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| **Review comments on the draft monitoring framework for the post-2020 global biodiversity framework** |
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| ***General Comments*** |
| Given the debate around digital sequence information on genetic resources (DSI) we found it surprising that there is no mention or placeholder for this topic in the GBF. In Decision CBD/COP/DEC/14/20 Parties have agreed that DSI is important for “for the three objectives of the Convention” and that it “contributes to scientific research as well as to other non-commercial and commercial activities in areas such as biological diversity, food security and human, animal and plant health”. Given this agreement, it would seem logical to reflect this agreement within the GBF document. Possible links with DSI could be:* under Goal A, “maintaining genetic diversity” as DSI is the only available tool to show whether genetic diversity is actually maintained or not. A new indicator could be “number of species with some sequence data available in public sequence databases” (Table 1, page 2, Column B, new row added after 15 or in Table 1, page 4 column C, row 36 which does not have an indicator at present).
* Under Goal C, Page 6, Column C, new row 74, a new indicator could be “number of species accessed with geographic information and genetic data available in public databases.”
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| In general, the development of indicators that provide information on the social aspects of biodiversity change (also known as IPBES' “indirect drivers” – here terminology should be made consistent) should urgently be intensified. In addition to the gaps in indicators for various NCPs (cf. B2 and B3), indicators on "environmental awareness" or "nature awareness", but also on environment-related crime , offer themselves as important additions.  |
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| ***Specific Comments*** |
| **Table** | **Page** | **Column letter** | **Row number** | **Comment** |
| 1 | 6 | C | 72 | Access to GR would increase if non-commercial research was more commonly conducted under “simplified measures” as foreseen (but rarely implemented by Parties) under Article 8a of the NP.The non-commercial research community would strongly support the use of simplified measures that could perhaps be centrally coordinated.Several new indicators could be added here:* “Parties providing non-commercial access to GR under simplified measures”

AND/OR* Standardized model clauses or documents for non-commercial research including a universal Standard Material Transfer Agreement that could be published as an IRCC by Parties
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| 1 | 6 | C | 74-76 | The zero draft indicators for benefit sharing released in November 2019 closely reflected the Nagoya Protocol Annex. However, in the current draft, these indicators have entirely disappeared. It is unclear if the reason for this removal is because no baseline data is available or if there are other reasons.As academic users we find ourselves disappointed that these scientific aspects of benefit sharing, which are critical for long-term capacity building, are not adequately represented or in the current draft and **we request that the first two non-monetary benefit sharing indicators from the zero draft be brought back into the GBF as indicators for non-monetary benefit-sharing:*** **“Number of research and development results shared”**
* **“Number of collaborations in scientific research”**

There are indeed significant technical challenges around collecting data on these indicators and they are indeed not well-suited for country-level reporting because governments are often not in direct touch with their scientists over the multi-year course of a research project and thus, often are not aware of the tangible and intangible outcomes of research projects.However, there are opportunities for global, comprehensive analyses of some of the non-monetary benefit sharing indicators that could and should be re-visited by SBSTTA. In particular, global databases of scientific publications (a proxy for “research results”) and other biological databases (proxy for “access to genetic resources”) combined with advances in bibliometric analyses (which enables geographic associations of authors involved in the research and access) make it possible to assess and quantify many aspects of the “old” (zero draft) non-monetary benefit sharing indicators.For example, scientific publications are centrally stored and indexed in large databases such as the European PubMed Central (EPMC) database. EPMC also offers a programmer interface that makes it possible to query (in an automated manner) multiple aspects of the publications in these databases including a great deal of metadata and even text data (from open-access publications) contained in these publications including the presence of species names, keywords, scientific topics, author affiliations (including geographical location of authors) and, through text mining, even possibly recognition of IRCC numbers or other unique identifiers (such as those associated with genetic resources held by collections or those associated with sequence data via accession numbers from INSDC).Thus, it would be possible, for example, to assess and answer such questions as “How many publications mentioned the keywords "biodiversity" + "endemic" + "Columbia" with authors from two different countries (e.g., Germany and Colombia) in 2018?” This information gives a powerful insight into scientific collaborations and research results shared.These types of analysis could also focus on specific endangered species, be used for all types of biodiversity utilization (using species names), or be sub-divided into different taxonomic levels (e.g., microbial, animal, plant), focused on certain endemic organisms (country-specific biodiversity), and/or associated with different key words (biotechnology, virology, taxonomy, etc).Furthermore, these analyses could possibly be extended to assess similar types of information held in patent databases. Here the zero draft indicator “Number of joint ownerships of relevant intellectual property rights” could be quantified.Finally, **these analyses could be done retroactively which would provide baseline data** and could be standardized so that the results are comparable year-over-year.The Leibniz Biodiversity Research Alliance combines the competencies and resources of 20 member institutions many of which have a particular focus on biodiversity informatics including 3 large research museums as well as a large plant collection, and a highly diverse microbial resource collection. **If the two non-monetary benefits sharing indicators (listed above) were to be added back into the Monitoring Framework, the Leibniz Biodiversity Research Alliance would be willing to “champion” these indicators and engage in a pilot project with stakeholders in the next inter-sessional period to develop the necessary informatics programming needed for bibliometric and informatic assessments.** Indeed, preliminary analyses and research has been done in this area.Furthermore, we would be very interested in joining the Biodiversity Indicators Partnership (BIP) and could imagine strong synergies amongst our institutes and current BIP partners and an integrated development of non-monetary benefit sharing indicators with other BIP Partners and data streams.**Take-home message:** The quantitative assessment of some aspects of non-monetary benefit sharing is possible and can be centralized and globally reported through BIP. The GBF would benefit from capturing and assessing these benefits, understanding their direct interactions with other biodiversity targets, and identifying gaps and opportunities for capacity development. |
| 1 | 7 | C | 84 | Please see above comment. |
| 2 | 22 | C | 140 | Line 140 is the quantification of access under Article 8c of the NP. It would be very informative to also collect data on access und Article 8a and 8b. There very fact that it is difficult to collect data here is an indication that indicators and data are needed here. An sMTA for non-commercial research for both biodiversity (8a) and public health (8b) would be very timely and welcomed especially in light of the on-going pandemic. |
| 2 | 22 | D | 141 | We are unaware of a data source for “total number of permits or their equivalent granted for access to genetic resources”. How will this data be collected? Why is “2018, approximately every four years” indicated? How will missing country data be handled? |
| 2 | 23 | C | 142 | Total number of IRCCs is a useful indicator but it would be useful and relatively simple to add a NEW indicator on IRCCs:“Total number of countries issuing IRCCs”. Reason: In our experience, once a country has an IRCC system in place the IRCCs in the database increase steadily. However, unfortunately from a user perspective, there are still relatively few countries that issue IRCCs even though they are mandated by the Nagoya Protocol. It would therefore be helpful to measure how many countries over time begin to issue IRCCs. Furthermore, this is a very simple thing to measure technologically within the ABS-CH. |
| 2 | 23 | C | 143-145 | The number of countries requiring PIC and publishing information in the ABS-CH and publishing procedures or legislation is indeed a useful indicator for measuring Party-level implementation of the Nagoya Protocol. It is also an important first step in the ABS process and very useful for users (such as us) to understand how to be compliant.However, the presence of legislation is not a measurement of *access* to genetic resources. If a Party develops complex, inefficient, or administratively challenging access procedures, it would effectively decrease actual access to GR numerically but it would be reported as an increase in access (applications).Whereas indicators in lines 141-142 indeed measure access, lines 143-145 do not measure access *per se* and are only indirectly related. In order to resolve this, we propose that an alternative, new Monitoring Element is needed here such as ”Progress on Nagoya Protocol implementation” (see below). |
| 2 | 24 | B | 146 & 149 | The zero draft indicators for non-monetary benefit sharing released in November 2019 should be brought back, especially **Number of research and development results shared” and “Number of collaborations in scientific research”**. Please see above comments on 1,6,C, lines 74-76. Specific to line 149, a global assessment of non-monetary benefit sharing in terms of scientific research and collaboration could also provide a focused assessment of contributions to conservation and sustainable use of biodiversity by targeted analyses as a “lighthouse project” within the global assessment.  |
| 2 | 24 | B & C | 147-148 | We consider the currently proposed indicators for T12.2 as highly inadequate to provide a useful measure for benefits shared. There is a false equivalency between the development of ABS legislation and benefit sharing. Benefit sharing is by no means an automatic result from the development of ABS legislation. There is no data that we are aware of that the promulgation of ABS legislation is a direct and reliable measure for benefit sharing. In fact, in a small survey of 23 biodiversity-research focused institutes within Germany, we found that research conducted in and/or with a Nagoya Protocol country (i.e. a country with ABS legislation) led to delays project implementation and product delivery of, on average, 13 months. Thus, this small study suggests that the presence of ABS legislation actually led to a decrease in biodiversity-related research outputs and collaboration (benefits). This is perhaps not always the case in countries that have efficient and user-friendly systems. But the inherent assumption (legislation = benefits shared) in this indicator is not based on data but rather on assumptions. If ABS measures are simple and straightforward then access is easy and benefit sharing is highly likely. It is still important for users to monitor the development of ABS legislation (and its publication in the ABS-CH is still highly important), but this cannot serve as a valid indicator for the amount/degree of actual benefit sharing. We therefore suggest that lines 147-148 be removed and captured instead (as proposed above) under a new monitoring element called “Progress on Nagoya Protocol implementation”. The same limitations apply to the indicators currently listed for T12.1 (140-145, under "access"), in the wider sense that development of access legislation/regulations also cannot be taken as valid measure for increasing benefits shared. |
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*Comments should be sent by e-mail to* *secretariat@cbd.int****no later than 25 July 2020****.*