



Nature In Scotland

How do we compare to the rest of the world?

Biodiversity: the clue is in the name. The variety of life on this planet is fabulous and vast. Assessing and reflecting it is a daunting challenge. But we must try to: the fact that we are losing species and habitats has been recognised for over a century and now world leaders, including our own First Minister, acknowledge that the world is facing twin climate and biodiversity crises.

To address these, we must understand the scale of the challenge.

In 2019 a coalition of nature conservation and scientific organisations published the [State of Nature in Scotland report](#). This revealed the ongoing loss, on average, of biodiversity in our country - as we see across the world. The Scottish Government's ecological advisers NatureScot contributed to and signed-up to the 2019 report, making it a shared evidence base across government and the voluntary sector for biodiversity conservation moving forwards.

But it does not answer two key questions: how much impact have human actions had on nature historically, before systematic records began just a few decades ago? And how is Scotland's nature faring compared to the rest of the world?

These are complex and multi-faceted questions. A [new analysis](#) by scientific staff at the Natural History Museum in London helps to address it. The [Biodiversity Intactness Index \(BII\)](#) is designed to be a sensitive, easily understood biodiversity indicator that can be applied at a range of scales. It includes an estimate of average abundance for a diverse range of species in a given area, relative to reference populations in areas with the very least human impacts (not counting novel species that aren't present in the reference areas).

It therefore indirectly reflects historic impacts and, importantly, it allows for comparison between different areas and regions, and the results are revealing. It shows that virtually the entire world, including all biodiversity hotspots, falls well below a threshold of 90% intactness. Closer to home, of 240 countries and territories around the world assessed and ranked, all of the four UK countries sit close to the bottom. England ranks 7th from the bottom; Northern Ireland is 12th; Wales 16th; and Scotland ranks 28th from the bottom of the list.

In terms of the Biodiversity Intactness Index, Scotland's enormous importance for nature in the UK countries is clear – but so is the finding that we are currently placed in the lowest 12% of global countries and territories. Of the 27 EU member states, 23 of them – 85% - rank more highly than Scotland.



All such analyses must be seen in context, understanding all the caveats. The BII was originally proposed in back 2005. The first analyses relied more heavily on expert opinion rather than quantitative data. A second analysis was published in 2016. The UK countries collectively scored poorly then too - but the method was still new and was probably overly optimistic in terms of background species turnover estimates.

The technique has, however, been refined extensively since then, with more efficient use of the data and adopting a more conservative approach, accounting for additional pressures that weren't included in the previous methods. Its credibility is now acknowledged in it being utilised by the two key global biodiversity initiatives, the [UN Convention on Biological Diversity](#) and [IPBES](#)¹. It still has caveats attached – the analysis is known, for example, to over-score the biodiversity intactness of non-native tree plantations.

The central message seems inescapable, however: by this measure, increasingly being adopted internationally, nature in Scotland is more depleted than in 88% of the 240 other countries and territories studied across the world. When we combine that with the current trend findings in the State of Nature report - that biodiversity loss is continuing right now in Scotland, on our watch - surely the wake-up call is too loud to ignore. We need to elevate the political priority of nature conservation and ecological restoration, and to invest further in them. Building a green recovery from the pandemic offers a chance to do that, and Scottish environmental NGOs have developed thinking about [how we might start](#).

We need to do more, but we can also take heart. Scotland's huge importance for nature in terms of the four UK countries is clear. Some ground-breaking initiatives, like Scottish Government funding for peatland restoration, are underway. In the [Edinburgh Declaration](#), Scotland has taken a lead in highlighting the role of sub-national governments in the global biodiversity effort. We have a uniquely vibrant community of NGO delivery partners, standing ready to work with the Scottish Government in partnership to build and deliver Scotland's next Biodiversity Strategy to 2030.

And that fabulous variety of life itself offers us hope. Too much of our biodiversity is in trouble - but we still have the staggering beauty of our pinewoods and peatlands, eagles, dolphins, bumblebees, salmon, kelp, orchids, curlews and thousands of other precious species. We have so much to lose – and, the BII now tells us, so much to regain, here at the start of this UK Decade on Ecosystem Restoration. All we need is the collective will to make it happen.

1. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

For Further Information please contact

RSPB Scotland Campaigns

campaigns.scotland@rspb.org.uk

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