

BirdLife International

INDICATORS FOR GLOBAL AND NATIONAL BIODIVERSITY TARGETS – EXPERIENCE AND INDICATOR RESOURCES FOR DEVELOPMENT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Response to call for peer review of CBD/SBSTTA/23/INF/4, 3 February 2020

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Key points

- A combined approach, whereby each country employs a set of core indicators that can be aggregated across all countries to obtain a global assessment of progress alongside a more flexible set of nationally-tailored indicators would address both global and national needs.
- Bespoke guidance on the application of indicators across scales needs to be articulated and communicated to Parties.
- In addition to the BIP Dashboard and UN Biodiversity Lab, the UN SDG indicators database makes available relevant national data and metadata.
- To ensure utility and congruence of the indicator set, relevant indicators identified through the SDGs and related relevant MEAs should be integrated as a priority, and equally a means established for post-2020 biodiversity indicator development to feed into these processes.
- The identification of indicators should be both top-down and bottom-up, whilst accepting that both approaches present scientific and technical challenges which need to be addressed.
- Use and synthesis of national biodiversity indices should be considered a priority, with an urgent need for greater guidance provided at the national level on desirable indicator characteristics and on their practical development and implementation in NBSAPs.
- In the selection of indicators, each should be tested for their efficacy in measuring positive change for biodiversity, as many purported indicators of biodiversity are in fact biodiversity neutral.
- Investment and work is needed at a national scale to explore and understand better the linkage between global and national targets and indicators, and how it might be improved.
- Any new targets must be assessed against SMART¹ criteria and made SMART, or else they are likely to be ineffective.
- Effective tracking of progress to targets cannot happen without adequate monitoring schemes (e.g. breeding bird surveys) and data compilation systems (e.g. IUCN Red List, World Database of Key Biodiversity Areas), yet they receive little or no support from many of the end-users who rely on them; means to address this should be included as part of the post-2020 framework development process.

¹ Specific, Measurable, Ambitious, Realistic & Time-bound, to which we add Unambiguous & Scalable: Green et al. (2019) Relating characteristics of global biodiversity targets to reported progress, *Conservation Biology* 33, 1360-1369.

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A) Overview and key messages on the uses and development of indicators for the Strategic Plan for Biodiversity 2011-2020

Uses of national indicators in support of the Strategic Plan for Biodiversity 2011-2020

The key message identified by the paper is correct. There is a significant mismatch between the global and national sets of robust indicators in support of the Strategic Plan for Biodiversity. Critically, many of the best and most globally robust indicators (where the greatest institutional investment in indicator development and testing has occurred) are not applicable and meaningful at smaller national scales. When applied at such scales they can be misleading and invalid. The global Living Planet Index and global Red List Index are two prominent examples where care must be taken in the creation and promotion of national level equivalents – quite different methods may be required. For the Red List Index, welcome progress in that direction has been made to supply SDG indicator 15.5.1 (<https://unstats.un.org/sdgs/metadata/files/Metadata-15-05-01.pdf>) and feed into the BIP Dashboard (<https://bipdashboard.naturereserve.org/bip/SelectCountry.html>).

There is a natural hierarchy of biodiversity indicators from global, to regional, to national, to sub-national scales. Each may have its own specific methodology and approach. This hierarchy needs to be articulated and communicated to the Conference of the Parties with bespoke guidance on the necessary characteristics and credible methods and indicators at each scale.

The information document notes that “Tools such as the BIP Dashboard and the UN Biodiversity Lab are increasing the availability of global indicator results and spatial data for use by countries”, but the methodologies and the provisional outputs need to be treated with care and the new methods need independent scientific scrutiny and peer-review before they are promoted for wider use by CBD Parties. The current BIP Dashboard indices available for the UK, as an example, bear no relation to the pre-existing and comprehensive biodiversity indicator sets openly available and published by the UK government annually. The same is true for other European countries. Likewise, the UN Biodiversity Lab presents species richness as a prominent biodiversity indicator at a national level, despite a series of papers that have shown how poorly species richness alone acts as a genuine indicator of biodiversity change. For non-experts especially, and at this stage of development, such premature tools may be unhelpful and misleading without further clarification and guidance in their appropriate use, interpretation and limitations. The proliferation of new tools and methods may also be unhelpful without clearer guidance on alignment and quality control in relation to the post 2020 framework. Resources therefore need to be directed towards ensuring new methods are given appropriate levels of scrutiny, and, once accessioned into the wider indicator set, appropriate guidance issued. We would note also the [UN SDG indicators database](#) which makes national data available for the SDG indicators, along with metadata providing details of methods etc.

Linked to the above, the paper shows that national indicators were used 11 times more frequently as global indicators in the 5th national reports - and laments the lack of adoption of the prescribed AHTEG-recommended indicators. This observation is telling. What has been a top-down approach has had mixed or limited success, for some of the reasons described above. This suggests that fresh impetus should be made into exploring the alternative model of a bottom-up approach to indicator development for the post-2020 global biodiversity framework. This brings along a whole series of scientific and practical challenges, some quite different to the top-down approach, but many are the same. Given the weight of evidence, as shown by

the 5th and 6th national reports, and the recurring problems in down-scaling the existing biodiversity indices, careful consideration needs to be given to the mobilisation and synthesis of national level indices within the post-2020 global biodiversity framework. The same generic principles of good practice apply to effective biodiversity indicators at each scale (e.g. Table 1 below) but different methods may be required at each scale.

Table 1. Key attributes of an effective biodiversity indicator (Gregory & van Strien 2010).

<i>Attribute</i>	<i>Details</i>
Representative	Includes all species in a taxon or a representative group
Immediate	Capable of regular update, ideally on an annual basis
Simplifying	Reduces complex information into an accessible form
Easily understood	Simple and transparent to a range of audiences
Quantitative	Accurate measurement with assessment of precision
Responsive to change	Sensitive to environmental change over short time scales
Timeliness	Allows rapid identification of patterns and early warning of issues
Susceptible to analysis	Data can be disaggregated to understand the underlying patterns
Realistic to collect	Quantitative data can be collected within the resources of manpower & finance over medium to long term
Indicative	Representing more general components of biodiversity than the constituent species trends, ideally reflecting ecosystem health
User driven	Developed in response to the need of policy and decision makers
Policy relevant	Allow policy makers to develop and adapt policy instruments
Stability	Relatively buffered from highly irregular natural fluctuations
Tractable	Susceptible to human influence and change

Notwithstanding the challenges outlined above, with reference to the comparison of a limited set of indicators vs a flexible indicator framework, it would seem possible and indeed desirable to have a core set of indicators that all countries try to report on, within a wider set that countries are encouraged to use and that has the advantages outlined. There is an inherent trade-off between each country using its own bespoke nationally-tailored indicators and the ability to aggregate data across all countries to obtain a global assessment of progress and identification of shortfalls in progress. Therefore a combined approach that allows both of these by identifying core indicators within a broader flexible framework seems to have considerable advantages.

In addition, coherence and efficiency is needed between indicators for the post-2020 global biodiversity framework and other related conventions and policy processes. As a priority, integration of relevant indicators as identified through the SDG process, and within other relevant MEAs (such as CMS, CITES, Ramsar, etc.) would go some way in ensuring the indicator sets' utility and congruence across agendas. Ideally, the development of both targets and indicators under each process should be coordinated, and while already some way advanced, the final SDG indicators should also take into account – and be informed by – those being developed under the post-2020 global biodiversity framework process, and not just the other way around. See further discussion below and examples on this point.

Status and selection of global indicators for the Strategic Plan for Biodiversity 2011-2020

We fully support the status of global indicators for the Strategic Plan for Biodiversity 2011-2020, described as a “flexible framework and indicative list”. This has worked well to bring forward and scrutinise potential indicators and to provide meaningful overview using the best available information, while recognising gaps in knowledge.

Gaps in knowledge are generally due to gaps in biodiversity monitoring, but they are not covered in this paper, and generally are neglected in discussion around the post-2020 global biodiversity framework. Biodiversity monitoring is another part of the puzzle in defining 'SMART' 2020 biodiversity ambitions, targets and indicators. The document does not give sufficient recognition of the need for investment in the underlying monitoring schemes (e.g. breeding bird surveys, butterfly censuses, forest plots) or data compilation systems (e.g. IUCN Red List, World Database on Protected Areas, World Database of Key Biodiversity Areas) that underpin many of these indicators. Effective tracking of progress to targets cannot happen without these schemes and systems, yet they receive little or no support from many of the end-users who rely on them.

There has also been a recent tendency to proliferate indicators rather than to fine-tune, focus, align and improve the quality of existing indicators, which should be considered a priority. Related to that, however, and given the comments above, the indicators might be sensibly categorised as:

1. ready for use at the global level
2. could be used at the global level but which require further development to be ready for use
3. *ready for use at the sub-global level*
4. *could be used at the sub-global level but which require further development to be ready for use*
5. ready for use at the national level
6. could be used at the national level but which require further development to be ready for use

Where 1 & 2 and 5 & 6 are recognised priorities and are the highest priorities for the post-2020 global biodiversity framework, 3 & 4 are italicised to indicate a lower priority. To date, the BIP has understandably focussed on global indicators, though not exclusively of late, and greater investment in understanding the development, use and synthesis of national biodiversity indices should be considered a priority. Greater guidance at the national level on desirable indicator characteristics (Table 1) and on their practical development and implementation in NBSAPs is urgently needed.

B) Availability of indicators for the Aichi Biodiversity Targets and the post-2020 global biodiversity framework

We agree that there are gaps in the availability of suitable indicators with global data for many of the Aichi Biodiversity Targets. Some of those targets are also difficult to measure at the global scale, which should provide lessons for the development of future global targets. Many of the targets contain ambiguity and are not judged to be 'SMART' targets (see Butchart *et al.* 2016 & Green *et al.* 2019).

Alignment with the goals is also critical here, rather than an association with, or link to a goal. As described above, if the indicators in Annex 1 are selected for global use and adequacy, then the secondary question is whether the method is suitable for national use and whether data exists for national use. In many cases these indicators are not meaningful and/or statistically sound at a national scale.

The final selection of indicators will obviously depend on the targets to be measured. We will provide some specific recommendations regarding the proposed goals, targets, and associated indicators that could be used to track these targets, in a separate response to the zero draft of the post-2020 global biodiversity framework. This will, where applicable, propose adjustments to related SDG indicators which could be used to better track biodiversity metrics associated with various SDGs and SDG Targets. For instance, examples could be as follows:

The following proposed revision to SDG indicator 12.1.1, reporting against SDG 12.1, could better track progress against the proposed post-2020 biodiversity target 13:

- Number of countries with sustainable consumption and production (SCP) national action plans **incorporating biodiversity considerations** or SCP mainstreamed as a priority or a target into national policies

And the following proposed revision to SDG indicator 12.6.1, reporting against SDG 12.6, could also track progress against the proposed post-2020 biodiversity target 14:

- Number of companies publishing sustainability reports **including biodiversity information**

C) Potential for the development of new indicators

The main message is correct, in that it is possible to develop new indicators to fill gaps with investment and champion institutions and with direction. 'Big data' is also increasing the potential for new indicators, particularly in terms of mapping, but caution is needed to ensure that they fulfil statistical standards so that they can act as genuine biodiversity indicators at the particular scale presented and are peer-reviewed. Many of the existing and proposed biodiversity indicators function well at one scale, but by their nature, fail at another.

The work to explore and develop new indicators by UNEP-WCMC and the BIP Partners is to be applauded, but there is a lot more work to do.

D) Additional considerations for identifying indicators for the post-2020 global biodiversity

As implied, common agreement, governance and use of indicators for the post-2020 global biodiversity framework and the biodiversity-related targets in the Sustainable Development Goals (SDGs) should be a priority. At the moment, there is the potential for considerable duplication, as well as confusion and competition among indicators. Clarity on governance here is key to help the Parties navigate process and make informed decisions.

Likewise, the opportunity to strengthen the use of a common set of indicators for national level reporting levels would greatly facilitate a bottom-up approach to monitoring progress towards the global targets in the future framework and contribute to improved accountability for the post-2020 global biodiversity framework, which would, in turn, lead to greater demonstrable progress against the goals.

As outlined by the Biodiversity Indicators Partnership (BIP), targets and indicators should be developed at the same time, and iteratively (rather than detached). Many have called for the post-2020 global biodiversity framework to embrace 'SMART' targets and it has been demonstrated that 'SMARTer' Aichi biodiversity targets have achieved greater demonstrable progress (Green *et al.* 2019).

There should be greater effort to understand barriers to biodiversity indicator development at national scales in different regions, and then a consideration of how a more plural set of indices and information at national scales can be synthesised and summarised meaningfully at regional and then global scales. A bottom-up approach, rather than a top-down one. Environmental decision making, policy development, regulation, and

law that relates to and impacts biodiversity (both negatively and positively) is predominantly made at national scales.

In the selection of indicators, each should be tested for their efficacy in measuring positive change for biodiversity, as many purported indicators of biodiversity are in fact biodiversity neutral. That is, they could move towards the goal/target without reflecting a positive change in biodiversity. Indicators related to biodiversity condition (i.e. populations or direct actions) should be more prevalent than those related to process. While process indicators are important, they should be scaled back; an overdependence on process based targets and indicators may result in our looking like we are on track to meet the goals despite being superficially through process.

It is also important to ensure that indicator development does not focus solely on terrestrial aspects – the marine narrative should also be explicit through the indicators that are selected.

What will be the status of the indicators in the post-2020 global biodiversity framework?

As the paper describes, the different status, selection and governance processes of indicators for the SDGs and the Strategic Plan for Biodiversity has several advantages but many disadvantages.

The framework of global indicators for the SDGs has been developed by the Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDG) as was agreed upon by the UN Statistical Commission. So National Statistical offices agreed “a limited and voluntary set” of indicators, in parallel with the CBD and mostly duplicating their efforts, but with expertise from only within government, and often unfamiliar with the subject area. Such duplication of effort would seem wasteful and inefficient, and may create confusion among parties as to the status of biodiversity and how it is changing.

Given the fact that the IAEG-SDG will meet to discuss the proposed updated SDG indicators in March 2020, the process for ensuring that the new post-2020 biodiversity indicators are coherent with the updated SDG indicators – while recognising that the post-2020 biodiversity targets will at this point not have been agreed – should be clarified and coherence ensured where at all possible.

How will indicators be selected for the post-2020 global biodiversity framework?

Ideally there needs to be a mechanism for global and national indicator users, providers and supporters to contribute to the process of deciding on targets and indicators for the framework against clear selection criteria and spatial scale. Again, marine targets and indicators should not be neglected in this process.

What is the desired relationship between indicators used to track progress towards national targets and global indicators used to track progress towards future global targets?

As the paper states, the translation of global targets as national level targets can make the use of the same indicators across scales and countries problematic, and is often unworkable or ill advised.

If global targets were to be designed with the ability to disaggregate to national targets, with corresponding indicators and reporting at each scale, then greater consideration needs to be given to the necessary mechanisms and capacity building for producing the indicator data at these scales, especially at the national scales.

We fully agree that such capacity will be easier to develop where reporting is against a limited set of headline indicators, which may be practical to produce at multiple scales.

There has been limited investment and work at a national scale to date to explore and understand better the linkage of global and national targets and indicators, and how it might be improved.

How might targets be developed to ensure their measurability?

We agree that the wording of targets will affect whether indicators for measuring progress can be easily identified or developed. Recent studies suggest that 'SMART' Aichi Targets were more likely to gain traction and make demonstrable progress under the current Strategic Plan for Biodiversity 2011-2020 (Han *et al.* 2014, Butchart *et al.* 2016, Green *et al.* 2019). Any new targets must be assessed against the SMART criteria and made SMART, or else they are likely to be ineffective.

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