

Statement by Dr. Liam Lysaght, Director of the National Biodiversity Data Centre.

Joint Committee on Climate Action

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Biodiversity – an evidence-based policy

Biodiversity and biodiversity policy is very much an evidence-based issue. Biodiversity quality is either being maintained and enhanced, or biodiversity is being diminished and suffering loss. The only effective way to measure success or failure of biodiversity policy as against this overall trend.

Biodiversity is measured by how well ecosystems function and how efficiently they deliver the ecosystem services that we all benefit from, such as pollination, nutrient cycling, soil fertility, water purification, etc. Measurement of ecosystem services is complex but generally the number and diversity of species in an area is a relatively good measure of ecosystem health.

State of knowledge on Ireland's biodiversity

Our understanding of biodiversity and biodiversity loss is still very poor. Although there are well known losses of iconic species such as Corncrake, Atlantic Salmon and European Eel, the bulk of biological diversity and ecosystem services are provided by lesser-known taxonomic groups about which we know very little. For example, just under 32,000 different species have been documented for Ireland (Figure 1) yet we estimate there are at least another 8,000 or so yet to be described.

The majority of our biodiversity and the functions it provides are delivered by smaller creatures – invertebrates, lichens, algae and fungi account for 86% of all species in Ireland. Other than the Irish Butterfly Monitoring Scheme which shows a 1.3% decline in butterfly populations since 2008, and the All-Ireland Bumblebee Monitoring Scheme that shows a 4.8% decline each year in bumblebee populations since 2012, we know very little about how these less conspicuous elements of biodiversity or biodiversity function are performing.

This is an impediment to prioritising, implementing, tracking and reviewing the effectiveness of biodiversity policy in Ireland.

Conservation assessments

We do know quite a bit about the other more easily recognisable species.

Red Lists are an internationally recognised method of doing a conservation assessment of the risk of species going extinct. It compares the known distribution of species from two different time periods, to identify any expansion or contraction in ranges across Ireland in recent decades. Red Lists have been completed for 12 broad taxonomic groups and found that on average about 20%, or one in five of all species assessed in Ireland are threatened with extinction. And for bees and fish it is an alarming 30%! (Figure 2).

Birds are assessed separately through the Birds of Conservation Concern process, the result of which we only recently published. It found that 63% of regularly occurring bird species in Ireland are of conservation concern, with the number of highest conservation concern increasing by 46% since

2013. Those species of most concern include iconic species such as Corncrake, Curlew, Lapwing and Barn Owl, and now includes widespread species like Meadow Pipit, Snipe and Kestrel.

What we do know

From what monitoring scheme are in place, we know that Ireland is not immune from the well documented global biodiversity crisis – biodiversity loss is happening right here in Ireland too, right now.

Whereas a small number of species are increasing in abundance, and some new species are arriving to Ireland, the overall trend is toward increasing biodiversity loss, and associated reduction in the quality of ecosystem services. This is occurring countrywide.

The challenge of shifting baseline syndrome

There is one other big caveat to the state knowledge on biodiversity that needs to be acknowledged. There are no long-term monitoring schemes that extend back more than about 20 years, so none of the big decline in biodiversity loss that Ireland experience during the 1970s and 1980s have been captured. Government policy must avoid the pitfall of fall into the shifting baseline syndrome.

Addressing the biodiversity crisis – a twin track approach

1. We need to make space for biodiversity in all parts of the county: gardens, parks, urban areas, farmland, forestry, roadsides, foreshore & marine waters. Everyone taking voluntary actions (big and small) for biodiversity can have a positive cumulative impact. This is likely to create favourable conditions to tackle the declines of the commoner, more generalist species.
2. Tackling declines in species that require more specialised conditions will require a much vigorous and strategic approach, as it is likely to require landscape-scale or catchment-scale intentions. This has already begun for species such as Freshwater Pearl Mussel, Hen Harrier and Curlew, but a great deal more needs to be done if it is to be effective.

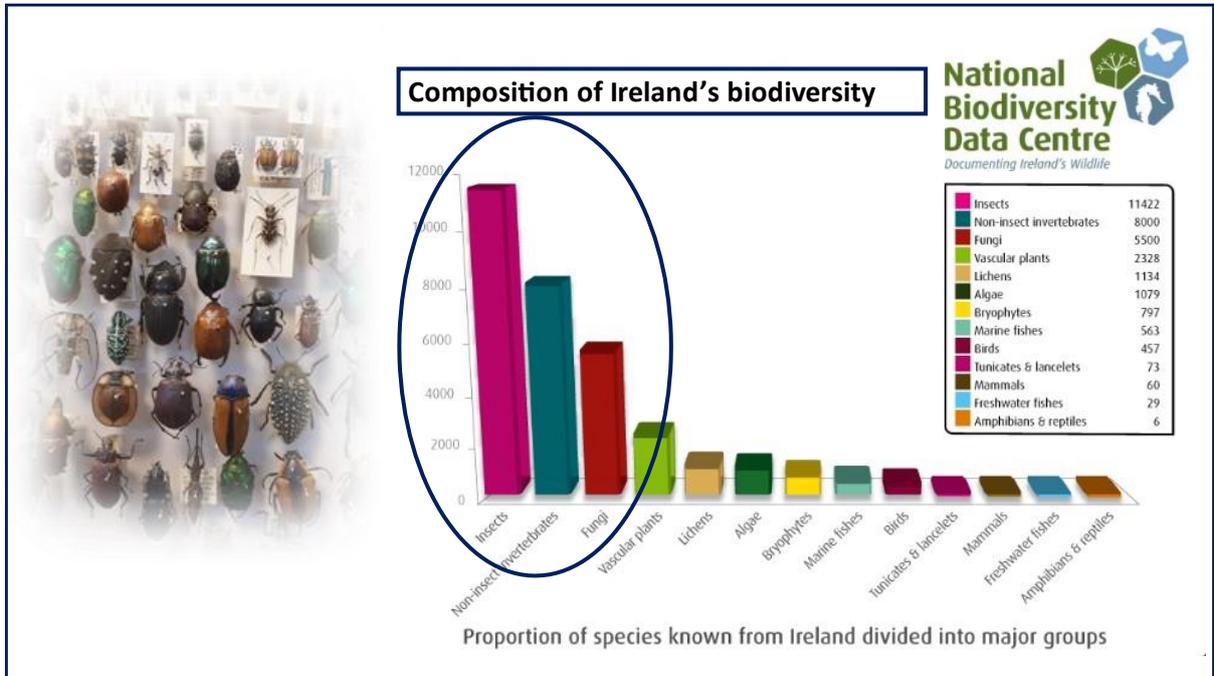


Figure 1: Species composition of Ireland's biodiversity. (Source: National Biodiversity Data Centre, 2010)

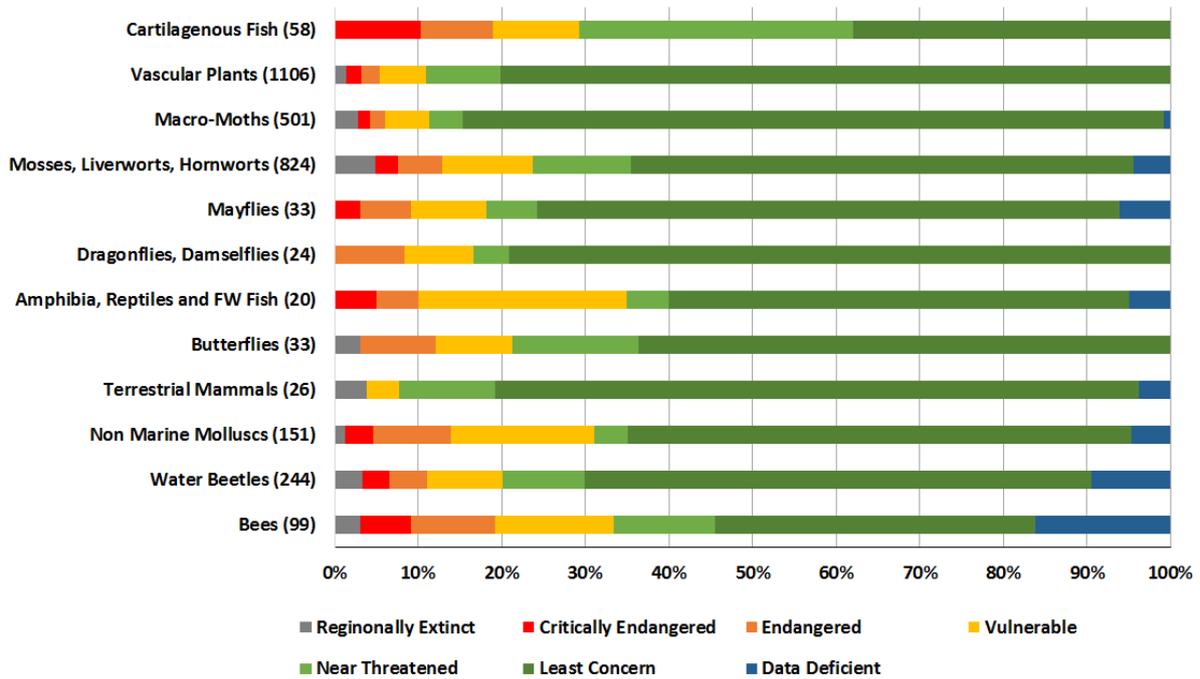


Figure 2: Proportion of the total known species in Ireland assessed under the IUCN Red List process and the breakdown per taxonomic group (number of species in brackets) and threat category. Those species currently in the critically endangered (CR), endangered (EN) and vulnerable (VU) categories are considered to be of immediate conservation concern (Source: National Biodiversity Indicators <https://indicators.biodiversityireland.ie/>)