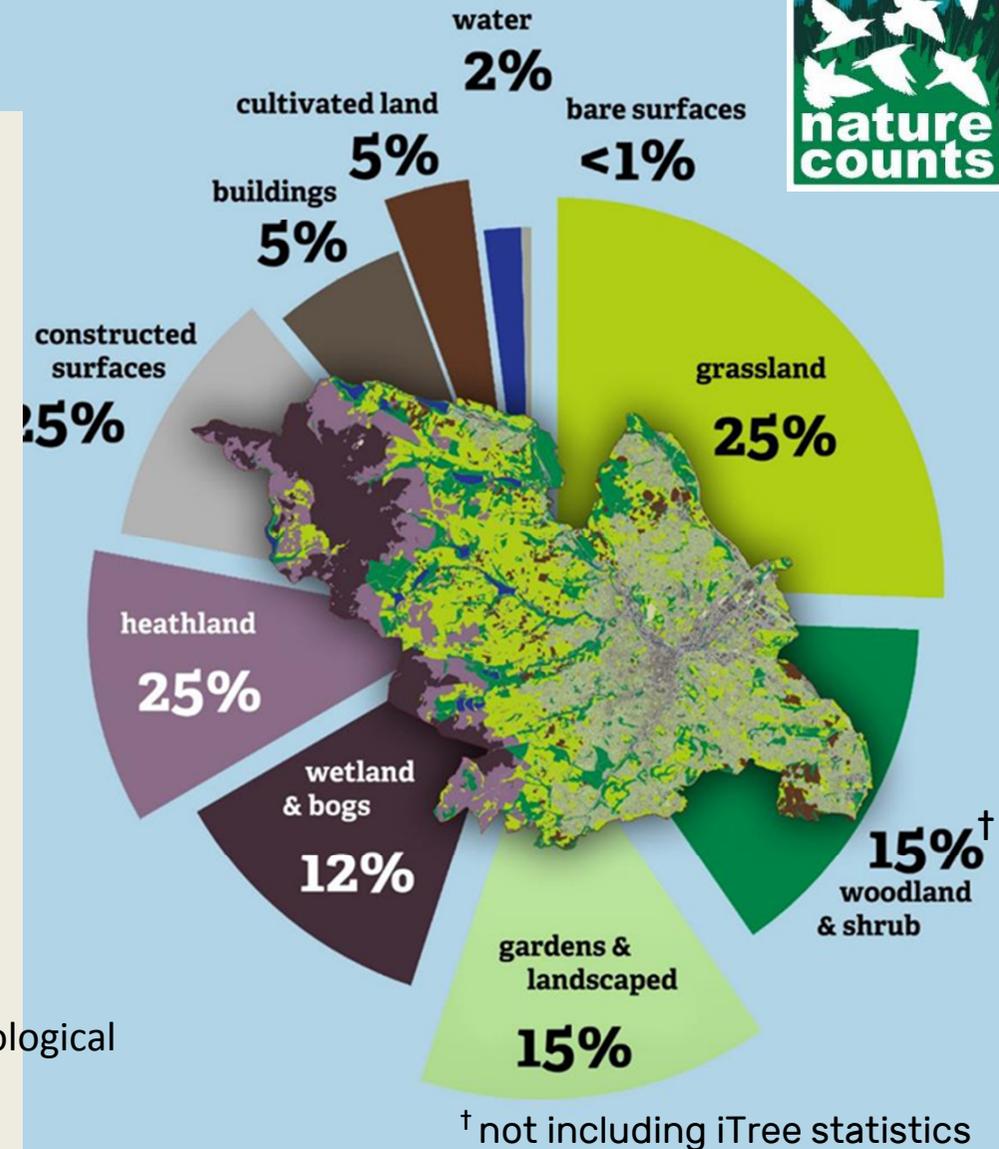
Sheffield's habitats

Wide variety of habitats (mapped from several sources*)

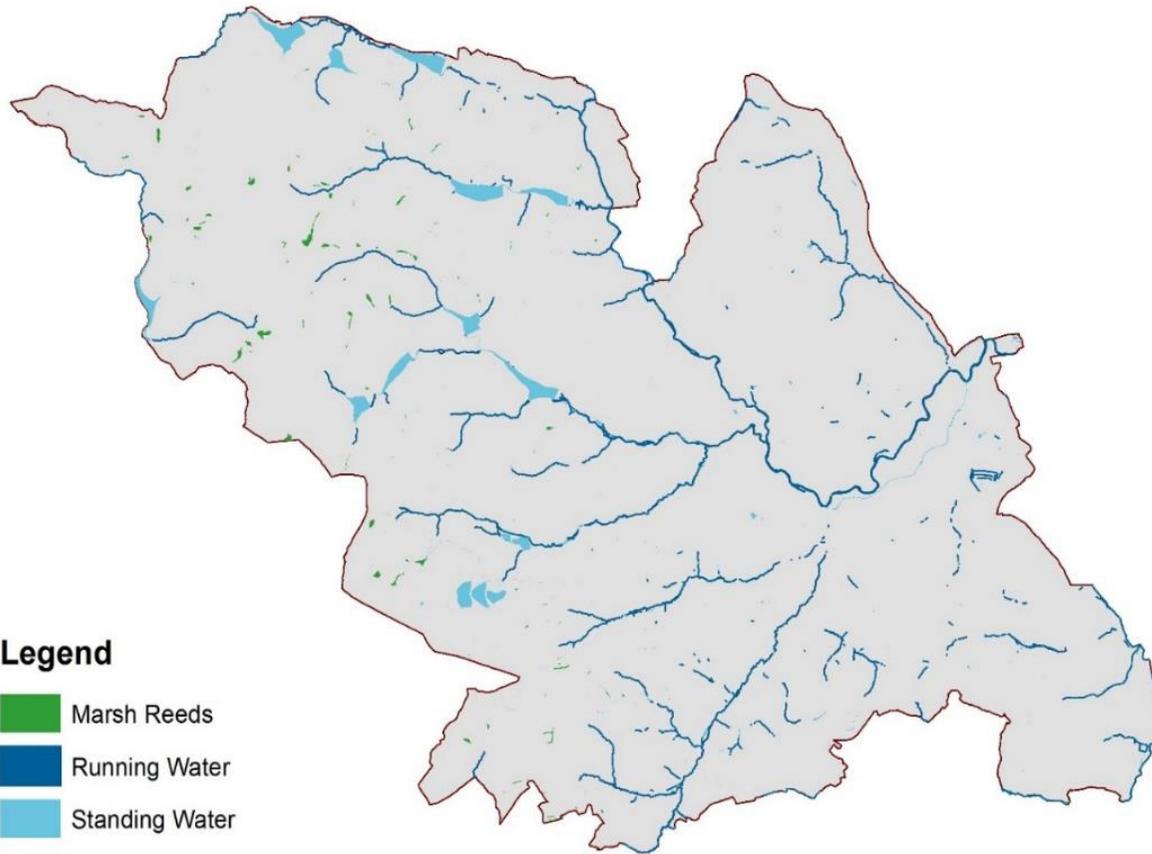
Sheffield has a variety of habitats from moorlands and uplands in the west, through to grasslands and farmlands, **rivers and reservoirs** in the district's centre, to a wooded and green urban landscape in the east.

This mosaic of habitats has the potential to support a rich diversity of species.

(*Esroy, Ebru (2017). An Integrated Approach to Enhancing Ecological Connectivity in Urban Areas: a case study of Sheffield, UK)

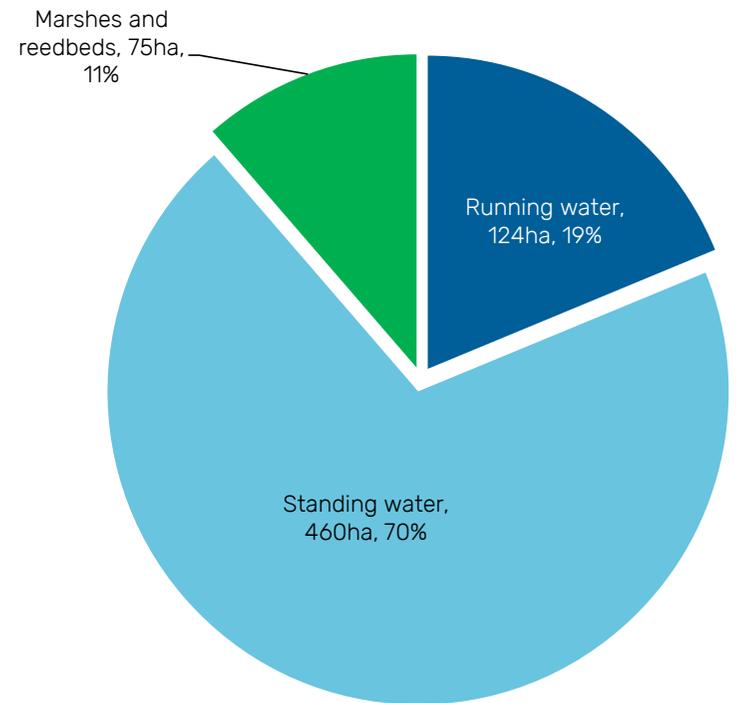


Waterways and Standing Water



Legend

-  Marsh Reeds
-  Running Water
-  Standing Water



% coverage and area of broad water habitats within Sheffield District

Waterways & Standing Water



- Sheffield contains 258km of linear waterways and multiple reservoirs.
- <50% covered by designated sites.
- **Top headline:** Sheffield's water quality has undergone **vast improvements** in recent decades, resulting in a substantial increase in biodiversity.
- **However,** the current ecological status of Sheffield's rivers is **variable**; EA assessments show that most stretches are of an overall **moderate status**.
- Quality improves with increasing distance from industrialised areas.



Recommendations



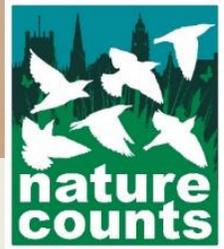
- Continue improving the overall condition of rivers particularly parts of the Porter and urban Don.
- Remove restrictions and barriers for wildlife whilst maintaining biosecurity; managing water extraction sensitively; re-naturalising rivers by removing modifications; and tackling diffuse pollution from agriculture and industry.
- Work with Natural England and others to improve water and wetland SSSIs to favourable condition.
- Focus efforts on improving the overall condition of key water and wetland LWS currently not in positive management.

Reservoirs: Redmires (SBSG)



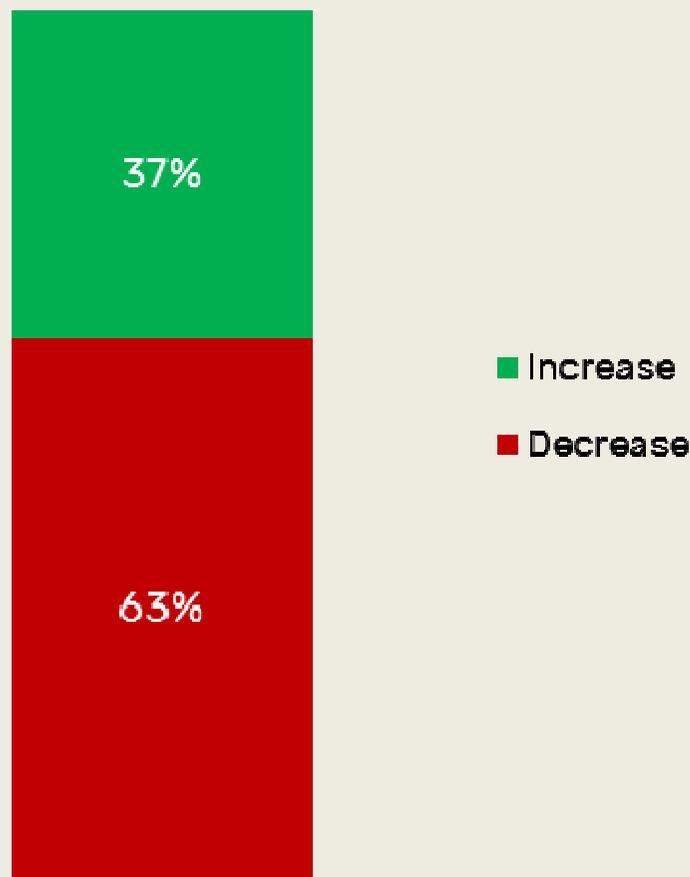
- SBSG have undertaken systematic visits recording both breeding birds and passage migrants on Redmires open water and the surrounding habitats, making Redmires one of the best-watched sites in the Sheffield area. At 350m above sea level, Redmires is easily seen by passing birds and is on a migration flight line.
- Over 200 bird species have been recorded, including rare visitors.
- Over 80 species have bred in the immediate area.
- Many other (non-bird) species have also been recorded in the area including several mammals and over 20 species of butterfly.
- **Recommendation:** Promote the importance of Redmires as a bird breeding and wildlife site and develop coordinated habitat management plans amongst relevant landowners and others.

Ponds: a national priority habitat



- The South Yorkshire Ponds Project (2008-2011) surveyed a large number of ponds, restored 20 ponds and created 16 new ponds.
- Froglife & SCC Living Waters Project. During part 1 (2013-15) 30 new ponds were built and five restored. Part 2 is underway with 16 new ponds being created and habitat work for associated reptiles and amphibians. SCC have just received news that they have funding for part 3 to focus on great crested newts in SE Sheffield.
- **Recommendation:** promote the importance of ponds for wildlife, encouraging public bodies, developers, land owners and farmers to incorporate ponds into new schemes. Provide advice to enable the public to include ponds in private gardens or improve the wildlife value of existing garden ponds.

UK Biodiversity Indicator: C5c.Wetland Birds (24 species from SBSG data)



Wetland Birds

Change in the number of tetrads occupied between 1975-80 and 2003-8. 15 (63%) decreased and 9 (37%) increased

Some species are doing well:
Goosander, oystercatcher, grey wagtail, mute swan, grey heron, mallard, curlew, dipper

Why? Climate change, habitat restoration and improved management

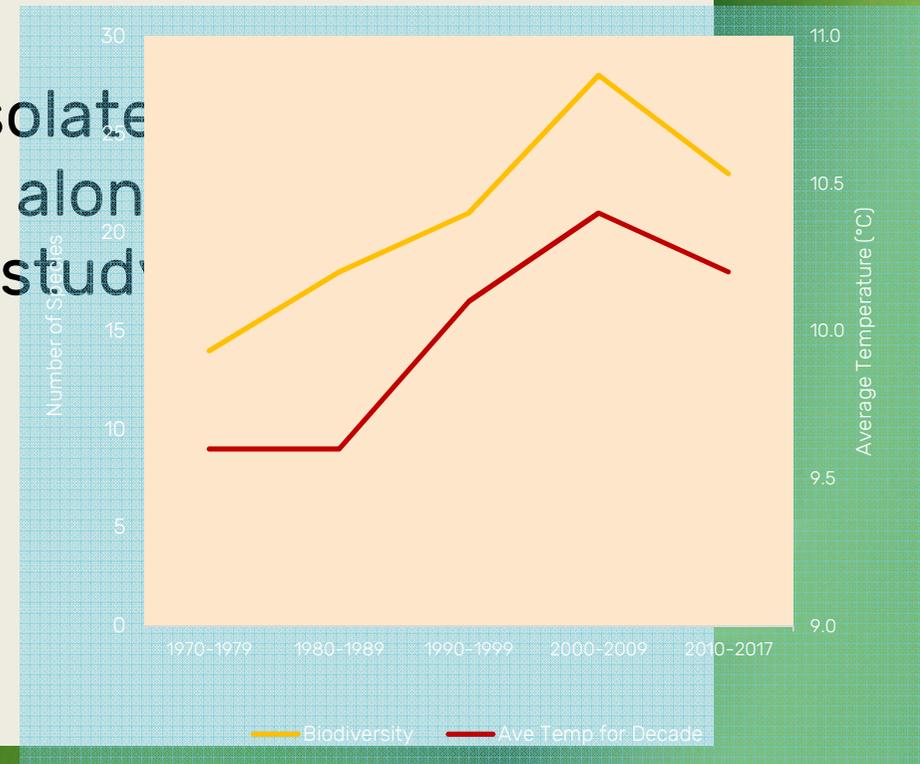
Other species not doing well:
Common sandpiper, lapwing, redshank, snipe, reed bunting, teal, yellow wagtail, sand martin

Why? Climate change, habitat modification and management

Other key species



- Fish species: 26 of the 31 species of fish have returned
- **Recommendation:** continue to deliver conservation actions that support the return and expansion of fish species including salmon
- Water vole – strong declines but isolated
- Bat species – high concentrations along
- Dragonflies and damselflies. Case study
 - 1981 – 9 or 10 species present
 - Now 20 regularly occurring species
 - Plus four occasional migrants
 - Reduction in pollution and improved water management and habitat
 - Also increase in warmer weather



Other key species: otters



- Otters confirmed throughout the Don in Sheffield from field signs and camera footage.
- Records being used to inform planning applications and maintenance works along the river.
- **Recommendation:** to continue to monitor and improve our knowledge of otter and ensure that planners, developers and construction companies are aware of the importance of this protected species and the habitats it relies on along the Don and elsewhere.



Other key species: otters

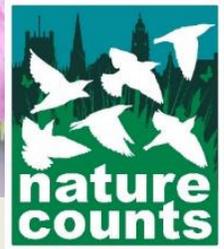


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UK Biodiversity Indicators

B6: Invasive Species



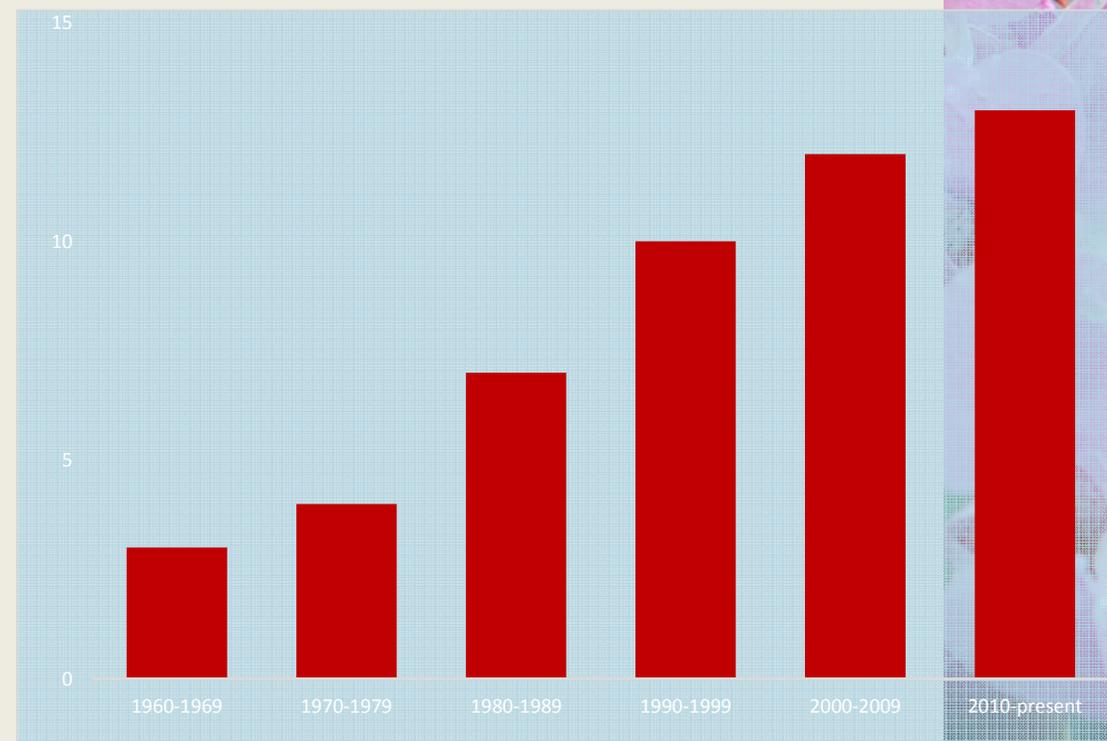
Freshwater invasive non-native species (INNS)

1960 = 3 species present day = 13 species

Japanese knotweed, Himalayan balsam

Recommendation: continue to strategically tackle invasive non-native plant species.

Action: SRWT, RSC, EA, SCC
local groups



Case study: crayfish on the brink



- White-clawed crayfish are 'endangered' and Sheffield is only one of four locations in Yorkshire and Humber to support the native species.
- They have declined significantly due to the introduction of non-native species and the 'crayfish plague'.
- The Sheffield Crayfish Action group have mapped the spread of the American signal crayfish in the city and the decline in the native.
- The group have undertaken actions to try and save the white-clawed including education and moving population to 'Ark sites'.
- Unfortunately it looks like only one translocation has been successful and the remaining tributary population is under threat from plague.
- **Recommendation:** develop targeted conservation plans for water vole, white-clawed crayfish, sand martin, kingfisher and otter as key indicator species or local species in severe decline.





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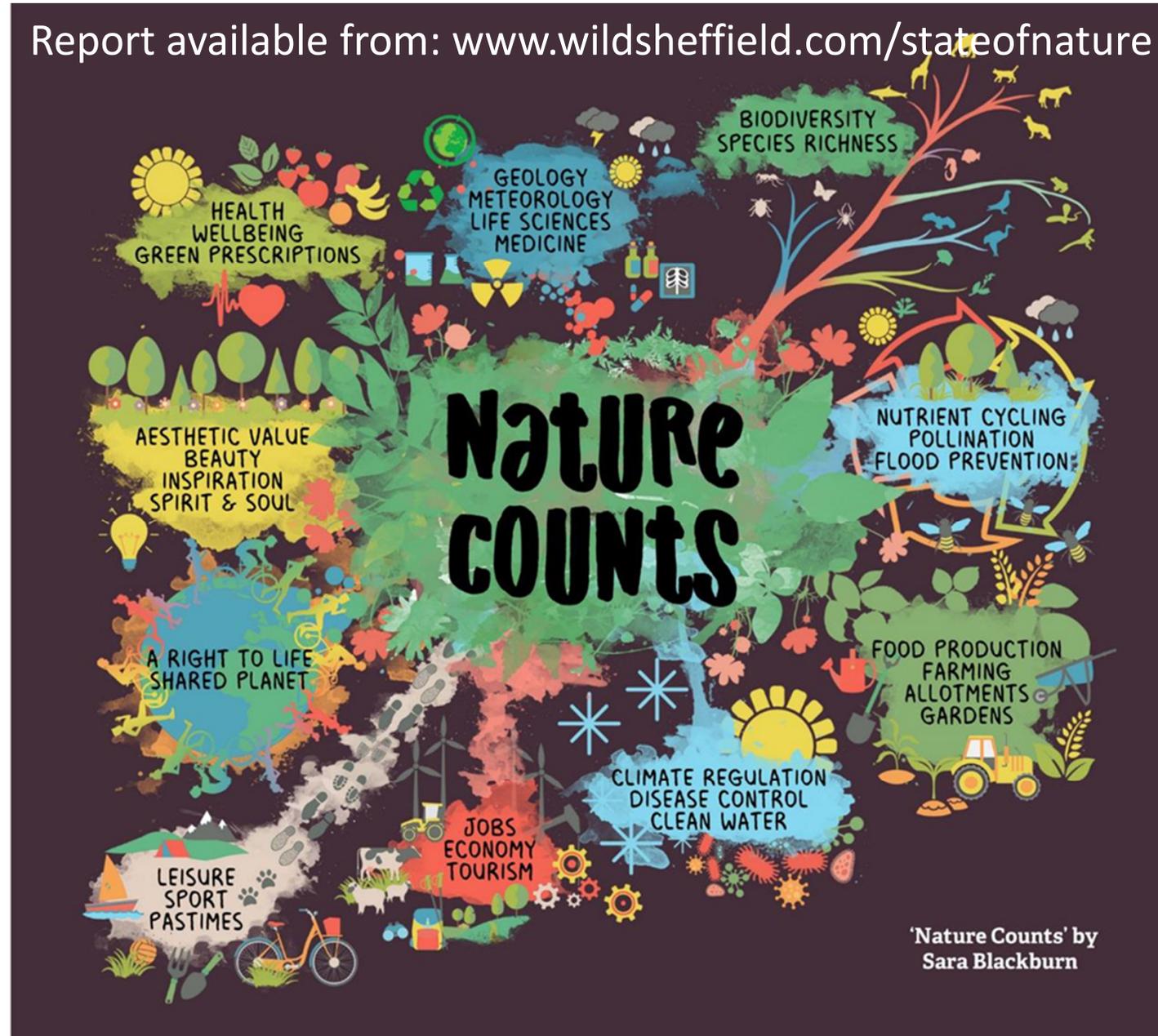


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Report available from: www.wildsheffield.com/stateofnature



'Nature Counts' by Sara Blackburn