

Principles of Effective Guidance to Support the Implementation of the Kunming-Montreal Global Biodiversity Framework

Louise Mercer^{1,2}, Daniela Alvarez Gallo^{1,3}, Elie Pédarros⁴, Sarah Dalrymple⁵, Katherine Jutting⁶, Vanessa Cutts⁷, Mohammed Khalid Sayeed Pasha⁸, Maria-Mihaela Antofie⁹, Onyeka Nwosu¹⁰, Barbara Engels¹¹ and Philip J.K. McGowan^{4*}

¹ The University of Oxford, Oxford, UK

² Memorial University of Newfoundland and Labrador, St Johns, Canada

³ The University of St Andrews, St Andrews, UK

⁴ Newcastle University, Newcastle, UK

⁵ Liverpool John Moores University, Liverpool, UK

⁶ Department for Environment, Food and Rural Affairs, Bristol, UK

⁷ University of Cambridge, Cambridge, UK

⁸ IUCN (International Union for Conservation of Nature) Asia Regional Office, Bangkok, Thailand

⁹ Lucian Blaga University of Sibiu, Sibiu, Romania

¹⁰ National Biosafety Management Agency, Abuja, Nigeria

¹¹ German Federal Agency for Nature Conservation, Bonn, Germany

*Corresponding author: philip.mcgowan@newcastle.ac.uk

Abstract

Effective guidance is necessary for conservation practitioners to implement targets of the Kunming-Montreal Global Biodiversity Framework (KMGBF). However, there is a need to determine what properties make good guidance: easily accessible, widely usable and addressing specific needs to be implemented quickly by end-users. Alongside a rapid review of tools and guidance resources (T&G) submitted to the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) in response to notification 2023-120, we gathered input from Party representatives and end-users involved with the Convention on Biological Diversity (CBD) processes. Key findings highlight regional disparities in perception between guidance producers and users, limited accessibility of guidance and lack of clarity surrounding guidance application. We present key principles for producing effective, inclusive guidance that is end-user focused to enhance the accessibility and usefulness of guidance supporting KMGBF implementation. These principles can aid development of co-designed, flexible, and accessible guidance that directly addresses the needs of diverse rights-holders and stakeholders. The use of these principles will require aligned technical capacity building for guidance producers and end-users accordingly. The application of these end-user pathways could contribute towards producing effective T&G that can be implemented to make progression to address KMGBF targets.

1. Introduction

Supporting Kunming-Montreal Global Biodiversity Framework (KMGBF: CBD 2022) implementation is a complex, long-term, and context-sensitive process that requires effective guidance. Practitioners require access to clear and concise syntheses of evidence in a variety of different formats (Cooke et al. 2012) to implement evidence-informed conservation (Kadykalo et al. 2021). Principles for producing effective Tools and Guidance (T&G) documents have been developed across different disciplines and fields such

as medicine which is routinely and clearly linked to the available scientific and technical evidence (Salafsky et al. 2019). The production of effective guidance can be facilitated by evaluating the support mechanisms in place to help those producing and collating guidance materials (Kadykalo et al. 2021; Downey et al. 2022).

There is a considerable amount of T&G in peer review, grey literature and other sources, that is intended to form a resource to support Parties implementing the Conservation on Biological Diversity (CBD). Guidance in conservation is intended to share good practices covering diverse topics from ecological management (Lindenmayer et al. 2006) and conservation literacy (Trombulak et al. 2004) to the development of high conservation value areas (Neugarten & Savy 2012). To understand the present state of T&G, the CBD Secretariat issued [notification 2023-120](#) (see CBD 2024) requesting information on existing T&G. The compilation of these resources was submitted to the CBD's scientific body, SBSTTA, and emphasised the importance of Parties having access to appropriate T&G to support monitoring and reporting (CBD 2024). The driver for our work was informally expressed concern about the utility of existing guidance to CBD Parties in addressing global goals and targets and the wider recognition T&G documents may have limited application (Walsh et al. 2015).

Downey et al. (2022) concluded that guidance documents intended to support conservation actions in United Kingdom and Ireland had a range of issues that affected their usefulness, including a lack of transparency in how recommendations were developed and the absence of statements of strength of the evidence. There is a need to identify if these challenges apply at the global level and if there are other issues that limit the effectiveness of T&G. Thus, we conducted a rapid synthesis of submissions made by Parties and stakeholders of tools and T&G for the KMGBF (CBD, 2024) to identify spatial and thematic coverage as well as their physical and stylistic accessibility to those who need them. To identify how T&G documents are perceived by actors responsible for delivering CBD goals and targets, we conducted a survey and interviews. We sought a representative sample of actors involved in implementing the KMGBF to gather different perspectives on what effective T&G means.

We present principles for producing effective guidance that were co-developed with those involved in T&G implementation from a diverse range of Parties and the CBD's recently established regional and subregional Technical and Scientific Cooperation support Centres (TSCCs). These principles can help to ensure T&G produced is accessible and applicable, supporting the early stages of implementation towards the KMGBF goals and targets.

2. Methodology

2.1 Review of documents submitted to the SBSTTA 26

We reviewed 1,290 publicly available documents compiled in the *Annex: Compilation of Submissions of Views and Information on Existing Tools and Guidance to Support Implementation of the KMGBF* that was submitted to the 26th meeting of SBSTTA (CBD, 2024). Information extracted from each document captured KMGBF targets addressed, location of submitting country/organization and language of production. For 10% of documents we collected information on technical language usage, presence of executive summary and length of document.

2.2 Survey of SBSTTA Focal Points

The survey aimed to assess the way in which T&G submitted to the CBD Secretariat is used by end-users which can include Parties, subsidiary bodies and implementation organisations. It was developed to provide important perspectives on what would make T&G more relevant, accessible, understandable, and usable, enhancing the implementation of the KMGBF. The survey was distributed via email to Focal Points of the SBSTTA through The Conservation and Sustainability Consortium of Academic Institutions (CASCADE). Survey questions can be found in Supplementary Information 1 (see below). Ethical approval was obtained from Newcastle University (Ref: 62756/2023).

2.3 Interviews with end-users

To identify challenges and good practices associated with effective development we gathered insight from end-users of T&G from a diverse range of organisations, which included representation from non-governmental organisations (NGOs), Parties, multilateral bodies and scientific institutions. We conducted semi-structured interviews and ensured representation from different geographic regions in addition to representation from regional and subregional TSCCs. Open-ended questions ensured that the interviewer was able to ask relevant follow-up questions that would not otherwise be captured in the interview guide. This approach ensured that interviewees provided information that they felt was appropriate and important in their context, while addressing the objectives of the study. Participants were provided with the opportunity to share answers via email or short interview (30-60 mins). Interviews were transcribed and collated with email responses. All responses underwent a thematic analysis, where each line of response was coded into themes. Responses underwent two iterations of coding between two reviewers who independently completed this stage prior to the final coding classifications. The key themes identified in responses linked to the preparation, production, and implementation of T&G. Ethical approval was obtained from Newcastle University (Ref: 62756/2023).

2.4 Principles for developing effective T&G

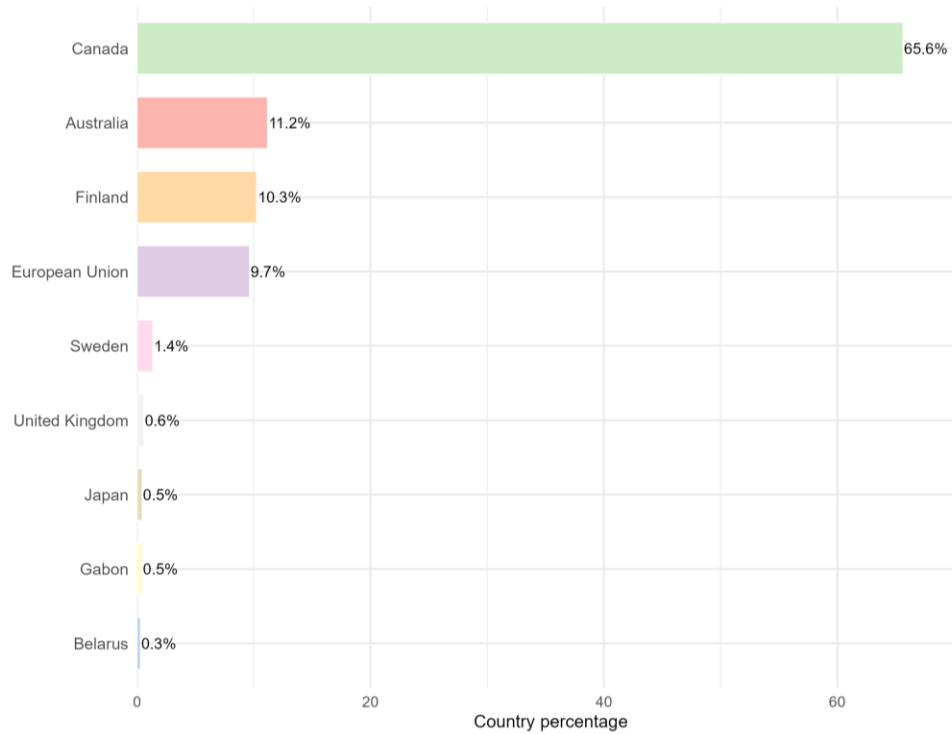
Sustained dialogue with respondents and interviewees led to the co-development of practical principles for developing effective and context sensitive guidance.

3. Results

3.1 Review of documents submitted to CBD

The organisations that submitted T&G are not representative of all Parties and all regions. Of the T&G resources submitted by Parties, 66% were submitted by Canada, (Figure 1A). Non-Party submissions accounted for 54.4% of total submissions (Figure 1B) and came from >70% of total respondents. Many of the submitted documents had limited immediate application outside the country where they were produced; they could work as a guide, but they did not make clear how they could be used in other regions, or provide case studies from other ecological, political or cultural contexts. Some of them are regulatory frameworks from specific countries or guides produced by national offices such as T&G for public servants in their own countries, and therefore, their applicability in other political and administrative contexts seems limited.

A



B

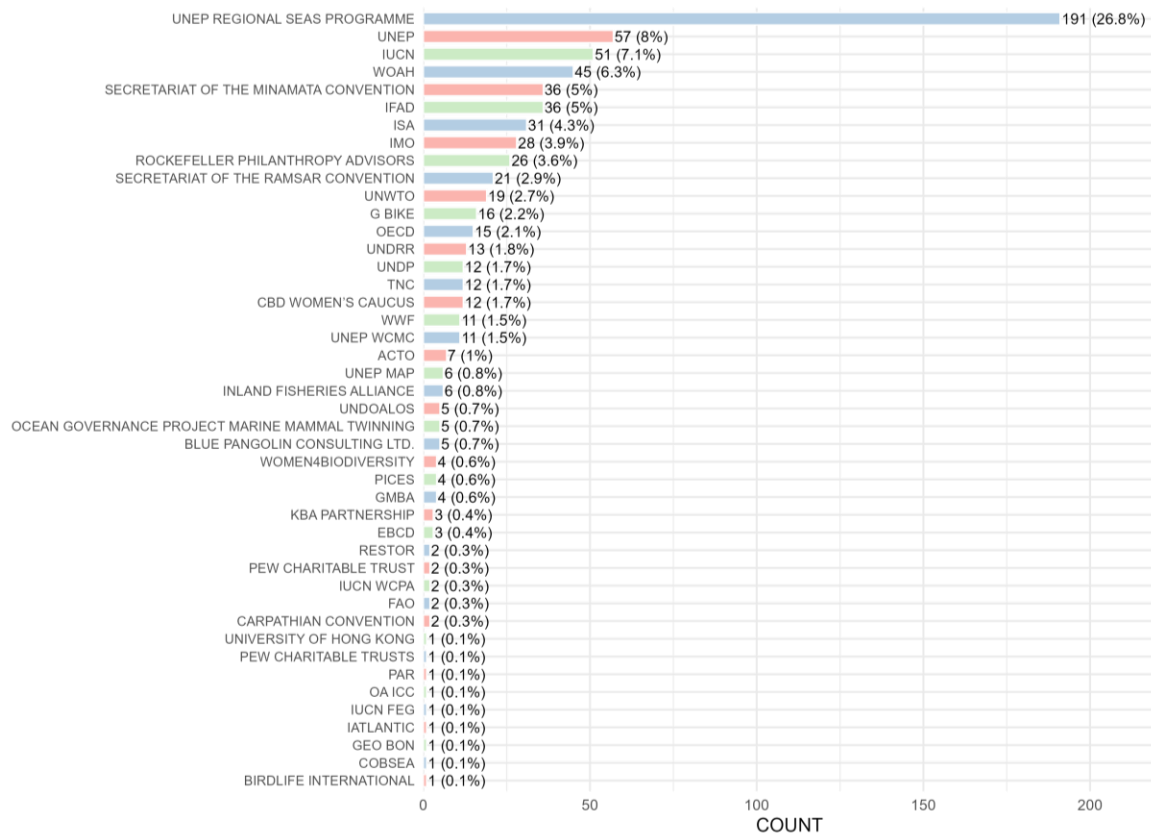


Figure 1. Proportion of T&G compiled by the CBD Secretariat in CBD/SBSTTA/26/INF/16/Rev.1 that were submitted by A) Parties and B) other actors. See *Glossary* for acronym definitions.

Most submitted documents (57.5%) were written in English (Figure 2). Only 8% of documents were submitted in all 6 UN languages.

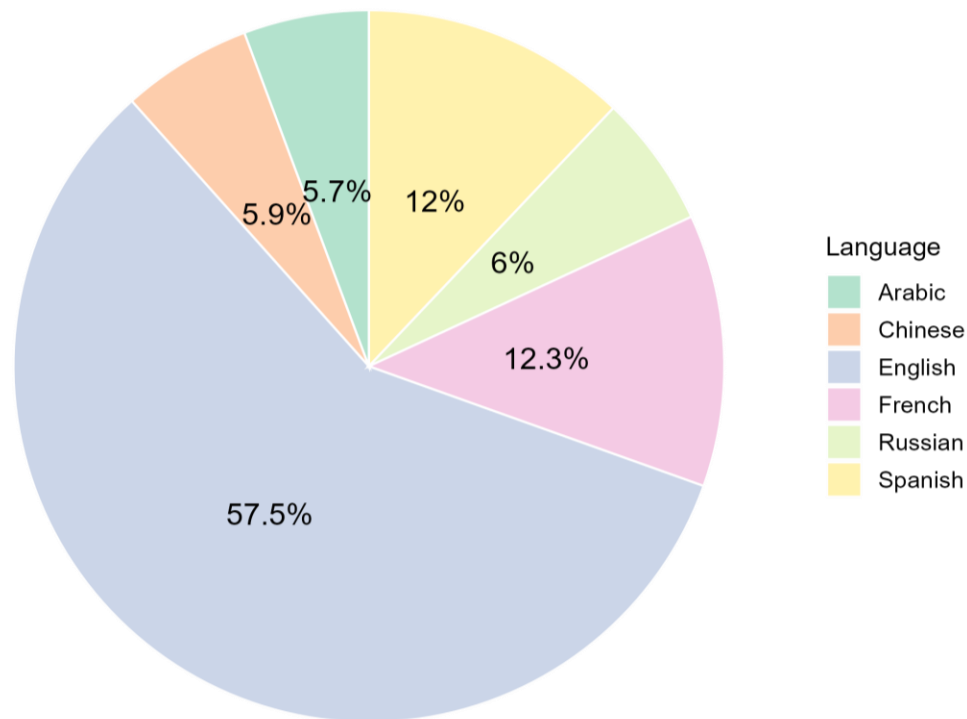


Figure 2. UN languages of T&G resources submitted in response to CBD notification 2023-120 (CBD, 2024)

There was variation in the targets addressed by the T&G documents submitted (Figure 3). The targets concerned with reducing pressures on biodiversity (Targets 1-8) were the subject of most T&G, with Target 3 on conserved areas and Target 4 on urgent management action for species and human wildlife co-existence most represented. Targets that were rarely addressed by T&G resources included Target 17 Biosafety and Biotechnology and Target 13 Access and Benefit-Sharing (ABS), each of which comprised 1% of submitted T&G.

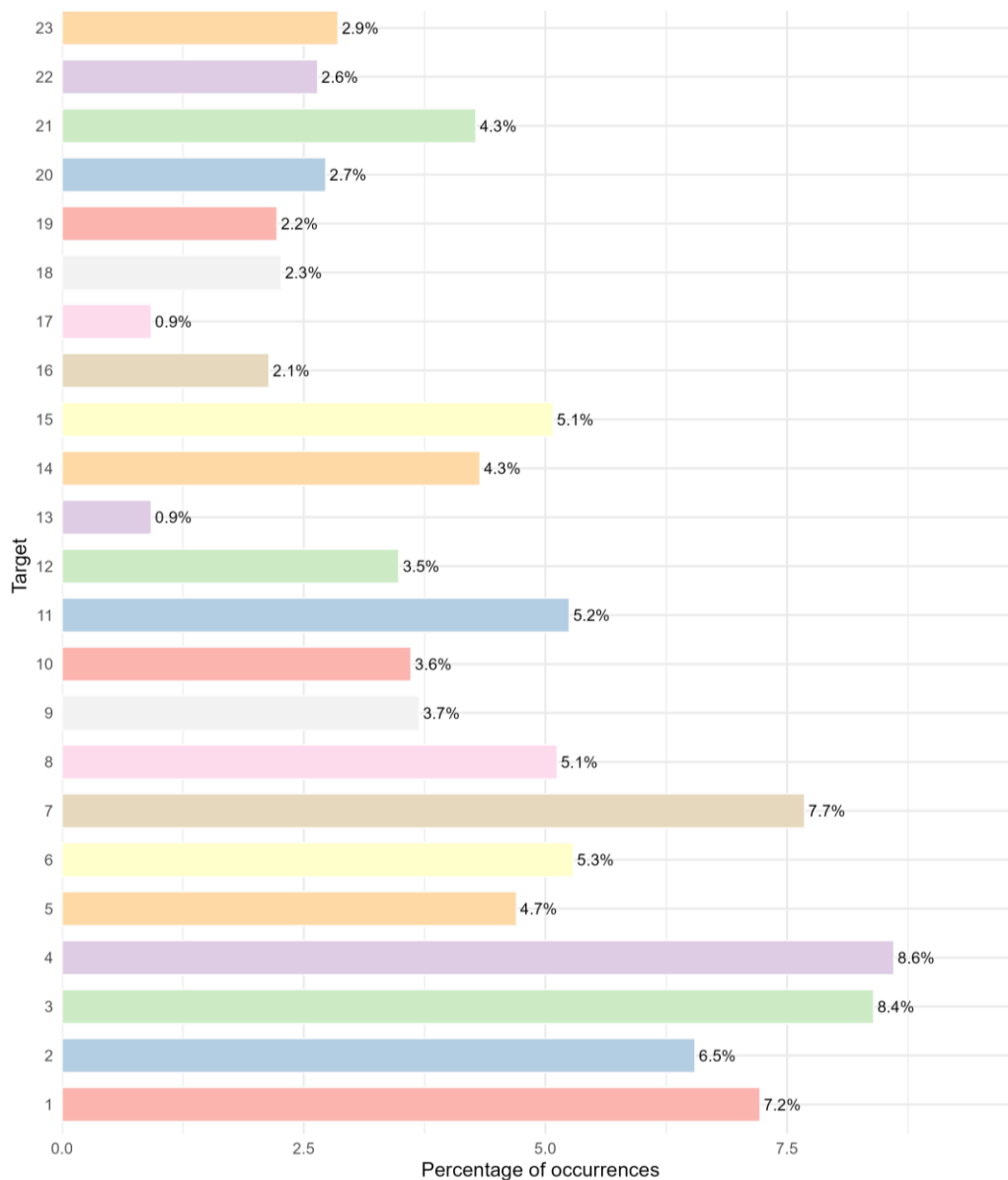


Figure 3. Frequency of different targets addressed by T&G documents reviewed.

3.2 Survey and Interview Responses

We received 20 survey responses from SBSTAA Focal Points or their representatives, of which 32% rarely search for tools and T&G. When asked why, responses from the developing countries highlighted challenges relating to a lack of clarity about where to search and difficulty finding relevant materials. 50% of respondents had heard about T&G through the CBD Secretariat, highlighting the important role the CBD plays in synthesising, storing and communicating evidence. Most respondents (70%) highlighted that they share T&G that they are aware of with relevant individuals and organisations in their country. Accessibility, which includes locating appropriate T&G resources and finding the language and presentation easy to follow, varied across Parties. While a few Parties reported excellent access, clarity, and language of T&G documents, others reported limited access and clarity of presentation. All survey respondents highlighted that the most accessible format of T&G is through electronic formats. Key

themes and discussion points drawn from interview responses are provided in Table 1. End-user respondents included different types of public servants from small countries, TSCCs and implementation officers working with the KMGBF. The co-developed principles for developing effective and context sensitive T&G are summarised in Figure 4. See Supplementary Information 2 below for the full resource.

Table 1. Key themes identified in interviewee responses linked to the preparation, production, and implementation of T&G.

Stage	Focus	Description	Example quotations
Preparation	Addressing gaps and needs	Guidance becomes ineffective when it does not align with current political priorities and policy frameworks. For example, national guidance should, wherever possible, align comprehensively with National Biodiversity Strategy and Action Plans (NBSAPs), National Determined Contributions (NDCs), National Adaptation Plans and National Development Plans. Detailed analysis is required to identify gaps, not only in terms of targets, but also in terms of regional knowledge, with attention to its relevance to specific biodiversity and context. Co-developed with a transdisciplinary approach, particularly through the active inclusion of Indigenous Peoples and Local Communities (IPLCs), and gender-sensitive approaches.	<i>"It's not at all clear where the attention to the guidance being demand driven is."</i> <i>"There are a number of things there that need to improve, and it would be useful to change the way they approach developing countries, how they try to encourage alignment of policies with the goals of the biodiversity framework."</i> <i>"... to go through those targets, look at what existing guidance is available and identify gaps. The big question is whether filling those gaps is actually going to help Parties make the targets"</i> <i>"Many tools are created for decision-makers, scientists, experts, technicians, but I think there's a lack of tools for the community. And that's the foundation for education, for changing perceptions and public ownership of these issues. That's where innovation is really needed."</i> <i>"I also recommend prioritizing guidance to be co-developed with Indigenous Peoples and Local Communities (IPLCs) contributions to ensure inclusivity and cultural relevance"</i>
Focus	Identifying where guidance is needed	There is a need for capacity-building on locating and applying relevant guidance Applicable to diverse regions and contexts could reduce time and cost of those working at TSCCs and <i>end-users</i>, and increase efficiency and effectiveness.	<i>"That process of filtering out the information that comes up is part of capacity"</i> <i>"You still need the human resources available, competent human resources that have the time and the motivation to be able to first of all read the guidance and then secondly implement it"</i> <i>"It takes a lot of experience and training to go onto the internet and pick up information and to be able to filter what's actually relevant and reliable to the subject that you want to research"</i> <i>"We're working closely with our focal points and also with research centres, because far from wanting to centralize everything, this must strengthen national institutional capacities. So, if Chile needs something that Brazil is great at, then let's facilitate those dialogues and see how we can transfer those capabilities"</i>

Production	Common challenges faced by end-users	Address specific needs to reduce duplication and ensure specific targets are addressed that need effort directed towards them. Accessibility: language- both technical terminology and style, and the language in which it is produced. Being able to find information and understand it. Formats (length, language, graphics) influence whether guidance is read and implemented.	<i>“There’s a lot of duplication of efforts”</i> <i>“Overly technical language with no clear path from global target/goal to national action”</i> <i>“Lack of clarity on which actors should lead and how progress will be measured”</i> <i>“Some CBD technical notes that are technically sound but lack simplified summaries, practical examples, or implementation pathways”</i> <i>“Language can become a barrier in accessing guidance and website format that are not user friendly”</i> <i>“Guidance that are not readily available and that it requires further searches to obtain information or the support needed”</i> <i>“Lengthy documents without concise summaries or visual aids”</i>
Production	Guidance definition	Effective guidance communicates goes beyond traditional manuals. Objectives are clearly defined, technical information is presented in a accessible way, actions are connected to measurable indicators, and implementation is tested through examples and case studies.	<i>“In our context, guidance is more than just an information note or technical manual—it is a structured, user-focused pathway that unpacks complex global targets (KMGBF) / standards or goals into actionable, context-specific steps that the end-users can integrate into their work to make it impactful and well quantified. Good guidance clarifies intent, simplifies technical language, links actions to indicators, and provides tested examples or case studies”</i> <i>“It goes from decisions to actually really specific ecosystems and really specific countries, regulatory frameworks”</i> <i>“It is about receiving advice or relevant information that will support in delivering on an objective or goal and also support in solving a problem or barrier towards achieving certain objectives”</i>

Production	Increasing accessibility	Accessibility is a key area to prioritise during guidance production. There are different ways to perceive access including whether guidance is freely available and then how you access and filter it to extract the key information. Freely accessible without complicated registrations, usage restrictions, or expensive licenses that create barriers to use. Clear, intuitive structure featuring executive summaries, simplified explanations, tables, and flowcharts that allow users to quickly determine whether the resource will address specific needs. Accessible in more languages than just English, especially available in languages at regional not just international scale.	<i>"Access to the actual information and then being able to analyse what the information actually means and how robust and reliable it is"</i> <i>"I think clear language is very important, plain language is key. Technical backing, yes, but in plain language"</i> <i>"Accessibility, easy platforms to navigate, simplified messages being provided and that is relevant to use, contextual and applicable"</i> <i>"Open access without subscription barriers"</i> <i>"Clear, practical, user-friendly"</i> <i>"Availability in UN languages and preferably key regional languages, with the help of CBD TSCCs"</i> <i>"In terms of accessibility, yes, I do think language is very important.... it's important, and that need must be reflected. It has to be available in the languages spoken in the region. That's essential"</i>
Dissemination	Implementation	Practical examples or relevance to the user's operating context or technical capacity available to implement T&G documents. Flexible frameworks allow the inclusion of context-specific attributes, stakeholders, and ecological contexts. Impartial, independent review of the utility of the T&G that require monitoring frameworks to track use overtime.	<i>It's also key that it has technical backing from a recognized source, that we can adapt it to different scales, whether national, regional or local, and that it includes concrete examples, not just theory"</i> <i>"Additionally, it must be compatible with the systems and data that we already handle in the country. They also don't work well if they require resources or technical capacities that we don't have available, if they don't consider the local legal and political framework"</i> <i>"Methodological guides with a step-by-step process have been very important and include practical examples of "this is how it's done." Step 1, Step 2, Step 3. They are very useful if they have clear examples."</i> <i>"That these tools be flexible, flexible enough to be adapted to our context, which is very unique, because many tools come from Europe and they are very different from us, culturally, ecologically, and institutionally"</i> <i>"There needs to be an impartial, independent review of the utility of the guidance"</i>

Dissemination	Sources	Sources of T&G are varied but most likely to be sought from trusted resource centres like the CBD clearing house mechanism. Networks of experts are key to disseminating guidance	<i>"We place a lot of value on academic institutions, expert networks, regardless of origin, research centres, absolutely"</i> <i>"Institutionally we prefer that they come from sources with technical and political legitimacy, such as competent national entities [...] that work with participatory approach, as well as regional networks and centres of excellence from the global South that understand firsthand the real conditions and limitations of implementation"</i>
---------------	---------	---	--

4. Discussion

4.1 Ensuring accessibility

Language and relevance are important considerations when developing effective T&G. Nearly 90% of the T&G documents submitted by Parties in response to CBD notification 2023-120 (CBD, 2024) were submitted by three Global North countries. This indicates that many of the target audiences in Global South countries may not find key T&G in their language or suitable for their context whatever their needs. This could hamper the implementation of T&G as the global distribution of biodiversity does not align with the regions where English is predominantly spoken (Amano & Berdejo-Espinola 2025). Language bias could lead to wasted resources if management actions are misinterpreted (Konno et al. 2020), therefore the use of agreed consistent terminology is necessary to promote more effective communication across T&G producers and users (Soto et al. 2024). Conservation evidence is predominantly available only in English, which was also the main language of submitted T&G documents (Figure 2). There is a need to address language barriers to harmonise and increase the accessibility of timely and relevant evidence for local end-users to bridge the gap between research and implementation (Amano & Berdejo-Espinola 2025).

T&G should be available in the language of the target audience, with UN official languages as the minimum standard for resources that aim to be globally relevant (English, French, Spanish, Russian, Chinese, and Arabic), and ideally in key regional languages, which TSCCs may be able to help with. There is a need to agree terminology across languages and update as necessary. Physical accessibility is key and would be enhanced significantly through open access and clear signposting to where end-users can find relevant T&G documents, most notably through CBD channels (Table 1).

4.2 Addressing clear need and ensuring relevancy

Respondents indicated there is no clear link between T&G that have been produced and a demonstrated demand by end-users, demonstrating a clear need to ensure existing T&G adequately addresses a gap (Table 1). The creation of knowledge and gathering of evidence are necessary but not sufficient for enacting evidence-informed decision-making (Kadykalo et al. 2021b). Evidence complacency (Sutherland & Wordley, 2017) highlights the need to draw from diverse knowledge systems as well as western-based science (Reyes-García & Benyei 2019; Wheeler & Root-Bernstein 2020; Wheeler et al. 2020). Only three documents were submitted by universities, all from the Global North, which raises questions about the role of academia and the existent mechanism in which this research, validation, consultation centers are participating in this global agenda.

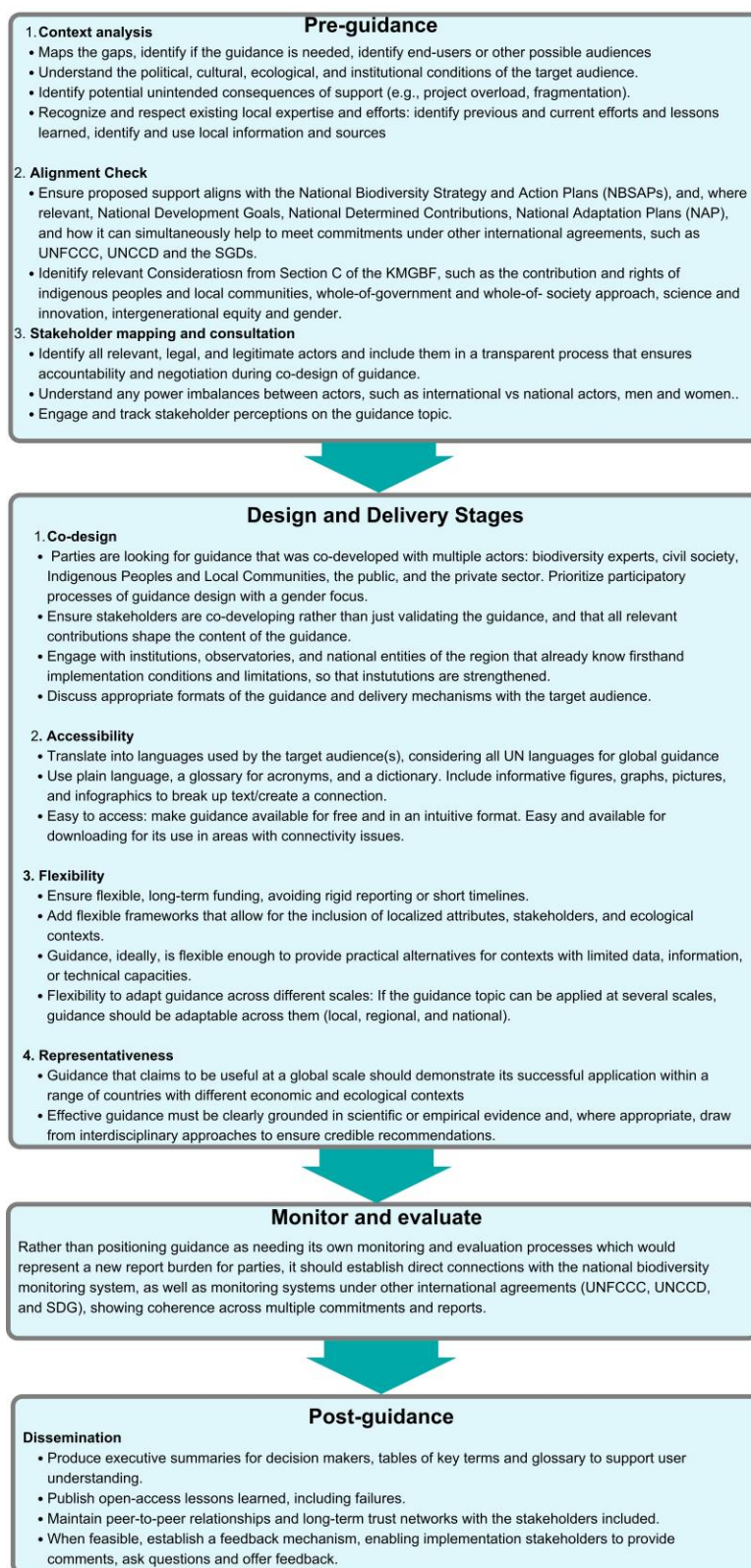


Figure 4. Summarized guidance principles adapted from “Principles of Good Guidance to Support the Implementation of the Kunming-Montreal Global Biodiversity Framework” (Supplementary information 2 below).

For Parties rich in biodiversity but constrained by human, technical, financial or institutional capacity, T&G are often developed without multi-stakeholder participation and so are often too generic and are misaligned with local contexts which results in T&G documents being underused, inequitable, and/or not clearly aligned with KMGBF targets. Where biodiversity that is the focus of action crosses boundaries, support from a range of stakeholders and Parties is necessary (Danielsen et al. 2023). Progress will be made when required resources are strategically evaluated, defined, identified, and budgeted for the national, regional and global contexts (Juffe-Bignoli et al. 2016).

Given the implementation needs and reporting burden on Parties that have signed a range of multilateral environmental agreements, effective T&G should clearly establish KMGBF- United Nations Framework Convention on Climate Change linkages wherever possible, addressing the climate-biodiversity nexus (i.e. water, food, energy, health). T&G documents should be produced in response to a clear demand with multistage input from stakeholders who are likely to use and implement the advice (Häkkinen et al. 2023). National guidance should clearly align with national instruments (Table 1), recognizing that T&G becomes ineffective if it does not align integrate with political priorities and policy frameworks. To be effective, T&G should provide support and strengthen established national planning processes and policy cycles. Where guidance is supporting countries to implement KMGBF Targets by 2030, there may need to be considerations to modify practices within their national planning processes and policy, to improve their KMGBF alignment and delivery. Further analysis is required to identify specific gaps that hamper implementation, not only in KMGBF targets (such as those receiving less attention, i.e. gender), but also in regional knowledge and contextual relevance. Accessible formatting such as executive summaries could help guide users to define relevancy by clearly highlighting which KMGBF targets are explicitly addressed.

4.3 Increasing implementation through co-development with end-users

Developing effective T&G requires a commitment to co-design and co-development through a participatory process that includes national and sub-national actors, relevant Non-Governmental Organisations and civil society among others. Co-development of projects with stakeholders (i.e. land managers, conservation practitioners, policy makers and researchers) can support the implementation of successful and effective conservation actions (Wauters & Mathijs 2013; O'Brien et al. 2021). This should extend to rightsholders; a group of often underrepresented voices that are key to successful implementation. Indigenous Peoples and Local Communities as well as other historically marginalised groups should be prioritised as essential partners in co-development rather than validators, ensuring their commitment, empowerment and full contributions are shaping content for inclusivity, cultural relevance and transformative stewardship, and explicit pathways to integrate their knowledge systems, standards and safeguard as envisaged in Section C of the KMGBF (CBD 2022). This includes, but is not limited to, following Free Prior and Informed Consent (FPIC) protocols, rights-based approaches, and ensuring women's equal rights to participation (ICCI 2025). Authentic inclusion of relevant actors should help produce balanced T&G and reduce disconnection from socioeconomic and cultural realities. However, there are regions where ethnicity is representative of social innovation mechanisms that should be in place to ensure appropriate ownership of biodiversity projects (Tikhonovskova et al. 2023).

T&G formats and delivery mechanisms are best determined collaboratively with target audiences where final products are accessible, culturally appropriate, and aligned with implementation capacities and modalities. Flexible frameworks and detailed case studies would enable the inclusion of local attributes, which are key to application and conservation in diverse contexts (Table 1). Tailoring good practice and best available evidence to each context-specific case is something that conservation could adopt from the field of medicine (Rycroft-Malone et al. 2004) or bioeconomy (Gómez-Bayona et al. 2025). The dynamic of regulatory framework development can be influenced by the regional governance context (Minogue, 2002) and conflicts which alter the T&G formats and delivery mechanisms (Young et al. 2010),

4.4 Focused technical capacity development

Capacity-building and development are integral to implementing the CBD and putting the KMGBF into action (Zhang et al. 2023). T&G production does not replace capacity building or other technical and scientific co-operation. T&G must be practical for very small teams managing multiple responsibilities, ensuring that limited capacity or data does not prevent meaningful progress toward biodiversity goals and targets. Focused training at all stages (Figure 5) is necessary to translate T&G to practice effectively. Supporting the capacity building and development required to locate and review T&G thoroughly could enable appropriate T&G materials to be accessed by relevant end-users more efficiently. The development of academic support offers a promising solution as well as aligned initiatives like the knowledge mobilisation network (Pédarros et al. 2025).

A key step toward the implementation for the KMGBF goals and targets is the creation of a global network of responsive regional and subregional TSCCs, which will have a role facilitating demand-driven, country-identified technical and scientific cooperation to support implementation of the KMGBF through approaches appropriate to national and regional context. Effective T&G will continue to be particularly relevant with the development of TSCCs, which aim to provide critical support to the CBD process yet must mobilise their own resources to do so, while responding to a broad range of capacity needs. There is often an emphasis on developing the capacity of developing countries and transition economies (Chandra and Idrisova, 2011). We reframe this in the context of T&G, to determine what capacity building and development is necessary so that where T&G producers are in the Global North they can best support those in the South and produce guidance that addresses known gaps and considers needs and contexts at local to national levels, flexible enough to deal with the lack of data and capacities. This could accelerate mainstreaming and resource mobilisation among capacity sharing (Mercer & Ovitz 2023; Lezak 2024). A two-way exchange between T&G producers and end-users can ensure T&G is understandable, accessible, and implemented effectively.

4.5 Defining effective guidance

We consider effective guidance to be a source of information that combines appropriate knowledge systems and adaptive mechanisms to inform context-specific implementation. This encompasses a multilevel, nonlinear approach moving beyond traditional definitions to add inclusivity and transdisciplinary framing. This is a different understanding of guidance from that described as “*an authoritative source of information and recommendations with the objective of informing the decisions and actions of practitioners*” (Downey et al. 2022). T&G should be considered more than a document or ‘one-off’ output, but rather as a dynamic and continuous process to enhance and harmonise capacity and capability to achieve an agreed outcome, which in this case is implementing the KMGBF.

5. Conclusion

A review of T&G submitted to the CBD Secretariat and input from SBSTTA focal points suggests that the relevance and utility of existing T&G resources offered to address KMGBF targets varies across users and implementation contexts. The production of T&G should be balanced against defined needs to increase likelihood of implementation. Accessibility challenges persist regarding format, language, and application to different ecological, cultural and capacity contexts. Accordingly, the production of T&G should be redefined using a more inclusive and transdisciplinary process to account for the societal and ecological contexts in which they are intended to be used. Doing so requires clear thought about how best to achieve improved biodiversity outcomes through all stages of T&G development, namely preparation, production, and dissemination. These steps should be inclusive, engaging with diverse rightsholders, stakeholders, and end-users. The principles outlined provide a structured pathway to develop practical, flexible and context-appropriate T&G that can be implemented by end-users to achieve quantifiable and long-lasting biological diversity outcomes. There is potential for the effective guidance principles to aid the work of TSCCs; however, doing so requires capacity development of T&G producers to co-develop relevant, inclusive and usable T&G accordingly.

Glossary of terms

ACTO – Amazon Cooperation Treaty Organization

CBD – Convention on Biological Diversity

EBCD – European Bureau for Conservation and Development

FAO – Food and Agriculture Organization of the United Nations

G BIKE – Genomic Biodiversity Knowledge for Resilient Ecosystems

GBF – Global Biodiversity Framework

GMBA – Global Mountain Biodiversity Assessment

IFAD – International Fund for Agricultural Development

IMO – International Maritime Organization

ISA – International Seabed Authority

IUCN – International Union for Conservation of Nature

IUCN FEG – Fisheries Expert Group (IUCN)

IUCN WCPA – World Commission on Protected Areas (IUCN)

KBA Partnership – Key Biodiversity Areas Partnership

KMGBF – Kunming-Montreal Global Biodiversity Framework

OA ICC – Ocean Acidification International Coordination Centre

OECD – Organisation for Economic Co-operation and Development

PAR – Platform for Agrobiodiversity Research

PEW Charitable Trusts – The Pew Charitable Trusts

SBSTTA – Subsidiary Body on Scientific, Technical and Technological Advice

SDG – Sustainable Development Goals

T&G – Tools and Guidance

TNC – The Nature Conservancy

TSCC – Technical and Scientific Cooperation Support Centre

UNDCO – United Nations Development Coordination Office
UNDP – United Nations Development Programme
UNEP – United Nations Environment Programme
UNEP MAP – United Nations Environment Programme Mediterranean Action Plan
UNEP WCMC – United Nations Environment Programme World Conservation Monitoring Centre
UNFCCC – United Nations Framework Convention on Climate Change
UNRFF – United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment
UNWTO – United Nations World Tourism Organization
WOAH – World Organisation for Animal Health
WOMEN CAUCUS – Women’s Caucus (CBD and related processes)
WWF – World Wide Fund for Nature

Acknowledgements

The authors would like to acknowledge those who participated in this work and provided valuable feedback in a variety of formats. We thank those in the CASCADE network for their support during the project. The project was funded by the Research England Development Fund.

Conflict of Interest

The authors declare no conflicts of interest in relation to this submission.

Supporting information (see below)

Supplementary information 1 – Survey questions distributed to SBSTAA Focal Points.

Supplementary information 2 – Complete document “*Principles of Good Guidance to Support the Implementation of the Kunming-Montreal Global Biodiversity Framework*”

References (40 max)

- Amano, T. & Berdejo-Espinola, V. (2025). Language barriers in conservation: consequences and solutions. *Trends in Ecology & Evolution*, 40, 273–285.
- CBD (2022) *Kunming-Montreal Global Biodiversity Framework*. CBD/COP/DEC/15/4. Secretariat of the Convention on Biological Diversity, Montréal, Canada.
- CBD (2024). Compilation of submissions of views and information on existing tools and guidance that can support the implementation of the Kunming-Montreal Global Biodiversity Framework. CBD/SBSTTA/26/INF/16/Rev.1. CBD Secretariat, Montreal. Available at <https://www.cbd.int/doc/c/48aa/33fd/ffa1dfb52de27f79425ceca3/sbstta-26-inf-16-rev1-en.pdf>.
- Chandra, A. & Idrisova, A. (2011). Convention on Biological Diversity: A review of national challenges and opportunities for implementation. *Biodivers Conserv*, 3295–3316.

Cook, C.N., Carter, R.W. (Bill), Fuller, R.A. & Hockings, M. (2012). Managers consider multiple lines of evidence important for biodiversity management decisions. *Journal of Environmental Management*, 113, 341–346.

Danielsen, F., Mendoza, M. M., Alviola, P., Balete, D. S., Enghoff, M., Poulsen, M. K., & Jensen, A. E. (2003). Biodiversity monitoring in developing countries: what are we trying to achieve?. *Oryx*, 37(4), 407-409.

Danielsen, F., Ali, N., Andrianandrasana, H.T., Baquero, A., Basilius, U., de Araujo Lima Constantino, P., Despot-Belmonte, K., Frederiksen, P.O., Isaac, M., Jakobsen, P., Klimmek, H., Mapendembe, A., Meng, H., Schmidt-Vogt, D., Sophat, S., Sulyandziga, R., Virnig, A.L.S., Zhang, D. & Burgess, N.D. (2024). Involving citizens in monitoring the Kunming–Montreal Global Biodiversity Framework. *Nat Sustain*, 7, 1730–1739.

Downey, H., Bretagnolle, V., Brick, C., Bulman, C.R., Cooke, S.J., Dean, M., Edmonds, B., Frick, W.F., Friedman, K., McNicol, C., Nichols, C., Herbert, S., O’Brien, D., Ockendon, N., Petrovan, S., Stroud, D., White, T.B., Worthington, T.A. & Sutherland, W.J. (2022). Principles for the production of evidence-based guidance for conservation actions. *Conservation Science and Practice*, 4, e12663.

Feng, X., Enquist, B.J., Park, D.S., Boyle, B., Breshears, D.D., Gallagher, R.V., et al. (2022) A review of the heterogeneous landscape of biodiversity databases: Opportunities and challenges for a synthesized biodiversity knowledge base. *Global Ecology and Biogeography*, 31, 1242–1260.

Gómez-Bayona, L., Valencia-Arias, A. & Bernal, O.V. (2025) Bioeconomy and social innovation to promote productive inclusion. In *Sustainable Bioeconomy Development in the Global South* (eds. Ogwu, M.C., Izah, S.C., Merritt, H., Delgado Wise, R. & Jintrawet, A.), pp. 319–341. Springer, Cham.

Häkkinen, H., Taylor, N.G., Pettorelli, N., Sutherland, W.J., Aldará, J., Anker-Nilssen, T., Aulert, C., van Bemmelen, R.S.A., Burnell, D., Cadiou, B., Campioni, L., Clark, B.L., Dehnhard, N., Dias, M.P., Enners, L., Furness, R.W., Hallgrímsson, G.P., Hammer, S., Hansen, E.S., Hario, M., Hurling, S., Jessopp, M., Kleinschmidt, B., Leivits, M., Maniszewska, K., Oppel, S., Payo-Payo, A., Piec, D., Ramos, J.A., Robin, F., Sørensen, I.H., Stipnice, A., Thompson, D.L., Vulcano, A. & Petrovan, S. (2023). Co-developing guidance for conservation: An example for seabirds in the North-East Atlantic in the face of climate change impacts. *Conservation Science and Practice*, 5, e12985.

ICCI. (2025). *Enabling Pathways for Rights-based Community-led Conservation - Rights + Resources - Supporting Forest Tenure, Policy, and Market Reforms*.

Juffe-Bignoli, D., Brooks, T.M., Butchart, S.H.M., Jenkins, R.B., Boe, K., Hoffmann, M., et al. (2016) Assessing the cost of global biodiversity and conservation knowledge. *PLoS ONE*, 11, e0160640.

Kadykalo, A.N., Cooke, S.J. & Young, N. (2021a). The role of western-based scientific, Indigenous and local knowledge in wildlife management and conservation. *People and Nature*, 3, 610–626.

Kadykalo, A.N., Cooke, S.J. & Young, N. (2021b). The role of western-based scientific, Indigenous and local knowledge in wildlife management and conservation. *People and Nature*, 3, 610–626.

Konno, K., Akasaka, M., Koshida, C., Katayama, N., Osada, N., Spake, R. & Amano, T. (2020). Ignoring non-English-language studies may bias ecological meta-analyses. *Ecology and Evolution*, 10, 6373–6384.

Lezak, S. (2024). From capacity building to capacity sharing. *Nat Sustain*, 7, 1–3.

Lindenmayer, D.B., Franklin, J.F. & Fischer, J. (2006). General management principles and a checklist of strategies to guide forest biodiversity conservation. *Biological Conservation*, 131, 433–445.

Mercer, L. & Ovitz, K. (2023). Shifting from capacity building to capacity sharing in Arctic research: Considering transformative shifts in collaborative research at the ArcticNet Annual Scientific Meeting. *The Polar Journal*, 13, 172–176.

Minogue, M. (2002) Governance-based analysis of regulation. *Annals of Public and Cooperative Economics*, 73, 649–666.

Neugarten, R. & Savy, C. (2012). A Global Review of National Guidance for High Conservation Value.

O'Brien, D., Hall, J.E., Miró, A., O'Brien, K. & Jehle, R. (2021). A co-development approach to conservation leads to informed habitat design and rapid establishment of amphibian communities. *Ecological Solutions and Evidence*, 2, e12038.

Pédarros, É., Milner-Gulland, E. J., Beale, C. M., Brown, R. J., Dias, A., Diesmos, A. C., Holmes, G., Nicholas, H. C., Nwosu, O., Pasha, M. K. S., Shirley, M., Stephens, P. A., & McGowan, P. J. K. (2025). Less. *EcoEvoRxiv*. <https://doi.org/10.32942/X2GS99>

Pimbert, M. (1997). Issues Emerging in Implementing the Convention on Biological Diversity. *Journal of International Development*, 9, 415–425.

Reyes-García, V. & Benyei, P. (2019). Indigenous knowledge for conservation. *Nat Sustain*, 2, 657–658.

Rycroft-Malone, J., Seers, K., Titchen, A., Harvey, G., Kitson, A. & McCormack, B. (2004). What counts as evidence in evidence-based practice? *Journal of Advanced Nursing*, 47, 81–90.

Salafsky, N., Boshoven, J., Burivalova, Z., Dubois, N.S., Gomez, A., Johnson, A., Lee, A., Margoluis, R., Morrison, J., Muir, M., Pratt, S.C., Pullin, A.S., Salzer, D., Stewart, A., Sutherland, W.J. & Wordley, C.F.R. (2019). Defining and using evidence in conservation practice. *Conservation Science and Practice*, 1, e27.

Soto, I., Balzani, P., Carneiro, L., Cuthbert, R.N., Macêdo, R., Serhan Tarkan, A., Ahmed, D.A., Bang, A., Bacela-Spychalska, K., Bailey, S.A., Baudry, T., Ballesteros-Mejia, L., Bortolus, A., Briski, E., Britton, J.R., Buřič, M., Camacho-Cervantes, M., Cano-Barbacil, C., Copilaş-Ciocianu, D., Coughlan, N.E., Courtois, P., Csabai, Z., Dalu, T., De Santis, V., Dickey, J.W.E., Dimarco, R.D., Falk-Andersson, J., Fernandez, R.D., Florencio, M., Franco, A.C.S., García-Berthou, E., Giannetto, D., Glavendekic, M.M., Grabowski, M., Heringer, G., Herrera, I., Huang, W., Kamelamela, K.L., Kirichenko, N.I., Kouba, A., Kourantidou, M., Kurtul, I., Laufer, G., Lipták, B., Liu, C., López-López, E., Lozano, V., Mammola, S., Marchini, A., Meshkova, V., Milardi, M., Musolin, D.L., Nuñez, M.A., Oficialdegui, F.J., Patoka, J., Pattison, Z., Pincheira-Donoso, D., Piria, M., Probert, A.F., Rasmussen, J.J., Renault, D., Ribeiro, F., Rilov, G., Robinson, T.B., Sanchez, A.E., Schwindt, E., South, J., Stoett, P., Verreycken, H., Vilizzi, L., Wang, Y.-J., Watari, Y., Wehi, P.M., Weiperth, A., Wiberg-Larsen, P., Yapıcı, S., Yoğurtçuoğlu, B., Zenni, R.D., Galil, B.S., Dick, J.T.A., Russell, J.C., Ricciardi, A., Simberloff, D., Bradshaw, C.J.A. & Haubrock, P.J. (2024). Taming the terminological tempest in invasion science. *Biol Rev Camb Philos Soc*, 99, 1357–1390.

Sutherland, W. & Wordley, C. (2017). Evidence complacency hampers conservation. *Nature Ecology & Evolution*, 1215–1216.

Trombulak, S.C., Omland, K.S., Robinson, J.A., Lusk, J.J., Fleischner, T.L., Brown, G. & Domroese, M. (2004). Principles of Conservation Biology: Recommended Guidelines for Conservation Literacy from

the Education Committee of the Society for Conservation Biology. *Conservation Biology*, 18, 1180–1190.

Walsh, J.C., Dicks, L.V. & Sutherland, W.J. (2015). The effect of scientific evidence on conservation practitioners' management decisions. *Conservation Biology*, 29, 88–98.

Wauters, E. & Mathijs, E. (2013). An Investigation into the Socio-Psychological Determinants of Farmers' Conservation Decisions: Method and Implications for Policy, Extension and Research. *Journal of Agricultural Education and Extension*, 19, 53–72.

Wheeler, H.C., Danielsen, F., Fidel, M., Hausner, V., Horstkotte, T., Johnson, N., Lee, O., Mukherjee, N., Amos, A., Ashthorn, H., Ballari, Ø., Behe, C., Breton-Honeyman, K., Retter, G.-B., Buschman, V., Jakobsen, P., Johnson, F., Lyberth, B., Parrott, J.A., Pogodaev, M., Sulyandziga, R. & Vronski, N. (2020). The need for transformative changes in the use of Indigenous knowledge along with science for environmental decision-making in the Arctic. *People and Nature*, 2, 544–556.

Wheeler, H.C. & Root-Bernstein, M. (2020). Informing decision-making with Indigenous and local knowledge and science. *Journal of Applied Ecology*, 57, 1634–1643.

Wolff, M., Cockburn, J., De Wet, C., Carlos Bezerra, J., Weaver, M., Finca, A., De Vos, A., Ralekhetla, M., Libala, N., Mkabile, Q., Odume, O. & Palmer, C. (2019). Exploring and expanding transdisciplinary research for sustainable and just natural resource management. *Ecology and Society*, 24.

Young, J. C., Marzano, M., White, R. M., McCracken, D. I., Redpath, S. M., Carss, D. N., Quine, C. P., & Watt, A. D. (2010). The emergence of biodiversity conflicts from biodiversity impacts: characteristics and management strategies. *Biodiversity and Conservation*, 19(14), 3973–3990.

Zhang, D., Wang, L., Lu, X., Wang, C. & Liu, Y. (2023). Convention on Biological Diversity and its protocols: Negotiation, challenges and recommendations on the “capacity-building and development.” *Biodiversity Science*, 31, 22588.

Zurell, D., Bocedi, G., Velazco, S.J.E., Gonzalez, A., Purvis, A., Wintle, B., Merow, C., Lundquist, C., Guillera-Arroita, G., Settele, J., Serra-Diaz, J.M., Cabral, J.S., Travis, J.M.J., Schifferle, K., Buckley, L., Briscoe, N.J., Isaac, N.J.B., Peres-Neto, P.R., Keuth, R., Gascoigne, S.J.L., Ferrier, S. & Urban, M.C. (2025). Predicting the way forward for the Global Biodiversity Framework. *Proceedings of the National Academy of Sciences*, 122, e2501695122.

Supplementary information 1- Survey questions distributed to SBSTAA Focal Points

- Party of representation
- What is your role?
- How often do you search for Tools and Guidance relevant to KMGBF implementation?
 - Why?
- Are your needs represented in the Tools and Guidance available?
- If you do use Tools and Guidance for KMGBF implementation, where did you learn about them?
- Please give examples of Tools and Guidance relevant to KMGBF implementation that you have used in the last two years (Format: Tool name + website)
- Do you share Tools and Guidance with relevant individuals and organisations in your country?
 - Please give more details (name and link):
- How easy is it to access Tools and Guidance?
- Are the format and the presentation of Tools and Guidance clear?
- How accessible and understandable is the language?
- What format would be most accessible for you?
- What would make Tools and Guidance more helpful in implementing the KMGBF in your country?
- Were you (or your colleagues) consulted and/or involved in the creation of any existing Tools and Guidance?
 - Please specify which ones and how you were involved

Principles of Good Guidance to Support the Implementation of the Kunming-Montréal Global Biodiversity Framework

These principles were co-developed through collaboration with end-users, public officers from Developing countries, TSC Support Centres, decision-makers, and implementation officers working with the KMGBF. They are presented as a practical checklist (rather than an extensive step-by-step guide) for developing effective and context-sensitive guidance.

INTRODUCTION

These guidelines have been prepared in response to the growing need for relevant, representative, and, where possible, case-based guidance to support implementation of the [Kunming-Montreal Global Biodiversity Framework \(KMGBF\)](#) of the Convention on Biological Diversity (CBD). The KMGBF was adopted at the 15th Conference of the Parties (CoP) to CBD in December 2022 and comprises four goals and 23 targets that represent a very ambitious agenda with the aim of a “world living in harmony with nature by 2050”¹. The 23 targets describe a wide range of actions to be undertaken, and so there is a pressing need for Parties, and other actors, to be supported as they develop and implement plans to implement them. This need is particularly severe in countries that are rich in biodiversity but with significant capacity constraints, as they are key to achieving global biodiversity targets. To date, however, guidance intended to support the pursuit of global biodiversity objectives and now designed to support KMGBF implementation efforts often does not meet the needs of those acting where the need for guidance is greatest. For example, guidance is often considered to be too generic, misaligned with local contexts, and made without multi-stakeholder participation.

This document proposes principles to guide the development of guidance that is intended to help actors implement the KMGBF by co-designing and producing guidance that is appropriate for the intended context, engages the target audience, and supports the delivery of agreed global biodiversity

¹ <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>

outcomes. It may be relevant for Parties, donors, intergovernmental and multilateral institutions, national and international NGOs, and universities and research institutions. Supporting KMGBF implementation is a long-term, context-sensitive process that requires rigour, inclusion, and adaptability. These principles were co-developed with end-users, including public officers from developing countries, colleagues from CBD regional and sub-regional Technical and Scientific Co-operation Centres (TSCCs), decision-makers, and implementation officers working with international agreements, and encompass all the key elements that these 'end-users' identified as essential when seeking and using guidance. The identification of key issues and the development of the guidelines is described here [[add link to pre-print/manuscript](#)].

These principles aim to enhance the implementation of the CBD's knowledge management strategy and the Long-term Strategic Framework for Capacity Building and Development (CBD/COP/15/8) in support of global KMGBF implementation (CBD/COP/15/4). Recognising that while a guidance document or tool does not replace capacity building or other resource needs, implementation can be significantly strengthened by the provision of guidance that offers evidence-informed assessments of effective practices, strategies, lessons learned and processes related to the KMGBF goals and targets and cross-cutting considerations (see CBD/COP/DEC/16/9²).

GLOSSARY

CBD: Convention on Biological Diversity

KMGBF: Kunming-Montréal Global Biodiversity Framework

MEAs: Multilateral Environmental Agreements

NBSAP: National Biodiversity Strategies and Action Plans, the principal instruments for implementing the CBD at the national level

NGO: Non-governmental Organisation

SDGs: Sustainable Development Goals

T&G: Tools and Guidance

TSCC: Regional and subregional Technical and Scientific Cooperation Centres

² <https://www.cbd.int/doc/decisions/cop-16/cop-16-dec-09-en.pdf>

KM: Knowledge Management, which is processes, strategies, and practices through which biodiversity-related data, information, and knowledge are generated and collected; organized, curated, stored, and shared; and used or applied to achieve biodiversity-related objectives and outcomes.³

UNCCD: United Nations Convention to Combat Desertification

Rio Convention: three major international treaties that were adopted in Rio de Janeiro 1992, CBD, UNFCCC and UNCCD.

UNFCCC: United Nations Framework Convention on Climate Change.

1 CONTEXT OF THE GUIDANCE

The purpose of guidance intended to enhance implementation of the KMGBF, and the context in which it will be used, should be carefully considered at the outset. Given the range of relevant materials already available (e.g. Annex in CBD/SBSTTA/26/INF/16/Rev.1³) it seems appropriate that new guidance materials should go beyond traditional information notes, technical manuals and sources to provide practical, context-specific advice on actions or steps that are targeted specifically at implementation of particular aspects of the KMGBF, or indeed other biodiversity goals and targets. Such guidance should be suitable for end-users to adapt and apply them so that they can implement appropriate activities that will lead to impactful and well-quantified outcomes. It is important to bear in mind at the outset that Parties to the CBD vary enormously in size and, therefore, capacity (see Table 1 in Jarvis et al. 2025 preprint⁴). For example, there are 39 Parties to the CBD that have a human population of less than 1 million.

Context of guidance may include:

- Provide orientation that aligns and supports national priorities and policy cycles with KMGBF implementation.
- Respond to clearly identified user demand.
- Ensure there is regional representation of case studies or examples as evidence that the guidance is flexible across multiple contexts.
- Include a diverse range of stakeholders in the formulation.

³ <https://www.cbd.int/doc/c/48aa/33fd/ffa1dfb52de27f79425ceca3/sbstta-26-inf-16-rev1-en.pdf>

⁴ <https://ecoevorxiv.org/repository/view/10072/>

- Produce guidance that includes and values traditional knowledge and local experience.

2. MULTIDISCIPLINARY AND MULTILEVEL APPROACH

The development of guidance resources should be inclusive with all the possible stakeholders from the context where the guidance will be applied. This may include governmental officials (national, regional and/or local), Indigenous Peoples and local communities, civil society, and representatives from both the private and public sectors).

Guidance is likely to be more appropriate for its intended end-users and context if it has been developed through participatory approaches, supported by flexible frameworks. As many guidance documents contain case studies that are intended to be examples of effective use that others can follow, careful thought should be given to their selection to ensure that they are meaningful in the countries where the guidance is intended to be used. Examples from places that are relatively rich in capacity and resources are unlikely to be helpful in countries that do not have the same capacity and resources. If guidance is intended to be global in scope, it may be helpful to provide options for contexts where there are information gaps, lack of data, or limited capacities, offering a range of possible actions to advance towards the KMGBF targets.

3. PRE-GUIDANCE ASSESSMENT

Understanding gaps. It helps to ensure that the guidance is needed, which means there is evidence of demand from end-users, through NBSAPs, TSCCs or other CBD mechanisms or other evidence of the lack of tools or information to translate global objectives into context-appropriate, actionable plans. Also, it can be useful to check if there is guidance has been developed, but it does not meet needs or if it does addresses the gap being considered, but is in accessible to end-users. This check should avoid duplicating guidance that already exists and ensuring that resources devoted to guidance are used as efficiently and effectively as possible, both those developing the guidance and those who would use the guidance.

Audience. Identifying the target audience as well as other possible audiences will ensure that the guidance both reaches those can use it to and allow

important end-users and other stakeholders to be involved as appropriate. Developing an initial map of stakeholders and describing their roles within the intended guidance process will help make clear who the key audiences are.

Context. When developing guidance for specific countries, actors or issues, the background and contextual conditions that will influence how the guidance is received, interpreted, and implemented should be assessed thoroughly. This can help avoid potential negative environmental, social and economic impacts of implementing poorly conceived guidance. Examples of important contexts include avoiding fragmentation of responses, overload of information that may be 'nice to have', but which is not key for end-users focussed on implementation, and guidance that does not take into account customs, beliefs and habits of the end-user, and other stakeholders.

Existing expertise and activities. Guidance is likely to be more effective if it recognises and respects existing local expertise and ongoing efforts by identifying and acknowledging previous and current initiatives along with their lessons learned. It is important that new guidance builds upon, rather than duplicates, existing knowledge. This approach requires taking into account local information and sources, and when quality resources already address specific topics, the guidance should direct users to those existing materials rather than creating superfluous content.

Key questions include

- Is there demand for this guidance? What scientific or empirical evidence demonstrates that this guidance is necessary and will address a genuine gap or need?
- Who will use the guidance? Are their exact needs understood?
- Does guidance meet an implementation need identified in the NBSAP of the target audience country?
- Are there others providing guidance on either: a) the same or a similar issue; or b) the same or a related audience? If there are, can efforts be co-ordinated?
- Who else might be affected by or interested in this guidance? What are the characteristics of these key stakeholders?
- What are the dominant cultural values and worldviews regarding nature and biodiversity in this context? How do local communities or indigenous

people traditionally interact with and manage natural resources related to the target to address?

- Are there cultural practices, beliefs, or taboos that might influence how guidance is received or implemented?
- How do private sector, public sectors interact with and manage natural resources related to the target to address?
- Are there existing projects or initiatives that might compete for the same resources or attention during either development of the guidance or its use?
- What resource demands (financial, human, technical) would be created by using the guidance, and are these realistic in all contexts in which the guidance is intended to be used?
- What existing skills, knowledge, systems, or organizational capacity can this guidance build upon rather than duplicate?
- What existing research, data, assessments, or documentation can serve as a foundation for developing this guidance?

4. ALIGNMENT WITH KMGBF IMPLEMENTATION

Effective guidance should ensure that proposed support aligns as far as possible with National Biodiversity Strategy and Action Plans (NBSAPs) or other documents or clearly expressed needs for implementing the KMGBF. Without this alignment guidance may well become ineffective if it lacks coherence with national instruments and fails to integrate with current political priorities and policy frameworks.

Implementation of the KMGBF should take into account the Considerations listed in the Section C of the Framework. This Section states that the KMGBF should be 'understood, implemented, evaluated, reported and reviewed consistent with' 18 Considerations⁵. Some of these seem likely to be more appropriate than others in many contexts, such as

- a) IPLCs;
- b) Diverse value systems; and
- c) Science and innovation to include traditional knowledge

⁵ See Section C on page 5 of <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf>

Guidance should support and strengthen established national planning processes, rather than competing with them, respecting national circumstances, priorities and socioeconomic conditions. This means that the development of guidance should not propose issues to consider, or timescales that conflict with domestic priorities and implementation timeframes.

Wherever appropriate and possible it will be very helpful if guidance can support countries meet their commitments under multiple international agreements simultaneously to ease implementation and reporting burdens. In addition to the CBD's KMGBF, this may include other biodiversity-related MEAs and the other Rio Conventions (United Nations Framework Convention on Climate Change (UNFCCC) and United Nations Convention to Combat Desertification (UNCCD)). There may be other multilateral agreements and international processes that should be considered in particular contexts. In these cases, it may be helpful to map guidance onto the relevant policy processes, instruments, goals or targets that the guidance is intended to inform. Meeting this need may require providing navigation tools that help Parties align existing policy instruments (such as NBSAPs) with the KMGBF and its goals and targets, identify gaps, and enhance national implementation in ways that support synergies across these international commitments.

Key questions:

- How does the proposed guidance align with the country's current NBSAP and, where appropriate, any other agreed KMGBF implementation needs. Can it also support the implementation of SDG or other priorities and implementation strategies?
- Which national policies, laws, or regulations provide a foundation for implementing this guidance?
- Is there a benefit in aligning guidance that is intended to facilitate KMGBF implementation with other policies, plans or commitments, including obligations under UNFCCC, UNCCD or SDGs?

C. STAKEHOLDER MAPPING AND CONSULTATION

Identifying relevant actors. Effective stakeholder engagement requires identifying all relevant actors, including ensuring that voices that are often

underrepresented but which are key for the guidance to be implemented effectively are heard. Where appropriate, free, prior, and informed consent principles (FPIC) should be used, particularly when working with Indigenous Peoples and Local Communities (IPLCs) who may be particularly affected by implementation of guidance. The contribution and rights of IPLCs, and the importance of taking into account actors whose engagement is necessary for delivering the KMGBF are made clear in Section C ('Considerations for the implementation of the Kunming-Montreal Global Biodiversity Framework') of the KMGBF.

Mapping perceptions. End-user perceptions are important in driving action, and it is therefore helpful to acknowledge that at least some stakeholders may be influenced by beliefs and perceptions as well as, or perhaps instead of, technical, scientific or empirical evidence when taking action affecting biodiversity. This means that it is useful to understand these perceptions, where appropriate and to align community concerns with scientifically gathered data so that guidance takes into account these diverse perspectives while still advancing toward the intended objectives. This approach ensures that guidance resonates with stakeholders' lived experiences and values, creating a pathway for both acceptance and progress toward implementation goals. As noted above, the 'Considerations' in Section C of the KMGBF are relevant here.

Understanding who are the relevant actors and what their perceptions are at the beginning of the guidance development process should help avoid conflicts, the proposal of inappropriate action, and ensure that guidance is effective in the ecological, cultural and governance context where it is intended to be relevant. In some contexts, process and outcomes are in permanent negotiation between different stakeholders.

Key questions:

- Which actors will be affected by the implementation of the guidance being produced and to what extent should they be directly involved in designing the guidance to ensure its efficient and effective delivery?
- Is there any existing information of what people think about the topic the guidance is intended to address? This may include findings from

surveys or analysis of, for example, public, private, local or sectorial perceptions.

- Who else will be significantly affected by or have a vested interest in this guidance?
- Is it beneficial to actively seek out voices from indigenous peoples and local communities, women, youth, or other marginalized groups?
- Which government agencies, NGOs, academic institutions, or other organizations currently operate in this field?
- Which groups or individuals influence your target users and could affect adoption of the guidance?
- Who controls the funding, approval processes, or other critical resources needed for success?
- Who are the key local experts and knowledge holders that hold information that will be important in ensuring that the guidance is comprehensive and relevant to its intended context(s)?

4. DESIGN AND DEVELOPMENT OF THE GUIDANCE

When developing guidance, the following four issues are relevant:

A. CO-DESIGN

Stakeholder involvement. It is important to maintain the focus on helping users address biodiversity needs within the socioeconomic and cultural contexts that the guidance will be used in. Therefore, the development of effective guidance benefits from co-design through a participatory process that includes relevant actors, which may include national and sub-national actors, IPLCs, and the private sector, amongst others. It is important that the process is transparent, accountable, has legitimacy, and seeks the appropriate and genuine inclusion of stakeholders right from the start. Consideration should be given to which actors will lead monitoring efforts and how progress will be measured so as to promote clear accountability structures.

Engaging with local institutions, observatories, and national entities of the region that have firsthand knowledge of implementation conditions and

limitations is important to ensure that guidance is realistic and applicable in the local context. Promoting such a dialogue of knowledge and experiences may also help develop capacity and strengthen relationships and institutions. The format and style of the guidance being produced, and its delivery mechanism(s), should be discussed and determined collaboratively with target audiences, ensuring that final products are accessible, culturally appropriate, and aligned with user preferences and implementation capacities.

Key questions:

- What specific mechanisms will ensure genuine inclusion of relevant actors, including typically underrepresented groups, such as women, IPLCs, where appropriate, in our guidance development process?
- What methodologies are we using to guarantee that the participatory process shapes the guidance and not just validates pre-elaborated outcomes?
- At what stage in the process are we engaging target audiences in format discussions, and is it early enough to be meaningful?
- What methodologies will be used to actively include women in the guidance development
- Is this guidance sensitive to power imbalances?
- What mechanisms are we using to capture and integrate local knowledge and experiences, including the traditional knowledge of indigenous peoples and local communities, with their free, prior and informed consent, into the guidance?
- How are we balancing external technical knowledge with local experiential knowledge
- What communication styles and approaches are most effective in this cultural context?
- What feedback mechanisms are in place to adjust formats based on user experience?

B. ACCESSIBILITY

It is important that guidance is accessible to the target audiences, both in the way it is written and presented and physically so that it can be located easily and used.

The content should use plain language and informative graphics, photographs, figures, tables or flowcharts where appropriate and considering the range of target audiences. As well as providing information themselves, these visualisations help to break up text. It is often helpful to include a glossary and list of acronyms, and to avoid technical jargon and complex terminology that may create additional and unintended barriers to understanding and using the guidance.

It is important to include an Executive Summary for readers who have very limited time to assess if the full document is likely to be relevant and helpful for their context. A structure and digital format that allows easy searching of the document for quick navigation and information retrieval will enhance uptake.

Guidance should be available in the language of the target audience, with UN official languages as the minimum standard for resources that aim to be globally relevant (English, French, Spanish, Russian, Chinese, and Arabic).

Free guidance **access** without complicated registrations, usage restrictions, or expensive licenses that create barriers to use is key. It is ideal to create guidance files that are **freely available and easy to download**, store, and use on basic computers or mobile devices, even in areas with poor internet connectivity or older technology. Guidance should, where possible, be tagged and mapped to increase its findability, accessibility, interoperability and reuse.

Key questions:

- Is there a good understanding of what vocabulary and style of writing is needed for the target audience, such as a plain or using scientific terminology and which languages (UN and or other languages)?
- What technical terms are necessary, and should be provided with clear definitions in a glossary?
- Can text be replaced or complemented with informative images, charts, or infographics to communicate important messages effectively?
- Do all stakeholders have access to information in appropriate languages and formats?

- Does the Executive Summary clearly state what issue(s) the guidance addresses and how the guidance will help?
- Are there any barriers to access, such as a requirement for payment, subscription or registration, or large size that will be difficult to access in areas of poor internet connectivity?
- Can the guidance be used offline once downloaded?
- What happens if users do not have the latest software or operating systems?

C. FLEXIBILITY

In the context of KMGBF, guidance provides flexible frameworks **capable of incorporating local attributes**. These attributes may include:

- ecological settings (e.g. ecosystems and habitat, notable species and particular threats);
- social and cultural contexts (social systems, culturally significant species, ecosystem services essential to IPLCs such as medicinal plants, traditional food sources);
- governance (e.g. legislation and policies); and
- capacity and capability to put the guidance into practice.

Such flexibility is key to recognizing and conserving diverse ecological settings across different countries. Since there may be multiple pathways to achieve KMGBF targets, guidance that acknowledges and integrates local knowledge systems and governance structures, and existing capacity not only respects local realities but also enhances the long-term sustainability of conservation efforts.

Many contexts where guidance is needed to support the implementation of the KMGBF will have much less information than desired. There will also often be capacity constraints, sometimes significant. Guidance will have much more impact if it is flexible to accommodate a range of knowledge and capacities, rather than being developed for high levels of both. Providing practical options for dealing with a lack of information or uncertainty and limited capacity and capability will increase the contexts in which the guidance can be used.

This acknowledges that many Parties face significant implementation barriers due to resource, capacity, or technology constraints. Clear guidance takes users from identifying capacity gaps to finding feasible alternative solutions. The guidance should be practical for small teams managing multiple responsibilities, which is the case for Environment Departments in many small Parties. The emphasis should be on ways to maximise the impact of the guidance and achieving ambitious outcomes, even where capacity is limited.

It may be relevant to consider the scalability of the guidance being developed: does the issue need to be addressed across scale (e.g. local, regional and national) and can a single guidance be applied at these scales? If so, it may be helpful to provide specific and clear examples that demonstrate the different possible approaches and outcomes for implementation at each level.

Key questions:

- How will key biodiversity outcomes, ecological settings, local knowledge and practices, and governance be identified and incorporated?
- Is there sufficient understanding to the capacity needed to implement the guidance
- How flexible is the framework? Can it adapt to very different ecological and cultural contexts while maintaining its effectiveness in addressing the issue that is the focus of the guidance?
- What are the minimum viable steps users can take to make a positive difference if full implementation is not feasible?
- Which stakeholder groups might be disproportionately affected by implementation requirements?

Does the issue need to be addressed at more than one ecological or governance scale? If so, how do the approaches and outcomes differ between scales, and have differences been adequately documented? Do appropriate examples and case studies exist for the settings and scales covered?

D. REPRESENTATIVENESS

Guidance that seeks to be useful at a global scale should demonstrate its application in a range of countries across a range of economic and ecological contexts. Guidance is more likely to be helpful and to be used if it includes

concrete examples of real-world applications, demonstrating translation into practice in the contexts in which it is intended to be used. This involves showing how approaches have been implemented successfully in countries facing comparable challenges, rather than relying solely on theoretical concepts that may be difficult to translate into practice. It also involves ensuring that the implementation context is understood fully in the places where it is designed to be used.

Effective guidance should be grounded in scientific or empirical evidence and, where appropriate, draw from interdisciplinary approaches to ensure credible recommendations. The content should be unbiased and balanced regionally, serving as a legitimate resource rather than a lobbying tool that advances particular interests.

Key questions:

- Whom does this guidance benefit?
- If the guidance is intended to be global, are case studies from representative contexts, such as across UN regions (e.g. Africa, Asia-Pacific, Latin America and the Caribbean) and Parties of varying size and economic development?
- Are adaptations from the context in which the guidance was developed necessary to fit different contexts that the guidance is now intended to suit?
- How will any necessary adaptations be made so that they are appropriate for target countries or regions?
- Are there important differences in the implementation approaches in different target countries or regions?
- Is the expected outcome of the application of the guidance in different contexts made clear?

Is it plausible that there may be unexpected outcomes of the guidance being implemented in contexts other than that in which it was developed? These could be practical or they could be social, such as leading to a loss of confidence in guidance.

5. DISSEMINATION

The dissemination strategy should flow logically from the preceding sections, so that it is published on intuitive, easy to find and freely accessible web pages with offline versions available for use in low-connectivity areas. It should be developed with stakeholders engaged in its production.

An Executive Summary (maximum 2 pages) should accompany the full guidance, including a glossary of key terms important for an high level understanding of the purpose of the guidance and how it supports implementation of the KMGBF.

Where feasible, institutions creating guidance should consider establishing a feedback mechanism so that those implementing the guidance are able to provide comments, ask questions, and offer feedback. This will help serve as a valuable tool for measuring how effectively the guidance supports real-world implementation.

5. MONITOR AND EVALUATE

Monitoring. As guidance is being implemented it is useful to gather information on what works and what does not, or would benefit from modification in particular ecological, social and governance contexts. This need not be onerous, given existing reporting requirements, but is important in enhancing the useful of the guidance is different settings. Developing new case studies as the guidance is used will be informative in demonstrating its utility in new contexts.

Evaluation. It would be useful to build a picture, over time, of what guidance has been useful and why. The immediate, need, however, is to develop and use guidance that is designed to support implementation of the KMGBF and not add to reporting burden for Parties. It would be most efficient to record where guidance has been useful in CBD NBSAPs and, where relevant, in delivering national biodiversity targets and commitments made under other international agreements (e.g. UNFCCC, UNCCD, and SGD).

Key questions:

- What alternative monitoring approaches does the guidance offer for countries with different data collection capacities or preferences?

- What connections can we establish between our guidance monitoring, monitoring the purpose of the CBD, and countries' existing UNFCCC, UNCCD, and SDG reporting requirements?
- How does our monitoring framework explicitly show how guidance implementation contributes to multiple international agreement objectives simultaneously?