



## Environment Strategy Indicators - additional feedback from Scottish Environment LINK

7 October 2020

*Following a meeting with the Environment Strategy team on 23rd September 2020, LINK members would like to submit the following additional feedback on the proposed indicators. These suggestions have been shared from across the LINK network, with members from a range of our working groups.*

### Criteria for selecting indicators

- A public interest criteria could be added to ensure indicators make sense to the general public in order to increase engagement with the Strategy.
- It would be worthwhile considering whether the data gathered for the proposed indicators can be broken down to a regional or local level, as much of the action to meet outcomes will need to be driven at a regional or local authority level.
- It could be worthwhile investigating what conversations are taking place with the Scottish Biodiversity Strategy Project 4 “Biodiversity Evidence Base” Group led by Des Thompson (NatureScot).

### Outcome 1: Scotland’s nature is protected and restored with flourishing biodiversity and clean and healthy air, water, seas and soils

- It is essential that indicators against this Outcome assess **real ecological outcomes** - i.e. directly measured trends in **species and habitats** - rather than ‘means’ outcomes - for example, extent of protected sites, pathway action plans for invasive non-native species, number of people volunteering on nature conservation, etc. These latter are all important, but should be reflected in the other Outcomes and outcome pathways.
- In any preamble, there should be a restatement that the climate emergency and biodiversity crisis are interlinked as per the [First Minister’s statement](#) in July 2019.
- The indicators listed under Outcome 1 do not focus on ecological status or seek to measure ecological intactness. **The complexity of habitats need to be recognised, not just their extent.**

#### ‘Composite biodiversity indicator’

- We note this is the only indicator specifically considering the ‘flourishing biodiversity’ aspect of Outcome 1 and is currently under development.

- It should be noted that the notion of assessing biodiversity via a single measure or index has generated ongoing debate and critique among international biodiversity circles - see this [recent editorial](#) in Nature and related publications.
- A worthwhile biodiversity indicator for Scotland must effectively reflect the full range of species and habitats that comprise Scottish biodiversity. A single line or measure cannot achieve this: therefore, LINK favours a dis-aggregated approach.
- The State of Nature in Scotland Report 2019 is the best and most up-to-date assessment of biodiversity that we have - NatureScot signed-up to that report, and have signalled intention to adopt it as a cornerstone of the evidence base for biodiversity plans, policies and programmes going forward.
- The composite indicator should reflect and incorporate the State of Nature methods, adding an assessment of habitat quality (and potentially extent as appropriate) - and so should cover the following 4 measures:
  1. **Species Abundance** – success will mean keeping common species common and recovering depleted species populations.
  2. **Species Distribution (Occupancy)** – success will mean recovering and/or maintaining species range, avoiding contraction and fragmentation.
  3. **Species Extinction Risk** – success will mean ensuring that extinctions and the threat of extinctions as a result of human activity have ceased. This assessment should be based on regional IUCN Red Listing status. Though this relates to GB, that is the relevant biogeographic unit, and this measure is needed because abundance and distribution do not capture *threat* levels.
  4. **Habitat Quality and Extent** – success will mean recovery and/or maintenance of the size and good ecological status of natural and semi-natural habitats (which are both particularly wildlife rich and carbon rich). This measure could be assessed on a timescale longer than annual - possibly every 3 years.
- These four measures must be assessed across three biomes - **terrestrial, marine and freshwater**.
- For each, it will be necessary to identify and incorporate the **best and most appropriate existing measures and indicators** (terrestrial breeding birds, protected area condition assessments, seabird monitoring programme, etc) to construct the composite.
- We propose that **to secure a favourable Outcome against the aim of flourishing biodiversity at the Scotland-wide scale, each of these twelve elements must be either stable or increasing** - for example if (hypothetically) freshwater species are on average

contracting their ranges in Scotland, it should not be possible to conclude that our biodiversity is flourishing, even if species and habitats in terrestrial and marine biomes were stable and/or increasing.

- The composite indicator must be sophisticated enough to balance cycles/variations or factors that may lead to particularly “good” periods for some species that may “cancel out” big declines for other species/habitats. It must differentiate clearly between native and non-native species, especially habitat-forming species.
- Any composite indicator should be displayed in such a way that it is easy to see its component parts so that at least some of the complexities are readily visible.
- LINK members would appreciate further information as to when the ‘composite biodiversity’ indicator will be finalised?
- Indicators could consider the review of the Scottish Biodiversity Information Forum - it is key that the data is gathered frequently. Very importantly, we need to consider how useful this process will be without the data behind it - current biodiversity information services are not fit for purpose.

#### **Outcome 1 Pathway**

- Once an ambitious, effective and reliable biodiversity indicator is developed (as above), the Outcome Pathway for Outcome 1 will need to encompass the **key ‘means objectives’** that will be required to maximise our collective capacity to successfully meet the Outcome.
- We urge that these are marshalled and organised under the **5 IPBES Direct Drivers of Biodiversity Loss: habitat degradation; over-exploitation; pollution; climate change; invasive non-native species**. In this way, the focus of means objectives can be maintained directly onto the real drivers of biodiversity loss. Different drivers will of course require different mechanisms and approaches, with the addressing wider Indirect drivers of biodiversity loss as a part of that (at a lower strategic level generally).

#### **Other Outcome 1 indicators**

- Seas indicator focuses on contaminants and LINK members would advocate that this should include solid contaminants such as all forms of litter, including plastic.
- An indicator for seabed health must be included here, analogous to soil indicator but underwater, such as seafloor integrity. This is a complex area, but the proportion of seabed unimpacted by mobile bottom-towed fishing gear could be considered a proxy.
- The Woodland Area indicator listed under Outcome 4 does not consider biodiversity - creation and condition of native woodland need to be considered.

- The following indicators from the Forestry Strategy Implementation Plan must be brought in here to give a better indication of the levels of biodiversity in woodlands:
    - Woodland ecological condition from the National Forest Inventory Woodland Ecological Condition produced by Forest Research. (page 39 of the Forestry Strategy Implementation Plan)
    - Condition of protected forests and woodland sites from the Site condition monitoring data produced by Scottish Natural Heritage (page 40 of the Forestry Strategy Implementation Plan)
    - Index of Abundance for Scottish Terrestrial Breeding Birds – Woodland Species from the official statistics for terrestrial breeding birds produced by Scottish Natural Heritage (page 40 of the Forestry Strategy Implementation Plan)
  - The following indicators from the Biodiversity Strategy must be brought in:
    - Native woodland condition
  - Consideration should also be given to an indicator for appropriate deer management, as suggested in the Forestry Strategy Implementation Plan (page 26).
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- The indicators must also consider the impacts of our food systems. This could be the environmental impact of our diets or food waste in the supply chain.
  - The indicators should tie in to future land management subsidies both in terms of how the priorities are arrived at but also how monitoring is conducted.
  - For soils, soil carbon would be a useful indicator. Nitrogen waste is also a useful indicator to include.
  - LINK members suggest the indicator on peatland is grouped under Outcome 1 rather than Outcome 4 (as currently proposed).
  - LINK members suggest a revision to the peatland indicator to capture the area of peatland restored under the Peatland Action Fund. Focusing on ‘area restored’ may be easier to capture than what is currently listed under Outcome 4 (‘area restored to a favourable condition’). While the latter indicator may be ideal, reaching favourable condition takes time and needs monitoring. Data for ‘area restored’ will be available each year and, though it would remain a proxy, allows annual progress to be ascertained.

**Outcome 2: We play our full role in tackling the global climate emergency and limiting temperature rise to 1.5°C.**

- There should be a restatement that the climate emergency and biodiversity crisis are interlinked as per the First Minister’s statement in June 2019.

- An indicator that captures the opportunity for nature-based solutions to climate change is needed to deliver interlinked benefits from biodiversity and climate action. An indicator on carbon sequestration in terrestrial (particularly peatlands) and marine environments could help here.
- The third indicator - 'Emissions of greenhouse gases from natural resources' - is unclear. Does this refer to fossil fuel burning or emissions from eroded peat?
- Suggested indicators focus on reducing greenhouse gas emissions, but should also consider how we reduce consumption emissions and energy demand.

### **Outcome 3: We use and re-use resources wisely and have ended the throw-away culture**

- The 10 suggested indicators are good. LINK members suggest the following indicators are prioritised:
  - Material footprint;
  - Prevalence and source of litter (using LEQ indicators from the Litter Monitoring System (LMS) and Beachwatch data);
  - Total waste generated;
  - % of all waste that is re-used or recycled (or better - Circular Material Use - the ratio of circular use of materials to overall material use - see <https://ec.europa.eu/eurostat/web/circular-economy/indicators/monitoring-framework>);
  - Household waste per capita.
- Additionally, though we have not prioritised the carbon metric indicator in the list above, LINK members believe this is important and should be included as part of the Strategy within a pathway even if it is not a headline indicator.
- The indicators could mention plastics specifically as it is an issue the public care a lot about.
- The EU Circular Economy Monitoring Framework could be considered for circular economy indicators.
- Opportunity to use data gathered by Marine Conservation Society's Beachwatch project and Keep Scotland Beautiful's Local Environmental Quality surveys. From next year, data on the prevalence of litter and other LEQ indicators will be available annually via Zero Waste Scotland's Litter Monitoring System (LMS), while previous years' data on this is available in Keep Scotland Beautiful's LEAMS reports. Marine Conservation Society Beachwatch data is used to support Marine Scotland requirements for marine and beach litter monitoring.

#### **Outcome 4: Our thriving, sustainable economy conserves and grows natural assets**

- Natural Capital Asset Index does not include marine - the marine environment needs to be taken account of under this outcome too.
- As mentioned earlier, LINK members believe the woodland and peatland indicators fit better under Outcome 1. Don't agree that the woodland and peatland indicators are grouped under the economy outcome - fit better under Outcome 1.
- For woodlands specifically, members suggest the following changes:
  - Currently have the 'area of woodland creation' is given as an indicator that our 'sustainable economy conserves and grows our natural assets' but a better indicator for this outcome can be 'Area of UKWAS certified forests and woodland' which is data provided by Forest Research and is an indicator in the Forestry Strategy Implementation Plan, and also 'Area of forests and woodland covered by management plans'.
  - Another indicator can be: 'number of community groups that own and lease forests and woodlands' also from the Forestry Strategy Implementation Plan.
- There is scope for an indicator on landscape quality to be included here, given its importance for the tourist economy.
- An indicator looking at land use, for example a reduction of vacant and derelict land, could be useful here.
- To link with the economy, indicators about enterprises and whether they are seeking to restore, regenerate natural assets would be useful. For example: number of businesses with natural capital accounts.

#### **Outcome 5: Our healthy environment supports a fairer, healthier, more inclusive society**

- An indicator about the importance of a healthy environment for children's health should be included, to match work on incorporating the UNCRC.
- An indicator about increasing access to greenspace should specify 'biodiverse, usable greenspace.' Need to recognise that greenspaces can be of varying quality.
  - The Woodland Trust has an Access Standards which aspires that: no person should live more than 500m from at least one area accessible woodland of 2ha+ in size and no person should live more than 4km away from at least one area of accessible woodland of 20ha+ in size. These can be used as indicators and are available here: <https://www.woodlandtrust.org.uk/media/1721/space-for-people-woodland-access.pdf>

- Additionally, we need to know who uses greenspaces and how often.
- Data from the [2019 Scottish Household Survey](#) reinforces the importance of the quality of our environment, including our green and blue spaces, with regards to issues of inclusivity and fairness. While adults from Scotland's most deprived areas are now almost as likely as others to live within five minutes' walk of an open green or blue space, only 62% of these adults report being satisfied with this space - compared to 81% of adults in the least deprived areas. To enable effective work towards a situation in which Scotland's people really do benefit from our environment in a fair and inclusive way, it is important that the strategy's indicators reflect how access to clean and high quality green, blue and open spaces can differ according to the levels of deprivation present in different parts of the country.
- Access to growing spaces - such as community gardens or allotments - would be an important indicator as many people want access to growing space.
- For the indicator on involvement in biodiversity monitoring - this could be wider and capture involvement in hands-on conservation as well as biodiversity monitoring. Numbers of individuals participating in access to nature programmes such as the John Muir Award would provide a measure.

## **Outcome 6: We are responsible global citizens with a sustainable international footprint**

- Include an indicator to drive a reduction in sourcing materials from conflict zones.
- LINK members welcome the fisheries indicator but this only tells so much about the overall health of the marine environment in the absence of a seabed health/seafloor integrity indicator. As discussed earlier (ref: Scottish Biodiversity Strategy acknowledgement of fish stock status as a proxy for marine ecosystem health).
- LINK members welcome the footprint indicators suggested (carbon, water and land).
- LINK members welcome that the Scottish Government is also exploring the ecological footprint.

### **For more information contact:**

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