



How do we assist Welsh Ministers in measuring a nation's progress?

April 2019

Summary

- We welcome the inclusion of the biodiversity indicator as part of the milestone consultation. There is a clear argument for its inclusion based on our current commitments to both the international biodiversity targets as well as national well-being goals.
- We also welcome the inclusion of a proposed milestone on greenhouse gas emissions, but we believe this should measure both emissions within Wales and those from consumption of global goods and services in Wales (covering both indicators 41 and 42) to provide a true picture of Wales' progress.
- We recognise the challenge of setting milestones against indicators, for biodiversity in particular, but believe it to be possible and look forward to working together with Welsh Government to achieve this.
- The status of biodiversity is an essential part of how Wales should measure success in relation to sustainable development. Measuring our success in securing nature's recovery needs a wider number of factors to be considered. We therefore advocate further discussions on how we describe 'what good looks like' for nature's recovery as we move towards a clear biodiversity strategy against the backdrop of the CoP15 to the CBD in 2020, and for the setting of milestones to be the first step in setting a clear path to ensure the scale and pace of action is sufficient to reverse the decline of biodiversity in Wales

Achieving a "resilient" Wales

The Resilient Wales Goal seeks to create "a nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change)". This sets out a clear link between biodiversity and the resilience of ecosystems. This is reinforced in the Environment (Wales) Act. It is critical to recognise that, while biodiversity is a fundamental feature of ecosystem health, and helps us to understand progress towards healthier, more resilient ecosystems, it does not offer a definitive picture of their condition, or that of their composite natural resources.

To enable us to better understand the health of our ecosystems, a fuller suite of indicators and milestones (or targets) should be developed; these could 'sit' within the framework created by Part One of the Environment (Wales) Act 2016 so that the attributes of ecosystem resilience and the condition of natural resources can be tracked via successive State of Natural Resources Reports (SoNaRR) and responded to accordingly through government policy.

Notwithstanding this point, biodiversity is a key feature underpinning the resilience of ecosystems, and provides a natural solution to build resilience. Section 6 under Part 1 of the Environment (Wales) Act 2016 introduced an enhanced biodiversity and resilience of ecosystems duty for public authorities in the exercise of functions in relation to Wales. The Act sets out the following attributes of ecosystem resilience: diversity, connectivity, extent and adaptability.

However, SoNaRR sets out a framework for the assessment of resilience and showed that, in terms of ecosystem resilience, diversity is declining as shown by loss of habitats and species. It found that all habitats across Wales fail to achieve the resilience attributes of diversity, connectivity, extent, condition. This will impact their capacity to provide services and benefits into the future and undermine any progress towards fulfilling the section 6 duty, delivering sustainable management of natural resources and achieving the Well-being Goals.

Biodiversity & Well-being Goals

Biodiversity is integral in achieving our goal of a resilient Wales. The consultation recognises this. However, biodiversity is also inherently linked to the other Well-being Goals. The consultation fails to acknowledge the inherent link between biodiversity and a healthier Wales and a more equal Wales, despite this being recognised in the SoNaRR. There is increasing evidence that access to nature and greenspace has positive impacts on physical and mental health, contributing to achieving Well-being Goal 3. Additionally, increasing biodiversity provides an opportunity to make ecosystems as a cultural service more accessible and contribute to achieving Well-being Goal 4. The fact that the biodiversity indicator plays a role across all of the Well-being Goals is a strong argument in favour of its inclusion in the suite of milestones.

Indicator, Milestones and Targets

The 15th Conference of the Parties (COP) to the Convention on Biological Diversity (CBD), due to be held in Beijing in 2020, will see the development of a post-2020 international strategic plan for biodiversity. Against this backdrop, the milestone consultation provides a welcome first step towards a post-2020 biodiversity action plan in Wales. Accordingly, developing milestones against a biodiversity indicator should be seen within the wider context of developing a wider 'suite' of biodiversity targets.

A milestone developed against the biodiversity indicator will make great strides in measuring progress towards reversing nature's decline in Wales, which is in turn a key signal of our success in sustainability. However, a milestone set against the biodiversity indicator should ultimately be

complemented by corresponding milestones for the soil, water and air quality indicators, as well as a healthy ecosystem indicator. While we cannot comment on the full suite of indicators we are aware that many considered the current suite of 46 national indicators to be too limited to truly measure progress against the Well-being Goals. Therefore, while we recognise the rationale for focusing on a small set of milestones initially, we advocate for further tranches of milestones to be set against the remaining indicators as swiftly as possible.

SoNaRR's reporting on resilience has shown that we often have the right tools for appropriate intervention available under the existing legislative framework to improve biodiversity. However, to fully restore the potential of our ecosystems, efforts must be redoubled to effectively implement these tools, as part of a larger scale and 'joined-up' approach to nature's recovery. This shift, where incorporated into an understanding of the links to well-being, provide a clear pathway to reversing biodiversity decline.

Developing a biodiversity indicator

One measure of biodiversity presented in the State of Nature Report 2016 uses the official UK Priority Species Indicator, biodiversity indicator C4a and C4b, which indicate abundance and distribution, respectively.¹ The report showed that, against a 1970 baseline, abundance has fallen by 67%, while occupancy (distribution) has fallen by 35%. Given the progress on reporting on biodiversity since the last State of Nature Report, we believe the approach of measuring indicators C4b and C4a together is ecologically uninformative due to the assumptions made in doing so; combining these two indicators rests on assuming an equivalence between two different data types. This assumes that, for example, a 35% fall in one is equivalent to a 35% fall in the other. Furthermore, combining these data types leads to a lack of clarity around what the indicator is measuring, the magnitude of change, and ultimately what the message for progress towards nature's recovery is. Both indicator C4b and C4a are valuable indicators, and should be read alongside each other, rather than be combined. Accordingly, milestones could be set against either the abundance (C4a) or the distribution (C4b) indicator.

There is a trade-off between setting milestones against either a distribution or an abundance indicator. While the distribution indicator presents a robust measurement of biodiversity with the data we have available in Wales at the moment, an abundance indicator may be more representative of biodiversity as a whole once more data becomes available in the future. It is our understanding that further work is being undertaken to develop a bespoke Welsh biodiversity indicator, and we are committed to supporting this development, and the development of an appropriate milestone, in the coming months. We would encourage underlying data (e.g. data for individual taxa) to be presented along with the overarching indicator in future reports, as has been done in the State of Nature report. The more detailed depiction will be able to show drivers for change more clearly.

¹ UK State of Nature Report (2016), Figure 3, p 9

The report also presented a combination of long-term and short-term change in the relative abundance and distribution of species, as is proposed to be developed under the consultation. However, while the data for Wales is not sufficient for all species, there is sufficient data for certain taxa that can be used as an initial biodiversity indicator. This was presented in the Wales State of Nature Report. It provides an established measurement and justifies the biodiversity indicator to remain a part of the small set of indicators to have milestones set against them. As more data becomes available and analytical techniques improve this can be developed further.

We recognize this is a challenging area of work but we are confident that relevant milestones can be developed. Much work is underway through the State of Nature partnership organisations, including WEL members and academic institutes, to improve UK and country indicators. Multiple organisations are also working with the Centre for Ecology and Hydrology (CEH) to develop the abundance indicator. We encourage the Welsh Government to work together across all of these organisations to develop this and other appropriate indicators.

Marine

Of the 46 indicators, no indicator is intended to measure marine ecosystems. Whilst the indicator referring to “good status” under the Water Framework Directive includes some areas of relevance to the inshore marine environment (for example, water quality), there is no indicator covering the range of environmental variables that are monitored to determine the metric of ‘Good Environmental Status’ under the Marine Strategy Framework Directive. Furthermore, the application of any of the other indicators to monitoring of marine biodiversity is limited. Notably, indicator 43 (area of healthy ecosystem in Wales) to be measured initially through terrestrial, semi-natural habitat. This greatly reflects the need to further collate data, in particular on the abundance and distribution of Section 7 and OSPAR species. The biodiversity indicator is the only environmental indicator to potentially incorporate data on marine ecosystems and is therefore a suitable choice to be part of the ‘small set’ of chosen indicators against which to set milestones. This also means that any biodiversity indicator developed must be applicable to marine biodiversity.

Indicator 43: Healthy Ecosystem

Individual species have an intrinsic worth and the measurement of species is broadly indicative of habitat quality. Monitoring species, including priority species, is a crucial element in measuring progress towards a wider, healthier ecosystem and the status of biodiversity therefore makes for an appropriate headline indicator. However, as mentioned above, a fuller suite of indicators is needed to measure nature’s recovery – as per the aspects of ecosystem resilience described in the Environment (Wales) Act these need to address the extent, quality (condition) and connectivity, as well as diversity of ecosystems (with habitats providing an important proxy). Biodiversity is a fundamental feature of ecosystem health, and the biodiversity indicator therefore provides an appropriate and welcome headline indicator as part of the Milestone Consultation. However, it is important to remember that biodiversity does not offer a definitive picture of the resilience of ecosystem as a whole. Setting a milestone against the abundance (or distribution) of biodiversity

does not make this the only outcome and measure of successful intervention, and that the wider impacts of intervention must be taken into account using, for example, measures such as the Biodiversity Intactness Index² or the Ancient Woodland Inventory.

Indicators 41 and 42: Emissions of Greenhouse Gases

Climate change and biodiversity loss are two of greatest threats to future generations that we face, so it is essential that we monitor our progress in tackling these threats. However, tracking only those emissions of greenhouse gases released within Wales does not give an adequate picture of those greenhouse gases for which we are responsible. It would allow a decrease in territorial reductions to disguise an increase in emissions related to goods and services consumed in Wales.

In order to understand our performance in this key area for sustainable development, the milestones should relate to both emissions within Wales and emissions of greenhouse gases attributed to the consumption of global goods and services in Wales. This would require milestones to be set against both indicators 41 and 42, or a milestone that addresses both measures together to give a true picture of Wales' progress.

² <https://www.bipindicators.net/indicators/biodiversity-intactness-index>

Wales Environment Link (WEL) is a network of environmental, countryside and heritage Non-Governmental Organisations in Wales, most of whom have an all-Wales remit. WEL is a respected intermediary body connecting the government and the environmental NGO sector in Wales. Our vision is a healthy, sustainably managed environment and countryside with safeguarded heritage in which the people of Wales and future generations can prosper.

This paper represents the consensus view of a group of WEL members working in this specialist area. Members may also produce information individually in order to raise more detailed issues that are important to their particular organisation.



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