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Overcoming constructive ambiguity? Negotiating the
monitoring framework of the Kunming-Montreal Global
Biodiversity Framework (GBF)

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Abstract (EN)

Political strategies under the Convention on Biological Diversity (CBD) mechanism suffer from a compliance deficit by states. Although not legally binding, they form the basis of biodiversity conservation efforts and continued non-compliance goes against the *raison d'être* of the Convention.

Ahead of the upcoming global review of its newest political strategy, the Kunming-Montreal Biodiversity framework, repeated issues are brought up in negotiations that seemingly remain unsolved. A theoretical explanation brought forward is that states do not want to aim to solve heterogeneous understandings of what is needed for implementation on the global level, assuming a state of constructive ambiguity in which the CBD mechanism remains functional but implementation on the national level remains low.

Member states of the CBD often lack the financial resources, and technical know-how to conduct implementation on the national level, which have been identified as reasons for past failures in implementation. Instead of addressing the core issues, actors focused on the framework architecture, merging discussions about technical readiness and development of methodologies into formal implementations procedure. This process is reflected upon critically within this research, and negotiations data from the GBF analysed to shed light on how heterogeneity in opinion is transposed into consensus by the involved actors, and what dangers this poses to the future of biodiversity conservation.

Abstract (DE)

Das völkerrechtliche Übereinkommen über die biologische Vielfalt (CBD) leidet unter einer mangelnden Umsetzung durch die Vertragsstaaten. Die politischen Ziele der letzten Jahrzehnte werden größtenteils nicht eingehalten. Obwohl sie nicht rechtsverbindlich sind, bilden sie dennoch die Grundlage für den Erhalt der biologischen Vielfalt, und eine dauerhafte Nichteinhaltung dieser Ziele steht im Widerspruch zur *raison d'être* des Übereinkommens.

Die neueste politische Strategie im Rahmen der CBD, das *Kunming-Montreal Global Biodiversity Framework (GBF)*, wird alsbald einer Überprüfung unterzogen werden. Im Vorfeld dieser Überprüfung werden wiederholt Probleme angesprochen, die unbefriedigend gelöst werden oder gar ungelöst bleiben. Die hier vorgebrachte theoretische Erklärung lautet, dass die Staaten nicht darauf abzielen, ihre unterschiedlichen Auffassungen zu klären, was für die erfolgreiche Umsetzung politischer Ziele notwendig wäre. Stattdessen ist von einem Zustand konstruktiver Mehrdeutigkeit (*constructive ambiguity*) auszugehen. In diesem Zustand bleibt der zwischenstaatliche CBD-Mechanismus trotz bestehender Meinungsdivergenzen funktionsfähig, die politische Umsetzung auf nationaler Ebene bleibt jedoch gering.

Den CBD-Mitgliedstaaten fehlen oft die finanziellen Ressourcen und das technische Know-how, um die Umsetzung auf nationaler Ebene durchzuführen, was als Grund für frühere Misserfolge bei der Umsetzung identifiziert wurde. Anstatt diese Kernfragen und Probleme direkt anzugehen, konzentrieren sich die Akteure auf die bürokratische Rahmenstruktur der politischen Ziele. Dabei verschmelzen Diskussionen über technische Kapazität und Methodiken mit formalen Umsetzungsverfahren. Genau dieser Prozess wird im Rahmen dieser Arbeit unter dem Blickwinkel der konstruktiven Mehrdeutigkeit reflektiert, wobei Daten aus den Verhandlungen rund um den GBF analysiert werden. Dabei wird versucht zu zeigen, wie Meinungsverschiedenheiten der beteiligten Akteure in Konsens umgewandelt werden und welche Gefahren diese Strategie für die Zukunft des Artenschutzes mit sich bringt.

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It has been an invaluable experience to begin this process coming from a more sceptical, practice-oriented experience focused on operationalisation and day-to-day workings within an international environment, to then trying to examine its challenges and its possibilities in more detail.

In a world which may sometimes seem performative and unjust, I would also like to express gratitude to all those directly and indirectly fighting biodiversity loss around the world.

“Only if we understand, can we care. Only if we care, we will help. Only if we help, we shall be saved.”¹

Dr. Jane Goodall, DBE

¹ From the book “Jane Goodall: 40 Years at Gombe”, 1999,
<https://www.goodreads.com/work/quotes/413618-jane-goodall-40-years-at-gombe>; in German:
https://janegoodall.at/wp-content/uploads/2025/02/Zitate-Dr.-Jane-Goodall_2023.pdf.

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List of abbreviations

ABS	Access and Benefit-Sharing
AHTEG	Ad Hoc Technical Expert Group
AT(s)	Aichi Target / Aichi Targets
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of the Parties
DSI	Digital Sequence Information
ed.	Edition
Eds.	Editors
e.g.	exempli gratia
FAO	Food and Agriculture Organisation
GBO	Global Biodiversity Outlook (by the CBD Secretariat)
GBF	Kunming-Montreal Global Biodiversity Framework
i.a.	inter alia
IGO	Intergovernmental organisation
IO	International organisation
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPLC	Indigenous Peoples and Local Communities
IPPC	International Plant Protection Convention
IR	International relations
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
MEA	Multilateral environmental agreement

NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-governmental organisation
NR	National Report (under Article 26 CBD)
NRL	EU Nature Restoration Regulation/Nature Restoration Law
OEWG	Open-Ended Working Group
PA	Protected Area
Ramsar Convention	Convention on Wetlands of International Importance especially as Waterfowl Habitat
RoP	Rules of Procedure
RQ	Research Question
SBI	Subsidiary Body on Implementation
SDGs	UN Sustainable Development Goals
SBSTA	Subsidiary Body for Scientific and Technological Advice to the UNFCCC
SBSTTA	Subsidiary Body for Scientific, Technical and Technological Advice to the CBD
TK	Traditional Knowledge
TKLC	Traditional Knowledge and Local Communities
UN	United Nations
UNCCD	UN Convention to Combat Desertification
UNFCCC	UN Framework Convention on Climate Change
UNEP	United Nations Environment Programme
UNCHE	United Nations Conference on the Human Environment
VCLT	Vienna Convention on the Law of Treaties
Vol.	Volume
WHO	World Health Organisation
WOAH	World Organisation for Animal Health
World Heritage Convention	Convention Concerning the Protection of the World Cultural and Natural Heritage

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1. Introduction

But I want to be clear, we are not here to hide behind speeches or to postpone decisions. We are here because the planet demands action, action that is real, immediate and tangible action on the ground. Time has run out. Hundreds of thousands of species are disappearing forever across the globe, and the world expects from us solutions and concrete agreements that enable us to save nothing less than creation, creation and life on Earth. Science has been clear, climate change, biodiversity loss, land degradation, are not separate crises. They are three dimensions of the same challenge, one that grows worse every day that we delay action. This is why we must act now. We need to act today, not tomorrow. And action must be immediate, visible, and above all, it must happen where nature and people meet on the ground. We have never had so much evidence, so much technology, nor such capacity to work together. The question is not whether we can do it. The question is whether we are willing to do it. [...]

The Minister of the Environment of Panama addressed delegates at the opening of the 27th Meeting of the Subsidiary Body for Scientific Technical and Technological Advice of the Convention on Biological Diversity (CBD) on 20 October 2025 with both a plea for immediate action and a hint of reprimand, finishing his speech by saying “*The world expects from us results and no more excuses*”. These words ring true, and echo those of Sweden’s Prime Minister: “*People are no longer satisfied only with declarations. They demand firm action and concrete results. They expect that the nations of the world, having identified a problem, will have the vitality to act*”. Yet the difference is that his statement was delivered at the opening of the 1972 UN Conference on the Human Environment (UNCHE, “Stockholm conference”), over 50 years ago (Le Prestre 2017: 33).

The world is (still) indeed at critical historical moment in environmental and conservation politics, with biodiversity conservation at a crossroads (Corson/Campbell 2023: 1). Environmental problems were already considered “vital, urgent and global” decades ago (Brunnée 2002: 2) and despite multilateral efforts, little progress has been done to effectively combat them. According to the Living Planet Index,² wildlife populations have

² A tool developed by WWF and the Zoological Society of London to measure animal life on Planet Earth, it features datasets of over 32 000 populations of over 5230 animal species (Greenfield 2022): <https://www.livingplanetindex.org>.

decreased by an average 69% in the past 50 years (Greenfield 2022), with extinction risk for over 1 million of the world's species (Rosendal 2020: 22). Biodiversity and ecosystem functions are rapidly deteriorating worldwide, and failing to reduce biodiversity loss is expected to undermine 80% of the UN Sustainable Development Goals (ibid). The biodiversity decline is not yet inevitable, as ongoing efforts show recovery is still possible for many of the threatened plants and animals (Greenfield 2022).

Out of the international legal instruments relating to the protection of the environment, the CBD is the most comprehensive (Harrop/Pritchard 2011: 474). The most recent political ambition under the CBD framework is the Kunming-Montreal Global Biodiversity Framework (GBF). It was formally adopted in December 2022 at CBD COP15 and consists of a biodiversity strategy for conservation, protection and restoration of ecosystems until 2030. Its predecessor, the Aichi targets, a set of 20 high-level commitments towards conservation, species extinction and ecosystem decline. According to the CBD Secretariat's assessment as featured in the Global Biodiversity Outlook report (2020: 12-17), none of these targets were achieved. Perceptions on why this happened differ between state delegates, external scientific experts and the CBD Secretariat itself. I would like to contribute to the academic discussion by analysing *how international negotiations redirect scientific and technical challenges into formal compromises that constitute constructive ambiguity*, on the example of the GBF indicator negotiations in the CBD Subsidiary Body for Scientific Technical and Technological Advice (SBSTTA).

As the proposed GBF monitoring framework largely builds on the existing indicators during the Aichi targets era, I am particularly interested in how scientific and technical methodological shortcomings were addressed during negotiations, and what other challenges states may have addressed. In the chapters below, I will first outline the specifics of the Aichi targets and the GBF themselves, showing how they are connected and what criticisms they were subjected to. I will then elaborate on the theoretical approach on constructive ambiguity, and how states divert contentious discussions into seeming consensus, why they do this and who it benefits, and what the pitfalls of this tactic may be. Afterwards, I will describe the methods used for the data analysis and present the results followed by a discussion section and what implications the results offer for the future of the GBF, particularly its planned global review at the end of 2026.

2. State of the Art

While the GBF is the newest of the CBD's consolidated efforts in tackling biodiversity challenges, it does not appear in a political or legal vacuum. This chapter provides background information on the historical developments surrounding the CBD as well as its strategic plans for biodiversity, and how they have been received by contemporary scholars within the field of biodiversity politics.

2.1. The inception of the Convention on Biological Diversity

The emergence of a wider environmental discourse in the political sphere is linked to the industrial and scientific revolutions in the 18th and 19th century which contributed to environmental degradation through accelerating resources consumption and pollution (Carter 2012: 4). The latter part of the 19th and early part of the 20th century saw the first environmental legislations and emergence of conservation initiatives, particularly for the protection of wildlife, wilderness and natural resources (Lowe/Goyder 1983: 15). While environmental policy was initially considered to be a domestic matter only (Le Prestre 2017: 28), several environmental disasters during the 1960s had brought the reality of a global ecological crisis closer to public perception. Political and activist mass movements started emerging across the globe (Carter 2012: 5), marking the begin of modern environmental politics. Other developments followed suit, such as the founding of the first international non-governmental organisations (Friends of the Earth in 1969, Greenpeace in 1972) as well as the first Green political parties (Tasmania and New Zealand) (Dobson 2017: 19).

States had already signed over 250 multilateral environmental agreements (MEAs) by the early 1970s, but the 1972 UNCHE is still considered to have kick-started the area of international environmental law (Mitchell et al. 2020: 106). Biodiversity decline was already well-recognised by biologists and conservationists at the end of the 1980s, with the lack of broad knowledge being cited as a setback for progressing with biodiversity conservation (Wilson 1988: 12; 14). To combat existing problems, scientists urged for the need to treat biodiversity as a global resource and not as an area-specific problem (ibid: 3) and proceed in acquiring sufficient knowledge on which conservation policies could be adequately based (ibid).

Recognising that global environmental problems cannot be solved by one state alone as they require effective inter-state cooperation (Carter 2012: 242), states increased international environmental action which culminated in the UN Earth Summit in 1992 held in Rio de Janeiro, Brazil.

Not only was it the largest ever gathering of world leaders as well as non-governmental activists and interest groups which led to the agreement on the UN Framework Convention on Climate Change (UNFCCC),³ it also saw the Convention on Biological Diversity (CBD) being opened for signature - a “turning point for the transformation of international environmental law” (Bragdon 1996: 177). While climate change initially received more international attention, there is now increased recognition that biodiversity and climate change are challenges that must be tackled together with high caution in order to be effective (Vadrot 2018: 198). The IPCC notes that simplifying the relationship between the two areas could have negative impacts, as some climate measures are unsustainable (i.a. bioenergy-plantations largely encourage the demand for land conversion) and increase the deterioration of ecosystems (Rosendal 2020: 23).

Originally stemming from the work of an Ad Hoc Working Group of Experts on Biological Diversity convened under the UN Environment Programme (UNEP) at the end of the 1980s (CBD Secretariat, 2005: xxiii), the discussions on an international legal treaty had progressed fast. The CBD treaty text was adopted in 1992 shortly before its presentation at the Earth Summit as the result of seven negotiation sessions over the course of three years.⁴

Nevertheless, the negotiations were marked by several conflicts from the beginning and still shape CBD processes to this day. Concerning its core objectives and priorities, negotiations were marked by a divide between North and South perspectives. The global South, which serves as the collective repository of four-fifths of the world’s biodiversity, was focused on the goal of sustainable use of biological resources, as well as mechanisms for equitable financial and technological transfers (Harrop/Pritchard 2010:

³ The Intergovernmental Panel on Climate Change (IPCC) is often mentioned alongside the UNFCCC, however the two are separate instruments. The IPCC was established as an intergovernmental expert body in 1988, four years prior to and independently from the UNFCCC.

⁴ A full repository of the official documents of all negotiation sessions can be found here: <https://www.cbd.int/history>.

475). The global North was mostly focused on a conservation perspective, which was historically i.a. conducted through protected areas in high-biodiversity regions, often isolating those places from people. In the past, this had presented a disproportionate burden on states in the Global South, where to this day resources and public support for biodiversity conservation remain low (Obura et al 2021: 746).

The objectives of the CBD, listed in Article 1, are the “conservation of biological diversity⁵, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources”. The CBD therefore recognises that the key to maintaining biological diversity depends upon using this diversity in a sustainable manner (CBD Secretariat 2005: xxiii). The jurisdictional scope of the CBD, listed in Article 4, outlines that it applies “in the case of components of biological diversity, in areas within the limits of [a Contracting Party’s]⁶ national jurisdiction”, and “in the case of processes and activities, regardless of where their effects occur, carried out under [a Contracting Party’s] jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction”. Article 5 further notes that each Contracting Party should, “as far as possible and as appropriate, cooperate with other Contracting Parties” directly or through competent international organisations (IOs).

The CBD features guiding objectives of conservation, sustainable use and equitable sharing of benefits in its Articles 6-20 - some of the key provisions contain i.a. measures for the conservation of biological diversity, incentives for the conservation and sustainable use of biological diversity, research, education, training and public awareness, access to and transfer of technology and the provision of financial resources. The CBD Secretariat (2005: xxiii) describes these as obligations, while failing to point out their weaknesses - namely that the formulation of the articles, expressed in imprecise

⁵ For the purposes of the CBD as per Article 2, “*Biological diversity*” means *the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems*.

⁶ As per Articles 33-35 of the CBD, both States and “*regional economic integration organisations*” can become parties to it. “*Regional economic integration organisation*” as defined in Article 2 of the CBD is an organisation constituted by sovereign States of a given region, to which its member States have transferred competence in respect of matters governed by the CBD and which has been duly authorised, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to it. As of April 2026, the European Union is the only regional economic integration organisation that is party to the CBD (in addition to 195 State parties).

language or “over-qualified terms which enable member states to implement these provisions in virtually any manner they wish” (Harrop/Pritchard 2010: 476). Even the negotiators foresaw that subsidiary hard law protocols would be necessary to address specific matters (Article 28 CBD).

The CBD to this day notably suffers from “implementation problems” (Vadrot 2014: 94), its instruments developed to implement policy measures largely perceived as inefficient and inadequate to achieve its purpose, the conservation and sustainable use of biodiversity. Harrop/Pritchard (2010: 475) point out that while the CBD is undoubtedly a “hard law instrument”, an international treaty that sets obligations on its state parties, those obligations are in fact very limited. This resulted in a hard law instrument that operates in the manner of a “soft law instrument”, a more flexible and policy-oriented approach (ibid: 476) which can be reflected in its implementation shortcomings.

The Earth Summit was meant to show great symbolic importance for its impact and the culmination of a global effort (Hajer 1995: 1-2). Despite that, it publicly showed the many conceptual holes and political ambivalences that had slumbered beneath the consensus’ (ibid: 1). As such, the entry into force of the CBD marks the end of an incredibly intense negotiation period but also constitutes the beginning of its actual process: “It is time for national and international policy makers to create the practical experience needed to give practical meaning to the Convention” (Bragdon 1996: 179).

2.2. Operationalisation and first goals

The CBD’s first COP took place in 1994 where several important decisions were taken about the convention’s operationalisation, i.a. on the rules and procedures of the COP (including the principle of voting per consensus)⁷, the financial mechanism, the Clearing-House mechanism for technical and scientific cooperation, the establishment of SBSTTA and the location of the Secretariat (Vadrot 2018: 214). The COP’s key function as per Article 23 of the CBD is to keep its implementation under review and to steer its development (CBD Secretariat 2005: xviii). As the CBD’s treaty text is broad, the first COP

⁷ CBD COP has so far always decided by consensus, rather than by a vote, on substantial matters (procedural decisions can on the other hand be decided by a majority vote). Interestingly enough, the rule on consensus voting (CBD COP RoP Rule 40 para. 1) was left bracketed at COP1 and can still be seen as bracketed to this day in the official version of the RoP (<https://www.cbd.int/convention/rules.shtml>).

meetings saw a large body of (over a hundred) procedural and substantive decisions taken to further clarify necessary aspects to proceed with work under the CBD framework (ibid). Since its 3rd meeting, the CBD COP has met biannually, including additional extraordinary meetings, to further the implementation of the Convention.⁸

One of the main shortcomings for CBD's plan of work was the lack of global knowledge on biodiversity. The CBD is one of seven MEAs that address biodiversity related issues.⁹ As some of their objectives indicate potential overlaps, engagement among Secretariats at each other's official meetings (e.g. COPs) is facilitated to limit redundancies (Vadrot 2018: 212).¹⁰ While the SBSTTA was established for the purpose of providing expertise on different scientific, technical and technological aspects, the lack of a global assessment producing body (such as the IPCC) for topics of biodiversity was seen as a challenge.¹¹

The CBD Secretariat partially assumed this role by producing several biodiversity assessments prior to the establishment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (ibid: 214),¹² and the COP initiated multiple thematic medium-term programmes of work to map future work, identify key issues and suggest concrete timeframes. At COP4 in 1998, states considered adopting a long-term programme of work, selecting issues for in-depth consideration for the next couple of years, including the way in which scientific and technical work was to be carried out (CBD Secretariat 2005: xxiv).

From these developments emerged operational guidelines for improving the functioning of COP and SBSTTA, as well as the first Strategic Plan for the implementation of the CBD (adopted at COP6 in 2002) (ibid: xxv). Two additional protocols to the CBD were adopted

⁸ A full list of the COP meetings, as well as their decisions and other modalities: <https://www.cbd.int/cop>

⁹ The others being the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), the International Plant Protection Convention (IPPC), and the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

¹⁰ The relationship between rules generated by these MEAs as part of the biodiversity regime has further implications for effective implementation. For a detailed analysis see: Rosendal 2001.

¹¹ The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), sometimes called the IPCC for biodiversity, was established in 2012.

¹² For the full list of the Global Biodiversity Outlook reports, and their different overall objectives, see here: <https://www.cbd.int/gbo> as well as under section 2.3.1. below.

in 2000 (the Cartagena Protocol on Biosafety) and 2010 (the Nagoya Protocol on ABS) (Rosendal 2020: 22). These serve simultaneously as supplementary but separate international agreements, therefore parties to the CBD are not automatically parties to the protocols.¹³

Consent plays a central role in law-making under environmental MEAs, as well as under the CBD. Differing from traditional national state-level legislature which can bind subject regardless of their support for a decision, any implementing acts of an international treaty are firmly anchored in a consent-based structure (Brunnée 2002: 5). Strategic plans under the CBD have all been adopted following an agreement of parties by consensus. Achieving this is however the beginning, not the end of the actual efforts needed to protect biodiversity. One of the only two concrete obligations in the CBD text is the submission of national reports (NRs) which reflect measures taken for the implementation of the Convention (Article 26 CBD). The reports reflect national actions undertaken in line with strategic goals agreed upon at COP meetings.

Two issues arise with this mechanism: firstly, this mechanism is non-punitive, and as such, there is little repercussions for non-submission of reports.¹⁴ Secondly, even when reports are submitted, it does not mean that strategic goals and political targets will be achieved. The fifth round of national reports due in 2014 saw a record number of 192 submissions, in the middle of the timeframe for the achievement of the “Aichi Targets”, the strategic plan for 2010-2020. Already at this time however, doubts about the achievability of the targets were entering both the academic and political debate (CBD Secretariat 2014: 17) and ultimately materialised: not a single Aichi Target was in the end achieved during the intended timeframe (CBD Secretariat 2020: 12-17) (see more under section 2.4 below).

2.3. The Subsidiary Body for Scientific, Technical and Technological Advice

SBSTTA was the first subsidiary body established by the CBD COP. Article 25 of the CBD lays down its mandate: “*a subsidiary body for the provision of scientific, technical and*

¹³ As of April 2026, the Cartagena Protocol has 173 Parties and the Nagoya Protocol has 142 Parties.

¹⁴ From 196 CBD Parties (195 states + the EU), the following have in the past submitted national reports (NRs): NR1: 151; NR2: 137, NR3: 153; NR4: 179; NR5: 192; NR6:103; NR7 (due February 2026): 130. More information here: <https://www.cbd.int/reports> and for the full NR6 and NR7 here: <https://ort.cbd.int/>.

technological advice [...] to provide the Conference of the Parties and, as appropriate, its other subsidiary bodies with timely advice relating to the implementation of this Convention”, that shall provide following services under the authority of and in accordance with guidelines by the COP:

“(a) Provide scientific and technical assessments of the status of biological diversity;

(b) Prepare scientific and technical assessments of the effects of types of measures taken in accordance with the provisions of this Convention;

(c) Identify innovative, efficient and state-of-the-art technologies and know-how relating to the conservation and sustainable use of biological diversity and advise on the ways and means of promoting development and/or transferring such technologies;

(d) Provide advice on scientific programmes and international cooperation in research and development related to conservation and sustainable use of biological diversity; and

(e) Respond to scientific, technical, technological and methodological questions that the Conference of the Parties and its subsidiary bodies may put to the body.”

SBSTTA usually meets annually, with two ordinary SBSTTA meetings usually taking place in between COPs (CBD Secretariat 2005: 288). SBSTTA's main contribution is to ensure that the workings of the CBD continue without issues, as well as to provide operational advice (Chasek 2019: 20). The SBSTTA is equipped to negotiate on new items for discussion such as biofuels or bioengineering (Vadrot 2018: 213), and has from its inception discussed technical issues such as ‘monitoring and assessment of biodiversity, taxonomy approaches, economic valuation, genetic resources, biosafety, and various forms of biodiversity’, all of which fall within the realm of expertise of modern science (Escobar 1998: 58). While SBSTTA was conceptualised as a multidisciplinary subsidiary body that is open to participation by all parties through government representatives that are “competent in the relevant field of expertise” (Article 25 of the CBD, para 1), there was little knowledge among national delegations on how to address biodiversity-related issues from the scientific perspective in the 1990s.

At one of the first SBSTTA meetings, Brazil sent a seasoned diplomat instead of an expert - this is highlighted with the intention to increase its strategic positioning within a body

dominated by western scientists (Vadrot 2018: 214). Following this example, other delegations did the same. This resulted in a politicisation of the discussions at SBSTTA, which ended up resembling a ‘mini COP’ rather than a scientific and technical body (labelled as a so-called “identity crisis” of SBSTTA, Koetz et al 2008: 506). This was not a problem exclusive to SBSTTA however: several committees with similar membership structures, such as the science and technology committee to the UNCCD and the SBSTA of UNFCCC (Kohler 2020: 119).

These developments were recognised by COP5, where parties identified the need to improve the quality of scientific, technical and technological advice which is provided to the COP. From COP5 onwards, SBSTTA was given the power to establish, under guidance of the COP, ad hoc technical expert and advisory groups, as well as adopt terms of reference for them in order to assist its work in certain thematic areas (subject to change). Typically, multiple ad hoc expert groups convene simultaneously. The ad hoc status indicates that they are not equal to subsidiary bodies under the CBD (CBD Secretariat 2005: 288), but also reflects the necessity of needing to improve implementation of the Convention which can only be done following sound scientific advice.

While the CBD has its own definition of what biological diversity is (see above in section 2.1.), some scholars argue that putting forth a new definition of “biodiversity” does not create a new object of study outside of existing disciplines such as biology and ecology (Escobar 1998: 55). Instead, the new definition seeks to be a response to the coinage of a new forthcoming relationship between nature and society which goes beyond the scientific domain (ibid).¹⁵ Escobar identifies the need for an ethnographic perspective on CBD meetings outside of COPs, such as the SBSTTA and ad-hoc working groups, to better examine the workings of the CBD mechanisms and the constructions of concepts and objects of study (ibid: 57). However, the CBD does not operate in a vacuum, and the necessity to acknowledge other international processes was recognised by COP6 when it recommended to SBSTTA to develop procedures on how to initiate, prepare, and be

¹⁵ Escobar’s analysis of the biodiversity network originating in the 1980s and 1990s tries to uncover the origins of the “idea of biodiversity” and identifies several heterogenous positions. One of the identified positions is that produced by dominant institutions, inter alia also the activities surrounding the CBD. For his in-depth analysis, see Escobar 1998.

involved in scientific assessments (CBD Secretariat 2005: 289). By the early 2000s, it was further recognised that conservation is best accomplished through transboundary efforts, and the use of targets to frame, communicate and guide global environmental governance became a central feature of MEAs, including how technological innovations can help achieve and monitor the attainment of targets (more in section 2.3.3. below) (Corson/Campbell 2023: 2).

2.3.1. The role and work of SBSTTA as a “science-policy interface”

For the purposes of the CBD framework, SBSTTA is the “official” interface between science and policy matters and has repeatedly come under close scrutiny for its work (see more in section 2.3.2. below) (Koetz et al 2008: 505). SBSTTA has multiple ways of informing itself on thematic areas of interest. In addition to SBSTTA negotiations featuring the statements of CBD parties on certain topics, as well as the reports of ad hoc technical advisory and expert groups, SBSTTA has been encouraged by COP to involve itself in the meetings of scientific bodies of other conventions, institutions and processes, as well as holding meetings with equivalent bodies of other conventions to exchange expertise (CBD Secretariat 2005: 290).¹⁶

Beyond trying to claim that SBSTTA discussions should simply be “more scientific”, the quality of SBSTTA’s work mostly depends on the content material for meetings and opportunities to improve it (Koetz et al 2008: 505). Missing scientific knowledge and expertise are considered a ‘threat’ to environmental politics as they hinder effectiveness and in turn, implementation (Vadrot 2014: 100). As its regular meetings only occur once a year, a lot of work is conducted intersessionally: on the one hand, the SBSTTA Bureau¹⁷ and the CBD Secretariat can establish liaison groups comprising “a balanced range of experts qualified in fields” relevant to the subjects discussed (CBD 2026; see also UNEP/CBD/COP/VIII/10, Annex, para 13).

On the other hand, SBSTTA can establish ad hoc technical expert groups (AHTEGs) under guidance of the COP. These are established for a limited duration of time and should

¹⁶ The SBSTTA Chair, or any of the members of the SBSTTA Bureau authorised by the Chair, may represent SBSTTA at these other meetings (CBD Secretariat 2005: 290).

¹⁷ For the full list of current members and SBSTTA Bureau meeting minutes, see here: <https://www.cbd.int/sbstta/bureau>.

“draw on existing knowledge and competence available in other international, regional and national organisations, including NGOs and the scientific community, as well as indigenous and local community organisations and the private sector” (CBD 2026; see also UNEP/CBD/COP/VIII/10, Annex, para 18).

These groups should at best not duplicate, but supplement and draw on existing efforts work conducted in and by other organisations and help SBSTTA in its decision making. They should limit the use of resources when possible, i.a. by using innovative means of communication and limit the need for face to face meetings (ibid).¹⁸ It is usually not possible to gain direct insights into expert working groups under SBSTTA, as they are not open to the public. However, during Covid, there were several opportunities for “briefing webinars” conducted for delegates to prepare them for SBSTTA -as well as SBI - meetings which gives a new insight opportunity into internal AHTEG workings (more on this matter under section 4.2. below).

One of the shortcomings identified in the CBD framework has been listed as the difficulty in communicating relevant biodiversity knowledge to decision makers (Vadrot 2014: 94). Generally, SBSTTA assessments are often produced through the work of AHTEGs and/or liaison groups (Koetz et al 2008: 509). There should however be a distinction between a SBSTTA recommendation, which are regular outputs of meetings, and a SBSTTA assessment which must be mandated by the COP and carried out in an “objective and authoritative manner”, and according to clearly set terms of reference (ibid). Such formal assessments were more common in the very early days of SBSTTA, and have not been used in practice in decades.¹⁹

Additionally, the scientific community has also independently attempted to contribute to intergovernmental efforts. Some notable mentions include the Global Biodiversity Assessment, a report produced together by more than 300 scientists and published in 1995; as well as the Millenium Ecosystem Assessment published in 2005, combining the

¹⁸ Interestingly enough, this rule pre-dates Covid and the modernisation of digital negotiations and meeting practices: prior to the development of online meeting technology, ad hoc technical expert groups were relying on internet fora for their exchanges. Some of these discussions have been archived, but some are retained on the CBD website to this day.

¹⁹ SBSTTA recommendations to the COP still oftentimes carry the word “assessment” in their titles.

efforts of over 1500 scientists (ibid: 216-217).²⁰ While this is in line with the modus operandi of SBSTTA (CBD 2026; see also UNEP/CBD/COP/VIII/10, Annex, para 19), delegates do not seem endorse these external reports easily, more on this in the section below in the results section. The role of SBSTTA as an interface between the independent expert body (IPBES) and the parties to the CBD in the COP mirrors the role of SBSTA's role between IPCC and the UNFCCC COP, with both subsidiary bodies showing reluctance in openly welcoming the assessments (Kohler 2020: 120).

The CBD Secretariat periodically prepares the Global Biodiversity Outlook (GBO), a report summarizing the status of biodiversity and the possible steps to be taken to ensure the strategic goals of the CBD can be adequately met (Vadrot 2018: 214). Five GBOs have been periodically produced since COP2.²¹ Labelled as the 'flagship publication' by the CBD Secretariat, GBOs in practice have served as mid-term assessments of the state of implementation of strategic plans under the CBD. The way that they approach and summarise data is therefore very tailored to this purpose and cannot compare to the independent assessments of external bodies such as IPBES.

The establishment of IPBES in 2012 followed a long period of several international processes calling for a global expert body for biodiversity (sometimes called an 'IPCC for biodiversity'), expressing the necessity for science and scientists to be further integrated into the developments of biodiversity strategies (Vadrot 2014: 104). The organisation of IPBES is independent from the CBD mechanism and functions under different rules and timelines. Since its establishment, 14 assessments have already been completed and even more assessments are ongoing and should be completed by 2030.²² One of the main arguments behind the establishment of IPBES was the lack of access to scientific knowledge: policymakers lacked the appropriate information to make the right decisions, and IPBES took on the mantle of bringing "science by scientists" to the political agenda (Le Prestre 2017: 55). IPBES consistently releases assessments that take into account the needs of the CBD. The most recent IPBES assessment concerns the impact and

²⁰ The latter also contributed to the creation of IPBES.

²¹ GBO1 in 2001; GBO2 in 2006; GBO3 in 2010; GBO4 in 2014 and GBO5 in 2020. For the full texts of the GBOs as well as the modalities of their developments, see here: <https://www.cbd.int/gbo>.

²² Full list of assessments and additional information can be found here: <https://www.ipbes.net/assessing-knowledge>.

dependence of business on biodiversity and nature's contributions to people and directly addresses the role of businesses in delivering transformative change for i.a. the GBF (2026: 4), including suggestions on how businesses can align with biodiversity goals and targets (ibid: 25).

While its work is by no means sidelined, the role of IPBES assessments within SBSTTA meetings is still not universally accepted by all delegates: at SBSTTA27, much of the final recommendation text relating to IPBES was left bracketed and several delegates expressed caution in endorsing IPBES' work before having sufficient familiarity with the text (Tsioumanis et al. 2025b: 4). No agreement could be reached whether to "welcome" (positive connotation) or simply "take note" (neutral connotation) of the most recent IPBES work, the Nexus Assessment and the Transformative Change Assessment (ibid). The SBSTTA is also chronically overloaded, with sessions extending beyond original meeting times by several hours. This is a particular disadvantage for smaller countries which do not have the capacity to send large delegations to the conference, reinforcing existing global power imbalances (Vadrot 2020a: 234). A clear link between IPBES assessments and decision-making, whether at the international or national level, could help ease the workload (Hulme et al. 2011: 697) but comes with its own set of uncertainties.

2.3.2. Criticism of SBSTTA's work and the CBD mechanism

The politicisation of SBSTTA has been cited as a major reason for implementation deficits in the CBD mechanism and partially listed not only as one of the reasons for the establishment of IPBES, but also for a new subsidiary body to the CBD, the subsidiary body on implementation (SBI). Decided at COP12, its mandate relates to enhancing the implementation of the CBD i.a. including developing recommendations for overcoming obstacles encountered in the implementation of the CBD or its strategic plans and review the effectiveness of existing processes under the CBD (UNEP/CBD/COP/DEC/XII/26 Annex, para 1).

It is nevertheless explicitly stated that the SBI and SBSTTA "*should carry out their respective functions taking into account their role and functions with a view to ensuring complementarity in their work and avoiding overlap*" (ibid: para 3). Due to its structure as

outlined above, the CBD is heavily dependent for its effectiveness on the actions of its parties as well as other institutions (CBD Secretariat 2005: xxv). Implementation is defined as ‘deliberate efforts by national authorities to follow up their international commitments in domestic policies within the specific issue area’, involving domestic implementation (i.a. legislation enabling domestic policies and programmes) as well as international implementation (i.a. efforts when participating in other international negotiations or compliance mechanisms) (Rosendal 2001: 97).

SBSTTA does not substitute scientific and technological work conducted by dedicated organisations, which is why the CBD has established institutional links through memoranda of cooperation with many other relevant MEAs and IGOs to help minimise duplicating efforts and enable parallel processes which benefit its objectives and implementation possibilities (CBD Secretariat 2005: xxv). Neither does SBSTTA’s work substitute the work conducted on IPBES assessments. While they also do not conduct primary research, the methodical synthesis and critical evaluation of available data, peer-reviewed scientific literature and indigenous knowledge and the open and transparent process have still addressed many criticisms that SBSTTA’s early work has received.²³ Particularly when it comes to the politicisation of what scientific knowledge enters SBSTTA, delegates have been called out for selectively using and misusing scientific data to support their respective agendas (Koetz et al. 2008: 514).

There have even been academics considering the whole notion of sustainable development to be a ‘rhetorical ploy’ for concealing a strategy of remaining on a development course rather than primarily addressing the ecological crises - a diversion strategy, in a sense (Hajer 1995: 12). Reports on environmental policy addressed the necessary adaptations to be made in order to move forward as early as before the Earth Summit i.a. the Brundtland report (1987), a UN-led publication with a clear message: ‘The time has come to break out of past patterns [...] We are unanimous in our conviction that the security, well-being and very survival of the planet depend on such changes, now.’ (ibid). Yet the problems seem to persist to this day. Theoretically situated in ‘liberal environmentalism’ (Hurrell 2005: 42), this anchoring will not be further explored in this

²³ For more information on how IPBES describes its process for conducting assessments, see here: https://www.ipbes.net/assessment-guide_what-is-an-ipbes-assessment.

thesis but could serve as an outlook to be considered for future research. Already noted by Escobar in the early days of the CBD (1998: 76), the “distance between dominant discourses around biodiversity conservation and the political ecology of social movements is great and perhaps growing”, which remains a problem of the framework to this day.

Additionally, further criticism addresses the fact that the CBD mechanism does not seem to address underlying causes for biodiversity loss in connection to the global economic system and its increasing demand for resources (Perrings et al 2011: 512). Despite the attempts to strengthen implementation of its objectives by formulating clearer strategies and targets for biodiversity loss that need to be reached, results have remained limited, and their reception mixed. Since the early 2000s, the CBD has been criticised for privileging certain “ways of knowing, being and living [...] and marginalizing IPLCs in terms of land and resource rights, access, and governing authority (Corson/Campbell 2023: 3).

Discussions on the implementation of Article 8j of the CBD, the inclusion of traditional knowledge and local communities, has been ongoing for thirty years (Escobar 1998: 61) prior to a decision of CBD COP16 in 2024 to convene a subsidiary body on these matters (CBD/COP/DEC/16/5). Although the decision was complemented with a programme of work (CBD/COP/DEC/16/4) and the first meeting of the new subsidiary body was held successfully in October 2025 (Tsioumanis et al 2025a: 1), there is still a long road ahead to actually combatting the structural problems underlying the inclusion of IPLCs/TKLCs.

It has further been argued (Koetz et al. 2008: 514) that SBSTTA’s effectiveness can be improved by going beyond the failed attempts to make its work more scientific, and lean into the development of its ‘political nature’ (“*it is crucial for the effectiveness of SBSTTA, and the quality of its advice, to keep room for “the political”*”). This should reflect the fact that despite its mandate, SBSTTA is not well-suited as a purely scientific forum and if negotiations shift towards a more informed, substantive political debate over alternative policy choices could help better understand underlying conflicts of values and interests (ibid). In the discussion part, I will argue that applying the concept of constructive ambiguity to the GBF negotiations reveals such tendencies have developed, but they have not made SBSTTA more effective.

2.3.3. “Targets“ and „indicators“ for biodiversity

When it comes to producing global expertise on biodiversity, one of the major identified challenges to effective outcomes is the gathering and synthesis of a large amount of heterogenous relevant data (Vadrot 2020b: 16). Both targets and indicators are used in various policy areas to formulate goals or measure specific conditions, changes or developments, respectively. Achieving global targets on biodiversity hinges on effective indicators of biodiversity that can convert raw data into reliable numbers that shape policymaking (Hébert et al. 2026: 1). The use of indicators does not originate in biodiversity conservation, but they are used both within the CBD framework as well as outside of it to refer to trends in environmental processes.²⁴

In order to effectively create a target, one needs to define the boundaries of what the object in question is. Targets are quantitative or qualitative benchmarks commonly used in the design of non-legally binding policy documents (Smith et al. 2023: 1). Targets do not naturally emerge from scientific discussions, instead just as any other matters they are “negotiated and contested” (Keune et al. 2022: 28). Target-based governance holds a certain promise of accountability, by measuring certain progress with an objective baseline and therefore trying to produce objective results (Hagerman et al. 2021: 1). Moreover, indicators might be a useful tool to translate raw data into further policy decisions, but their influence is limited to how they are perceived, how they are defined and under which conditions (and with which data) they are intended to work (Hébert et al. 2026: 10). Monitoring data itself does not solve an issue. Monitoring can help pinpoint new environmental problems that need regulatory attention, and provide the necessary political (and or legal) pressure to implement new policies in certain areas (Biber 2013: 1).

Since the early 2000s, the CBD has tried to implement three strategic plans to combat biodiversity loss and has used indicators to translate its political goals into actions throughout the process. The quality and content of the indicators have been subject to constant consideration and improvement attempts. The first of these was referred to as

²⁴ From the seven MEAs that address biodiversity issues (CBD, CITES, CMS, ITPGRFA, Ramsar Convention, IPPC, World Heritage Convention), all use indicators in for different purposes in translating their strategic goals into actionable steps; as do many other environmental treaties such as the UNFCCC.

the ‘2010 target’, as decided at CBD COP6: *“Parties commit themselves to a more effective and coherent implementation of the three objectives of the Convention, to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth.”* (UNEP/CBD/COP/DEC/VI/26 para 11). At COP7, states for the first time adopted indicators for the purpose of achieving their strategic goals, a *“framework to enhance the evaluation of achievements and progress in the implementation of the Strategic Plan”* (UNEP/CBD/COP/DEC/VII/30, Preamble).

Originally, the indicators had little assigned authoritative value within the CBD framework, with COP7 noting *“these goals and targets should be viewed as flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities”* (ibid, para 13). SBSTTA was tasked with reviewing information on the indicators with the help of an AHTEG as well as suggest new ones if necessary (ibid, paras 5-6). These have over time developed into an institutionalised structure which strengthens the international legal basis of the CBD, with authors arguing that a compliance or monitoring system could achieve the same level of progress as legal architecture (Le Prestre 2017: 34).

Adequate biodiversity monitoring requires the collection, use and understanding of biodiversity data as well as the development of methodologies (Vadrot 2018: 219), yet these actions are not undertaken either by SBSTTA nor by the COP but by external institutions, scientific research organisations and joint initiatives. One such initiative is the Global Biodiversity Observation Network (GEO-BON). After the CBD became its party,²⁵ SBSTTA representatives have attending its meetings and engaged in reporting on the work that was being done. There has been close collaboration with the aim to ease development and harmonisation of methodologies, datasets and indicators to further the implementation of the CBD and its strategic goals (ibid: 2020). In 2015, GEO BON and the partners within its consortium introduced a set of indicators following a novel approach: a *“new generation of global indicators integrating biodiversity observations,*

²⁵ The full list of indicators, including methodologies and developers, can be found at: <https://geobon.org/ebvs/indicators/>.

remote sensing data, and models for assessing progress towards the CBD Strategic Plan 2011-2020 and Aichi Targets 5, 11, 12, 14, 15 and 19” (GEO BON 2015: 3).

At first, practical challenges in implementation within the CBD framework included unclarity in methodology and subject matter, as well as the failure to identify which targets to be prioritised (Smallwood et al. 2022: 54). Historically, issues in implementation were often linked to data availability, with incomplete global biodiversity data leading to poor coverage of many species and ecosystems (Affinito et al. 2025: 1286). Ideally, monitoring systems for biodiversity should be designed to integrate in situ observations from ‘conventional’ research methods with community-based monitoring and citizen science, as well as remote sensing data (ibid).

While the recent work on targets has certainly made progress in some areas, aiming for targets that have a good baseline of data and indicators that are therefore more likely to be implemented, there has also been a downside. The process is likely to reinforce the role of natural science in the “classic” sense and sideline alternative means of knowledge collection and production (Corson/Campbell 2023: 2). It should be noted that changes in biodiversity are first experienced on the local level, and thus local and national expertise have particular relevance for biodiversity issues (Hulme et al. 2011: 697), even when they do not take the form of science in the “classic” sense. The time to act is now - when trying to measure the state of nature and the human impact on life on Earth, “most indicators, whether monitored by natural and social scientists, or by Indigenous Peoples and local communities, are declining” (Díaz et al 2019: 1).

Nature is supplying humans with more material than ever before, and after decades of sharp increase in human activity and a growing human population, the cost is visible in an unprecedented global decline in the integrity of ecosystems, local ecological communities, as well as the abundance and amount of wild species (ibid: 2). In this regard, the rising amount and diversification of biodiversity data can help reflect the impact of social inequality (Chapman et al. 2024: 34). The path going forward will require more than technocratic fixes, as social and political disparities need to be addressed. Otherwise, new monitoring technologies continue collecting a broader scope of data, yet without caution it can continue to over-saturate existing and well-known overrepresentation of certain regions, taxa and time periods (ibid: 36).

2.4. The Aichi Targets

It is widely recognised that the CBD struggled to produce clear and measurable progress in its first decade of operation (Kohler 2020: 27). CBD parties attending COP10 in Nagoya, Japan in 2010 had to formally acknowledge what was already becoming imminent for some time: the first strategic plan of the CBD, the ‘2010 target’ had not been achieved (Vadrot 2014: 98; Perrings et al 2011: 512). This strategy was criticised for lacking scientific rigor and specificity, so the new attempt at a strategic plan wanted to combat this by presenting SMART targets (specific, measurable, ambitious/achievable, realistic, time-bound) that are well-founded in science (Hagerman et al. 2021: 1).



Figure 1. "Aichi Targets": Strategic goals and corresponding targets

SMART targets require more, and higher quality, geographically distributed data; clearly defined indicators that help measure progress, and institutionalised mechanisms that link the target monitoring with effects in decision-making (Campbell et al. 2014a: 43). Already during the time of the ‘2010 target’, SBSTTA had been tasked with developing sub-targets which should help implementation at the national level, however, these targets proved of little effectiveness to parties. Few had followed the framework in establishing

national targets, and even fewer had implemented them (Harrop/Pritchard 2011: 477). In addition to the concrete set of targets, an Implementation Decision was adopted by COP10 (UNEP/CBD/COP/DEC/X/5), recognizing that the strategic targets can only be achieved by effective implementation (ibid, preamble).

The Aichi Targets featured 20 separate targets thematically combined into five strategic goals.²⁶ While framed as a 10-year strategic plan, they were already looking ahead to the 2050 vision: that “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”.²⁷ In emphasizing the need for the “best available science”, the CBD recognises that decision making should be based on sound science and not on political considerations (Campbell et al. 2014a: 43). The relationship between science and policy is however not that simple (see more in the section 2.5.2. below), but this direction still reinforces the role of science within the CBD (Hagerman et al. 2021: 2).

Following the co-production model (whereby the relationship between science and policy is not linear, instead, knowledge is co-produced through their interaction), the Aichi Targets are the outcome of a combined scientific and technical process (ibid). Campbell et al. (2014a: 44) identifies several different ‘products’ of scientific and political elements, and when applying these to the Aichi Targets it is evident that their reasoning makes sense. As opposed to indicators, these targets clearly do not simply reiterate existing science. In agreeing on the Aichi Targets, CBD delegates used the basis of scientific knowledge to create a new independent object that “does not simply reflect reality as is” but one that “creates new realities” (ibid). While being considered an improvement over the previous CBD biodiversity targets, several shortcomings such as ambiguous wording, the lack of quantifiable elements, excessive complexity and redundancies have been identified that made it difficult to proceed with effective implementation (Butchart et al. 2016: 457-458; 465-466).

²⁶ The use of the ‘icons’ for the Aichi Biodiversity Targets is available for use outside of the UN inter alia for ‘information purposes’, and in reference to publications about the Aichi Biodiversity Targets under which this thesis falls. Copyright of the icons belongs to BIP/SCBD. For more information: <https://www.cbd.int/sp/targets/icons>. Official text from: <https://www.cbd.int/sp/targets>.

²⁷ For the use of the slogan in promotional flyers, see: <https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf>.

2.4.1. Structure and reporting

Table 1. Aichi Targets overview²⁸

<i>AT</i>	<i>Descriptive summary</i>
AT1●	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably
AT2●	Biodiversity values have been integrated into national and local development and poverty reduction strategies
AT3●	Phase out incentives and subsidies harmful to biodiversity, introduce positive incentives for conservation and sustainable use
AT4●	Governments and stakeholders at all levels have implemented sustainable production plans and limited the use of natural resources
AT5●	The rate of loss of natural habitats is at least halved or brought close to zero
AT6●	All fish and invertebrate stocks are managed and harvested sustainably, overfishing is avoided and fisheries' impact is within ecological limits
AT7●	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity
AT8●	Pollution, including from excess nutrients, has been brought to levels that aren't detrimental to ecosystem function and biodiversity
AT9●	Invasive alien species are identified and prioritised, priority species are controlled or eradicated, and measures are in place to prevent their introduction
AT10◇	Multiple anthropogenic pressures on coral reefs and other ecosystems impacted by climate change or ocean acidification are minimised to maintain their integrity and functioning
AT11●	>17% of terrestrial+inland water and >10% of coastal+marine areas are conserved through equitably managed systems of protected areas (PAs) and effective area-based conservation measures

²⁸ See FN 26 and FN 27 for references to the content of the table.

AT12●	Extinction of known threatened species has been prevented and their conservation status has been improved
AT13●	Genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives is maintained, genetic erosion is minimised and genetic diversity is safeguarded
AT14●	Ecosystems that provide essential services (i.a. water) and contribute to livelihoods, well-being, health, are restored taking into account the needs of women, indigenous and local communities
AT15●	Ecosystem resilience has been enhanced, incl. restoration of >15% of degraded ecosystems, contributing to climate change mitigation
AT16◇	The Nagoya Protocol is in force and operational
AT17◇	Each Party has developed and commenced implementing an updated national biodiversity strategy and action plan
AT18●	Traditional knowledge, innovations and practices of indigenous and local communities are respected and fully integrated on the national and international level
AT19●	Knowledge, the science base and technologies relating to biodiversity are improved, widely shared and applied
AT20●	Mobilisation of financial resources should increase substantially from the current levels

● = to be reached by 2020

◇ = to be reached by 2015

Although this period has been framed for its lack of implementation, there was sufficient awareness in the need for implementation embedded in the Aichi Targets process, as well as several funding opportunities for capacity-building and for implementation. With the fifth and sixth national reports due in 2014 and 2018 respectively, it was clearly specified that the 2020 targets are the model within which parties have the flexibility to choose their own national targets (Campbell et al. 2014a: 59). In parallel to supporting states with their national reports, CBD was operating several online platforms at the time that also featured indicators for tracking progress on the Aichi targets.²⁹ However, the targets are not all straight-forward and parties' action on implementation remained slow. Strategic

²⁹ See information on NR6, including for the available indicators: <https://www.cbd.int/nr6>.

Goal A (“*Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society*”) was by far the least scientifically developed one, with little agreement about what to monitor and how to monitor to achieve it (Galli et al. 2014: 121). Some reactions to the targets themselves were positive, arguing that problems arise with realizing them in practice. The SMART requirement has been linked to require precise and timely indicators, disaggregated data and improving accounting for trade-offs in between targets (Hagerman et al. 2021: 2). Others labelled them as complex in wording, continuing to lack clarity which makes it difficult to stimulate and quantify progress (Butchart et al. 2016: 457) (see more below).

In terms of reporting under the CBD mechanism, parties submitted the highest number of national reports in 2014 during the 5th round, reaching a total of 192 reports (from 196 CBD Parties).³⁰ Efforts in reaching the targets cannot be denied. Yet a repetition to the previous effort remains visible: already during the time of the ‘2010 target’, it was noted that parties’ responses to the convention’s mechanisms have increased, but they have not managed to counteract growing biodiversity pressures (Galli et al. 2014: 121). The high submission rate of NR5 did not change the fact that submitting the report without sufficient further action does not reflect in any adequate biodiversity protection.

Neither can it be said that states had not guidance in implementing the Aichi Targets. Their failure is often linked to the lack of a unified monitoring framework. Although remaining for flexible use by the parties, an indicative list of indicators that states could refer to has existed since 2012 (UNEP/CBD/COP/DEC/XI/3, Annex) and has been reaffirmed since 2016 (CBD/COP/DEC/XIII/28, Annex). COP13 adopted a sophisticated list of indicators which referred to different institutions’ work, methodologies, and provided for the relevant sources for further dissemination. The indicators’ labelling differs from the one in the GBF Monitoring Framework (see below). There is “generic” indicators (79) and “specific” indicators (147, out of which 40 featured also in the SDG framework) (CBD/COP/DEC/XIII/28, Annex, p.3). There is little hierarchy in between them, and the framework is specifically designed to be flexible so that states can adapt their needs/use the indicators they see fit (ibid, para 5).

³⁰ See here: <https://www.cbd.int/reports>.

Around 40-44%³¹ of the indicators listed in CBD/COP/DEC/XIII/28 appear almost unchanged in the GBF Monitoring Framework (see below), and around the same amount seem to disappear completely without any carry-over. Another 15-20% appear to have similarities with GBF indicators, but I would not label them as a direct carry-over. The timing of the 6th national report at the end of 2018 was unfortunate, as by then the scepticism had grown high and the failure was inevitable. Only 103 parties submitted NR6, almost half as little as NR5.³²

2.4.2. Criticism and implementation failure

By assessing trends related to global decline in nature, it was already evident prior to 2020 that the Aichi Targets will not be met. Already by mid-2014/2015, academic analyses were circulating and warning that due to delayed processes and insufficient information flows, the majority of the targets are unlikely to be delivered (Hill et al. 2015: 22). It is important to note that that failure was not for the lack of awareness or implementation efforts, but rather because of insufficient coordination and follow-up action.

Out of 54 elements linked to the 20 targets, Díaz et al. (2019: 4) identify ‘good’ progress made towards 5 (9%), ‘moderate’ progress towards 19 (35%) and ‘poor’ progress, or no progress at all, for 21 (39%). For 19 elements (17%), progress was not trackable or measurable and therefore should also be evaluated negatively or at least neutrally. Even in areas where progress is made, issues remain, e.g. protected areas (PAs) - AT 11; despite 14,9% of terrestrial and freshwater environment already being listed as protected in 2019, areas of importance for Earth’s biodiversity are only partially covered, and the protected areas are not yet effectively and equitably managed (Díaz et al. 2019: 5).

The complexity of biodiversity as a subject-matter, coupled with the lack of data, capacities and funding was evident as states tried (and failed) to identify priority targets, allowing for “cherry-picking” on which targets to implement (Smallwood 2022: 54). Some targets contain language that can be understood in different ways. For AT11, there are multiple definitions for what comprises an “*ecologically representative*” PA and a “*well-connected*” PA. “*Degraded ecosystems*” and “*restoration*” (AT15) are not easily defined

³¹ Personal estimate after document review.

³² See here: <https://www.cbd.int/nr6>.

(Butchart et al. 2016: 458). Other targets, (“moving targets”, Bull et al. 2013: 103) relating to migratory species or land that is subject to environmental change, are less suited to the ATs perception of conservation. It is labelled as “stationary”-oriented due to its heavy reliance on PAs, which cannot reflect dynamic (moving and changing) objects (ibid).

The establishment of PAs is one of the measures that has been criticised in literature, particularly when it comes to their creation, with reports of violent displacement of persons being linked to enclosing of their land and the establishment of parks and other area-based measures (Keune et al. 2022: 28). Despite this, proposals to expand PAs are continuously raised when discussing political targets (because they are often one of the few measures that can yield visible results fast). PAs are part of a “SMART” target, ergo they can be measured (i.a. documentation in the World Database on Protected Areas) (Campbell et al. 2014a: 53). In order to better monitoring efforts, over 100 indicators were proposed and discussed alongside the Aichi Targets, serving as a starting point for a unified global biodiversity monitoring progress (Galli et al. 2014: 121).

In fact, while it is evident that international law is consent-based, reaching consensus does not result in effective implementation. Not only does compliance require considerable resources such as time, political engagement on the national level and adequate financing, which are often not discussed on the same table as the political strategies and goals (Smallwood et al. 2022: 53). Scientific studies around the inception time of the Aichi Targets note the extreme cost that would be connected with full implementation, e.g. the estimated cost of reducing the extinction risk of threatened species could be up to 4.76 billion \$US a year (Galli et al. 2014: 122). Compliance additionally requires obligations. The CBD, as was previously stated, is surely a hard law instrument because it is an international treaty. However, as a hard law instrument, it has a clear “soft” law core. Only two of its provisions contain actual obligations for states: Article 6 on NBSAPs and Article 26 on NRs (Harrop/Pritchard 2011: 476).

Vadrot (2014: 100) has noted that the CBD lacks an implementation monitoring system where similar international treaties (e.g. CITES, UNFCCC) already do. Discussions around the GBF Monitoring Framework (see below) sought to frame this lack of an implementation mechanism as one of the main points in need of improvement, there are further nuances that frame the AT failure. Many targets remained unquantifiable (and

therefore unmeasurable) and complex to understand. They asked the impossible (e.g. AT9 on invasive alien species) and yet still on some levels were not ambitious enough to reach the CBD's objectives (Smallwood et al. 2022: 54). CBD states valued the flexibility of targets and first abstained from developing universal indicators. Monitoring was described specifically as a "flexible framework", yet it is particularly this flexibility that has been criticised as being at odds with "SMART" targets (Smith et al. 2023: 15).

Therefore, it can be summarised that of the main issues listed as an implementation deficit is the lack of quantifiable, therefore really measurable, elements. Most Aichi Targets (14/20; Butchart et al. 2016: 465) lacked quantified elements. This means there is no clear binary/numeric threshold to be met in order for the target to be achieved. Without this, it is much more difficult to measure progress toward a target. 3 ATs contain numerical thresholds (see table above), 3 ATs contain binary thresholds (which can objectively be met, or not be met) and only 2 ATs (AT16 and AT17) have all their elements quantifiable (Butchart et al. 2016: 465). To summarise, 30% have at least one quantifiable element (10% of these 30% have all quantifiable elements), and 70% have no quantifiable elements. Butchart et al. (2016: 465) echo scholars which list the unavailability of indicators, particularly their underlying methodologies as an issue: *"While the adoption of targets can stimulate development of indicators to meet measurement needs, it would seem ineffective to create a target for which indicators are presently unavailable (and unlikely to be developed)"* (ibid).

What should also not be sidelined is the general lack of awareness of biodiversity issues, which is linked to the challenges of implementation (ibid). National biodiversity strategies did not elicit much interest from investors, and governments often failed to provide adequate and reliable funding (Le Prestre 2017: 35). The link with international climate change mitigation efforts shows the public attention and political focus on climate change comes at the expense of biodiversity conservation, despite the fact that scientists have reiterated that the 2050 net-zero climate agenda is likely to fail if biodiversity issues are not integrated into the international climate agenda (Cardoso Pereira et al 2024: 315). At the same time, actions in one policy area may also negatively impact the other: development of carbon sinks (i.a. forest plantations) for carbon offsetting could come at the expense of biodiversity (Le Prestre 2017: 29).

2.5. The Global Biodiversity Framework

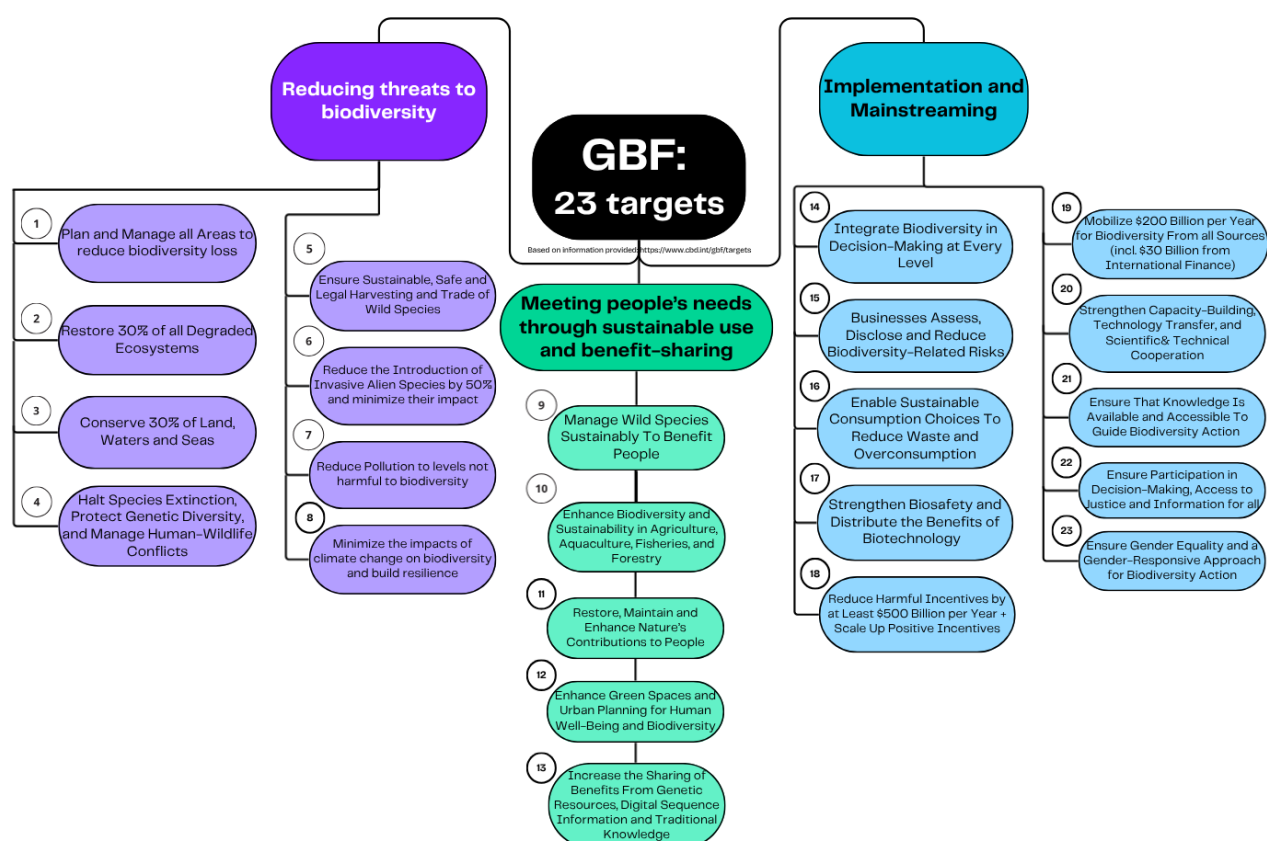
The GBF is the latest strategic effort by the CBD which aims to help achieve the 2050 vision (which has remained the same as during the Aichi Targets era, “*by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people*”). The link is clear from the working documents that the GBF is seen as an “intermediate step to 2050” (CBD/WG2020/REC/3/1 18-19), therefore directly connecting its success to that of future policy goals. Sometimes wrongly referred to as an “environmental agreement” itself (Hughes/Grumbine 2023: 1; Affinito et al. 2025: 1280), it represents a strategic plan for the implementation of the CBD that carries a strong burden: in the decade where the Aichi Targets should have reversed biodiversity loss, it has continued to rapidly decline (Hughes/Grumbine 2023: 1).

From the three previous sets of strategic goals stemming from the CBD framework, this is by far the most ambitious (Affinito et al 2025: 1280). While moving towards a 2050 vision, the GBF is mostly publicised for its 30x30 action-oriented targets to be achieved by 2030 (described in more detail in section 2.5.1. below). It should be underscored that it is intentional for no hierarchy to exist between the goals A-D (CBD/WG2020/REC/3/1: 3) and no target can individually lead to achievement of the goals (ibid: 18).

The GBF was discussed during four sessions of an open-ended working group (OEWG).³³ As evident from its reports (CBD/WG2020/REC/3/1 Annex, paras 1-3), the working group was structured in several contract groups as well as informal groups which worked on the text for different targets. The issue was then taken up in SBSTTA meetings and discussed at COP15 in Montreal, Canada (originally planned for Kunming, China hence the hyphenated name of the “Kunming-Montreal” GBF). It should be noted that the negotiations were impacted by the Covid-19 pandemic and its subsequent effects. Most notable were issues of the “digital divide” such as bandwidth and technical problems, as well as time zone differences and language barriers (the online meetings were held in English, with no interpretation) (Corson/Campbell 2023: 3).

³³ A repository of the working group sessions, as well as links to meeting documents, can be found here: <https://www.cbd.int/conferences/post2020>.

Figure 2. GBF targets overview.



Despite years of preparation, the GBF was heatedly discussed up until the last moment of its adoption. The final GBF text features almost half of the SBSTTA recommendation (CBD/SBSTTA/REC/24/2) produced in the final meeting before COP15. After a set of workshops and a meeting of the OEWG, the GBF was adopted in the early morning hours of the last day of COP15, Monday 19. December 2022, leaving negotiators “equally happy, or equally unhappy” (Tsioumani et al 2022: 2). On Sunday, 18. December 2022, new non-papers on the main items that were under negotiation were circulated by the Secretariat while contact groups were still meeting to continue their work. The morning plenary was suspended, and the evening plenary only opened on 2:54am on Monday morning (ibid).

The shift to virtual and hybrid negotiations leading up to GBF’s adoption has also been noted to have limited the ability of countries in the Global South, as well as non-state actors, to fully contribute to negotiations, culminating with an objection to the lack of perceived funding for developing countries at COP15 by the Democratic Republic of the Congo (Corson/Campbell 2023: 2). Despite the withdrawal of the objection and adoption of the GBF, tensions over parts of it still remained in the follow-up meetings. Due to the

tight timeline, the GBF targets need to be re-evaluated at least once prior to 2030 in order to try and counterbalance any issues that may arise in implementation. Global indicators are labelled ‘essential’ for this next step of summarizing progress towards targets, yet they are not designed to reflect changes on the local and national levels (Hébert 2025: 1).

While the GBF represents a renewed mutual effort for biodiversity conservation, it is by no means perfect. Multiple criticisms and contested elements will be described in the sections below to give a more nuanced view and lead into the results and discussion parts. Data shows that increasing the amount of global protected areas will not solve the biodiversity crisis, instead goals must effectively expand into multiple areas and address long-standing inequities (Hughes/Grumbine 2023: 4). Decolonial perspectives also address the fact that the protected area coverage target could reflect a new model of colonialism (Corson/Campbell 2023: 1), with tensions between countries of the Global North and Global South persisting in negotiations up until the GBF’s final adoption (ibid). Still, its Monitoring Framework is hailed as a (major) step forward compared to the ATs not only for providing a mandatory set of indicators to be considered, but for improving the national reporting through providing additional indicators for consideration, thus aiming to improve the overall implementation over time (Affinito et al. 2025: 1285).

2.5.1. Structure and reporting

While both are considered strategic plans for the implementation of the CBD, several aspects of the GBF differ from the Aichi targets. The GBF is supplemented by additional decisions by the CBD COP which are “of equal standing” to the GBF (CBD/COP/DEC/15/4 para 2), amongst them the GBF Monitoring framework in COP decision 15/5; decision 15/6 on planning, monitoring, reporting and review; decision 15/7 on resource mobilisation; decision 15/8 on capacity-building and development and technical and scientific cooperation and decision 15/13 on cooperation with other Conventions and international organisations. The COP also specifically addressed the multilateral aspect of combatting biodiversity in para 5: “*Invites Parties and other Governments to cooperate at the transboundary, regional and international levels in implementing*” the GBF.

The Monitoring Framework lays out how the CBD parties are expected to report on their progress towards the GBF targets. It is sometimes framed as an “important innovation”

(Affinito et al. 2025: 1280) compared to previous efforts as its elements are much more structured than the Implementation Decision accompanying the Aichi Targets (see above). Indicators during the Aichi Targets were kept within a “flexible framework” until the end so parties can choose what to implement. Now, the GBF monitoring framework relies on five different types of indicators which should provide clarity in that direction.

The GBF also features an overarching set of targets that can be divided in three categories: targets 1-8 for reducing threats to biodiversity; targets 9-13 for meeting people’s needs; and targets 14-23 for implementation and mainstreaming.³⁴ States should aim to achieve these by 2030, and all of them are necessary to achieve four broad goals by 2050. The GBF Monitoring Framework identifies at least one “required” indicator (headline, binary, or both) for each target that should be used to track progress in implementation.³⁵ While the obligations within the CBD itself have not changed, and parties are only legally required to submit NBSAPs and NRs, they are now for the first time expected to incorporate mechanisms for measuring the internationally agreed targets into their national frameworks. This presupposes the collection of data and metadata related to the indicators and making it publicly available (Vadrot 2026: 1).

Parties have the option of using a set of headline, binary, component and complementary indicators as well as additional nationally relevant indicators.³⁶ Headline indicators represent the overall scope of a goal and target, with a total of 26 headline indicators spread across the four goals and 15 out of the 23 targets (Affinito et al. 2025: 1282). One headline indicator can serve both for a goal and for a target, e.g. the indicator “A.1 Red List of Ecosystems” which is assigned as a headline indicator for both Goal A and Target 1;³⁷ or the indicator “B.1 Services provided by ecosystems” which is assigned as a headline indicator for both Goal B and Target 11.³⁸ Headline indicators contain

³⁴ An interactive full overview of the GBF targets, goals and their connection to the SDGs can be found here: <https://www.unep.org/interactives/biodiversity-sdgs-tool/global-biodiversity-framework.html> and within CBD/COP/DEC/15/4.

³⁵ An outline of indicators as well as their methodologies/metadata can be found here: <https://www.gbf-indicators.org> and a list of indicators can be found within CBD/COP/DEC/15/5.

³⁶ A visual representation of the Monitoring Framework can be found here: <https://www.gbf-indicators.org>.

³⁷ See the full metadata sheet here: <https://www.gbf-indicators.org/metadata/headline/A-1>.

³⁸ See the full metadata sheet here: <https://www.gbf-indicators.org/metadata/headline/B-1>.

quantitative data. Binary indicators on the other hand are qualitative measures that are compiled from a set of questions to be answered by each party (ibid). One level “below”, a set of component and complementary indicators are supposed to supplement the headline and binary indicators. 55 component and 124 complementary indicators are spread across the goals and targets of the GBF (ibid). Additionally, national indicators that parties have already established or developed remain a possibility to choose from when implementing. They serve as supplementary to the other indicators (ibid).

The broad scope of the content of the targets, and their overarching aims, remind of Raustiala&Victor’s comment on the CBD mechanism, which was albeit made in a different time. With its framework enabling diverse decision-making in different directions, states were perceiving the CBD as a “Christmas tree” treaty, “on which governments and NGOs hung many controversial ornaments - no matter how tangential to the issue of biological diversity” (Raustiala/Victor 2004: 290). Whether this problem has been solved remains to be seen. The GBF Monitoring Framework is framed as a step forward from the Aichi Target indicators, but only a thorough analysis of the 7th national reports³⁹ can determine actual efforts. Still, as shown above, several aspects of the strategic plans remain almost unchanged. Not only the content of the indicators themselves, accompanying text on “urging parties and other Governments, with the support of intergovernmental and other organisations, as appropriate, to implement” (CBD/COP/DEC/15/4 para 3) is unchanged from the CBD COP decision on the inception of the Aichi Targets (UNEP/CBD/COP/DEC/X/2 paras 3, 3a).

The success of the GBF will largely depend on states’ national implementation choices, not only in setting national policies but effectively conducting the monitoring necessary to produce the relevant data under the indicators. While states are subjects of international law and bound by the CBD, there are not the only actors that are involved in a policy’s implementation. States, alongside IGOs, NGOs, businesses and subnational authorities (federated states, provinces, autonomous regions, local authorities) that shape the dynamics of implementation (Le Prestre 2017: 20). While the GBF monitoring framework is now available and thus cited as a step forward from the times of the Aichi

³⁹ NR7 were due in February 2026, 130 submitted so far. More information here: <https://ort.cbd.int/>.

Targets, the content of many indicators has not substantively changed. According to the work of the AHTEG on indicators, even in the best-case implementation scenario less than 50% of the GBF's goals and targets are covered by the monitoring framework (Affinito et al 2025: 1280).

With this baseline, it will be made evident in the results section below that very little place is given in negotiations to the main problems identified by AHTEG, such as the substantial need of necessary data to actually give meaning to the GBF indicators (ibid). While some indicators have been successfully tested by scientists and labelled as reliable (Hébert et al. 2026: 1), more performance testing is needed for a broader scale of the indicators to ensure that tracking the GBF targets meaningfully contributes to halting biodiversity loss. For that purpose, collection of monitoring data is good, but not good enough. Amos lists four broad criticisms of the GBF while noting down that the Monitoring Framework currently lacks a comprehensive, in-depth analysis: “the emphasis on biodiversity being resources, the perpetuation of unsustainable status quos that prioritise the economic over the ecological; a lack of specific action in the action-oriented targets,” and a failure to consider broader societal transformations necessary to overturn the current status quo (Amos 2025: 191).

2.5.2. Scientific and technical considerations

The role of science for biodiversity conservation is a research topic of its own. The questions of what counts as scientific knowledge, how science is contested within scientific bodies and environmental negotiations, and which knowledge is relevant to formulating and implementing policy is a central question in environmental governance. Understanding data practices and how they can create bottlenecks and opportunities within implementation also remains crucial (Vadrot 2026: 2). Furthermore, emerging technologies are considered to potentially have a far-reaching impact on conservation and biodiversity protection efforts (Rabitz et al. 2022: 137).

Due to the considerations outlined in section 4.1. below it will not be the primary focus of this research. However, it is imperative to note that progress in scientific methods should serve as the primary foundation of CBD efforts to overcome past target failures. If the “math ain’t mathing”, in this case, if the science and data basis for biodiversity

monitoring are not up to the task, there will be little progress both in said monitoring and in action undertaken on its basis. Therefore, theoretically at least, one could argue that the establishment of IPBES and its existing assessments adopted so far should offer a better starting point to the GBF than to its processor when it comes of scientific knowledge. This could again be its own research area so for now, it will not be analysed further but will be taken into account when answering the RQ and looking through the results from the data analysis.

Science can often be presented as the ultimate justification needed for decision-makers to adopt adequate environmental policies (Le Prestre 2017: 53). There is however no unified understanding of how, when and under what conditions science influences policy and how it best should influence policy (Lidskog/Sundqvist 2015: 1). In the case of biodiversity, there is a variety of NGOs, scientific networks, advisors and professional organisations that engage in mixing scientific and political elements and support the work of technical bodies such as SBSTTA (Le Prestre 2017: 58). For the role of IPBES as an expert global assessment panel see also above in sections 2.3.1. and 2.3.2. Science's role has continuously been limited to the agenda-setting stage of policy-making (Kohler 2020: 2), but science and data are not only needed to estimate biodiversity loss - they can also serve as one of the main driving factor in combatting it.

With the new GBF monitoring framework, reliable biodiversity monitoring data has become central for effective implementation (Vadrot 2026: 1). The GBF Monitoring Framework itself places high value on the technical and scientific cooperation to fill monitoring gaps (CBD/COP/DEC/15/5, Annex I, para 4) and again urges states to “facilitate the development of guidance on the development of regional and national monitoring systems and on the implementation of the monitoring framework, including on capacity-building and development to support its implementation” (CBD/COP/DEC/15/5, para 14(a)). Scientific and technological developments can help in the monitoring efforts towards the GBF goals, but they cannot replace state action in effective policymaking, and they alone cannot halt biodiversity loss.

Scientific agendas can be perceived as driven by various structures and interests, but research shows that they are also driven by structural dependencies. Partelow et al. (2020) examine past and current dependencies of the science system that co-determine

scientific knowledge production for the case of tropical marine science (ibid: 2). These dependencies tend to reinforce strategic inequalities, particularly towards actors such as those from the global South (Tolochko/Vadrot 2021: 2). Information-sharing is perceived as a non-monetary benefit that can enhance equity, and yet in absence of adequate access to infrastructure, capacity-building and technology transfer, even open access information-sharing can simply lead to exacerbating existing inequalities (Campbell et al. 2022: 6).

New technological developments such as biotechnology serve both as scientific instruments and industrial tools that enable economic development relying on natural products. Boosting commercialisation in this area brings both opportunities and challenges. While biodiversity has been framed as a common good in the past, the ‘win-win’ situation in which nature conservation creates synergetic effects in terms of economic development (Vadrot 2018: 201-203) is very hard to fully implement in practice. Moreover, researchers have identified a shift in biodiversity politics where an increased competition between different knowledge forms is taking place (ibid: 219). Some scholars also highlight a paradox in which science is painted as necessary and yet, solving environmental problems does not seem to depend solely on accumulation of knowledge (Le Prestre 2017: 53). Le Prestre lists the climate change problem as an example case: the better and well known it becomes, the less the global political community “appears capable of addressing it” (ibid).

As environmental negotiations bring together a wide array of scientific and non-scientific actors which contribute different elements to the broader discussion, practices discussed and agreed upon in one setting may be received completely differently in another (Hajer 1995: 46). It takes time to establish trusted processes between institutions, and even then, there outstanding issues may remain unsolved. The CBD framework was of the last “key global regimes that lacked a scientific body” (Andresen 2014: 115), which has several implications. Despite SBSTTA’s existence, the scientific basis for biodiversity arguably remained weak at the beginning of CBD’s establishment. Therefore, instead of science preceding the political agreement, in CBD’s case the political agreement precedes science which should then in turn co-evolve with politics

(Le Prestre 2017: 59).⁴⁰ This could bring challenges in unifying the existing views and knowledge bases which exist (which is not the case if the science/methodology is presented from the start) (ibid).

When it comes to the GBF Monitoring Framework, it needs to be said that although it is championed as the solution to the CBD's implementation problem, many of its elements are not currently covered by any indicators (Affinito et al. 2025: 1283). To this day, the methodologies of some GBF indicators are unclear or unresolved, with states disagreeing on multiple occasions. Only binary and headline indicators can amount to a 19% coverage of the GBF's aim, and partial coverage of up to 40% (ibid). Recommended disaggregation can broaden the coverage and reduce gaps in the monitoring framework, but realistically, the outcome depends on what parties choose to report on and what type of data is available. Additionally, the nature of the binary indicators themselves is not to inform on actual implementation as they can only track elements in goals or targets that call for action (e.g. target 15) and not elements that relate to the action itself (ibid: 1284).

Targets for which only binary indicators are available (e.g. 8, 14, 16, 29, 22, 23) can only partially be covered by the current Monitoring Framework. Overall, for roughly 12-29% of the Monitoring Framework, there are no available indicators to track progress with. Further work is needed for additional indicators (ibid: 1285). Looking at other environmental 'regimes' shows that clear scientific advice does seem to work: in the acid rain regime, the ozone regime and the North sea regime⁴¹ governments seem reluctant to openly dispute factual conclusions that receive a clear majority of scientific backing (and are therefore considered "state-of-the-art" knowledge) (Andresen 2014: 117). Amos (2025: 192) is also missing a dedicated focus on supporting collaboration between existing stakeholders, more than a simple encouragement as currently found in the COP decision text. Biodiversity protection depends on a broad range of actors, and facilitating effective cooperation between them would be critical (ibid).

⁴⁰ This does not necessarily mean anything negative per say: Le Prestre lists the ozone regime as another example for this structure; but the ozone regime is largely considered to be based on an effective international agreement and therefore to be working well. It is about how the situation is handled in negotiations by delegations.

⁴¹ The Convention on Long-range Transboundary Air Pollution adopted under the United Nations Economic Commission for Europe, the Vienna Convention-Montreal Protocol regime on the ozone layer protection, and the International North Sea Conferences and OSPAR Convention.

2.5.3. COP16 and intersessional meetings

As part of the Monitoring Framework, the COP already considers the possibility for review and further development. As such, one could consider that its structural shortcomings are not hidden. COP15 considered that “*a review of the monitoring framework in order to finish its development at its sixteenth meeting, and thereafter keep the monitoring framework under review, as appropriate*” (CBD/COP/DEC/15/5, para 3). In the intersessional period between COP15 and COP16, regular sessions of CBD subsidiary bodies were supplemented by the work of several working groups including an AHTEG on indicators. COP16, in February 2025, endorsed technical updates to several headline (e.g. adding a new headline indicator for Target 22) and binary indicators as well as voluntary indicators (CBD/COP/DEC/16/31, para 1). A misconception that the Monitoring Framework was only finalised in February 2025 does not fully find a hold in the decision text. What COP16 substantially decided on is to finalise the questions available for binary indicators (ibid, Annex III). This makes sense for the compilation of the upcoming global report based on the 7th national reports due by states in 2026, but is at best only a procedural step forward. Binary indicators are indicators of progress towards measures conducted to achieve a target, not reflective of how effective these measures are to actually halt biodiversity loss.

After COP16, intersessional meetings progressed on their regular schedule. In October 2025, states came together at the SBSTTA27 meeting to discuss relevant issues with the GBF and Monitoring Framework, amongst them the structure of the Global Report to be prepared ahead of COP17. The meeting discussions focused i.a. on comments regarding the “annotated outline” of the Global Report as presented by the AHSTAG and the Secretariat: focusing the collective progress analysis on national data (India, Uruguay, Norway, Finland, Republic of Korea, Russian Federation and others), especially the 7th national reports; including a summary of the state of implementation of each GBF target based on headline and binary indicators (Switzerland, France, Denmark, Hungary), as well as a concise summary on the state of biodiversity loss (Spain) (Tsioumanis et al. 2025c: 1).

The topic of data that is needed for effective implementation was also addressed, with Uruguay and Spain stressing that global datasets cannot serve as a substitute for

adequate national data, “cautioning against conclusions misaligned with national realities” (ibid). Some states (i.e. Argentina, Colombia) addressed concerns regarding inputs by non-state actors and their quality, reliability, data fragmentation and the lack of coordination, which could potentially weaken the biodiversity data governance infrastructure. Towards the end of the SBSTTA27 meeting, many issues did not seem to get resolved. Asked by a delegate, “Am I attending a COP, or a scientific and technical body?”⁴² summarises the last days of the meeting, where plenaries and contact groups ran overtime, with delegates sitting together in the evenings to advance discussions for the next day (Tsioumanis et al. 2025d: 2). Disagreements remained up until the last day during the contact group on the Global Review, including not only its content but also the manner it addressed compliance. Several states called for language to be included which facilitated a “non-intrusive and non-punitive” nature for the report, “respecting national sovereignty and avoiding placing an undue burden on Parties, in particular developing countries” (ibid).

Despite several voices in literature arguing that climate and biodiversity should be tackled together, actions such as delegates not having SBSTTA recommend collaboration with other international conventions, instead referring to SBI as the appropriate forum for such a recommendation (Tsioumanis 2025d: 2) show that it is still not seen as an appropriate priority that requires urgent attention. Instigating procedural inadequacies for informal matters such as cooperation exchanges can limit the overall effectiveness of the CBD mechanism and lead to further delays in actual results. A similar unreadiness can be observed in the relationship towards IPBES, where SBSTTA27 delegates failed to agree on the appropriate manner in addressing the new IPBES assessments (ibid: 3). While the discussion between the words “welcomes”, “takes note of” and “encourages” may seem trivial, it shows a general divergence of opinion which is placed on the relevance of IPBES’ output, and the overall balance of the biodiversity governance framework. IPBES, as an “IPCC for biodiversity”, aims to have an authority over the scientific results it produces and to promote inclusiveness and increase participation regarding contributions toward its work (Vadrot 2020b: 18). IPBES’s relevance towards

⁴² See here for the full context: <https://enb.iisd.org/cbd-subsidiary-body-scientific-technical-technological-advice-sbstta27-sb8j1-23Oct2025>.

policymakers is vital to its functioning, as even institutionalised authority may be liquid and be transformed, or lose importance, over time (ibid).

2.5.4. Next steps

The year 2030 is approaching. The CBD's legal structure as a framework convention anticipates new scientific knowledge and changing circumstances that might lead to adapting or amending existing obligations, or setting new ones (e.g. through additional protocols such as the Cartagena and Nagoya protocols). Therefore, as problem-solving know-how grows, the CBD is fit to adapt (Bach/Martin 2023: 94). In that regard, a reinforced commitment to conservation in the form of the GBF and an improved monitoring can serve to not only strengthen the Convention's authoritativeness but actually make a difference to the biodiversity cause. While the fate of biodiversity conservation by no means rests on the GBF alone, the GBF is significant in how conservation law and policy will develop over the coming years (Amos 2025: 190), and yet it "hardly represents a theory of change" (ibid: 192).

While there is a positive trend noted in the submission of national reports in February/March 2026, simply submitting a national report is not enough in tackling biodiversity loss. Monitoring the reaction to the national reports during the upcoming negotiations as part of COP17 can help either further the hypothesis in this thesis, which will be developed below, or counteract it, so further "monitoring" of the situation (pun intended) remains necessary. At COP16, the CBD parties reiterated the notion from COP15 that a global review of the GBF must be conducted and decided its specifications within a dedicated decision item (CBD/COP/DEC/16/32). A global review of the collective progress towards the GBF implementation is thereby to be conducted at COP17 and COP19 (ibid, para 6). The global review is intended to "*culminate in a decision or decisions by the COP, including, as necessary, any recommendations to identify and address challenges in collective progress in implementation, including on the means of implementation, in particular for developing country Parties, with a view to achieving the goals and targets of the GBF*" (ibid, para 7). The basis of the global review will be a global report (ibid, para 9), and its content will be based on the submitted 7th national reports.

In this context it should be highlighted that the links between the climate and biodiversity frameworks have been mentioned above and will remain crucial to the next steps of tackling biodiversity loss. Both UNFCCC and CBD were opened for signature at the Rio Summit in 1992 and their political trajectories have shown both similarities and discrepancies. One common ‘vice’ they share are their implementation deficits. At UNFCCC COP14 in 2008, the then-Executive Secretary recognised that 50 to 80% of effective mitigation actions, and almost 100% of adaptation actions were conducted at the sub-national level (Le Prestre 2017: 30).

The UNFCCC has already conducted a “global stocktake”, in essence a global review, of its program. The CBD delegates can therefore decide whether and how much to learn from this process at their upcoming global review. While similar in their essence, the global stocktake (UNFCCC) and the global review (of the GBF) are structurally different: the UNFCCC is already reviewing its existing “infrastructure” while the GBF global review will in the least optimistic scenario be a summary of the national reports in a global report without an actual change forward. It is unclear how the CBD COP will approach any shortcomings as the global report is specifically described as “*facilitative, non-intrusive and non-punitive manner, respecting national sovereignty and avoiding placing an undue burden on Parties, in particular developing countries, with no focus on individual Parties and respecting their policy space*” (CBD/COP/DEC/16/32, para 8).

This spirit was also reflected in intersessional meetings between COP16 and COP17. When discussing the global report, states were careful to avoid a structure that will enable “finger-pointing” at any states or their shortcomings (see more in 2.5.3. above). In addition to international efforts under the CBD, regional efforts are undertaken to further biodiversity loss. As the implementation of the GBF happens on the national level, coordinated regional effort such as the EU Nature Restoration Regulation (also informally known as EU Nature Restoration Law/NRL) can help solve existing deficits (Hering et al. 2023: 1248). The NRL has acknowledged that existing EU laws and policies have fallen short in halting biodiversity loss, and without adapting those, international targets (such as the GBF) cannot be met (ibid).

It lastly should also be noted that contrary to what the implementation difficulties may point to, there is not as much disagreement between different groups (policymakers,

practitioners, scientists) on the barriers and solutions to the use of conservation science in policy as might have been expected (Rose et al. 2017: 5). In a survey with over 700 participants, the top barriers identified by the stakeholders for conservation were the lack of funding; the lack of perception of conservation as a political priority as well as the prioritisation of the private sector over conservation (including claims that nature is exploited when economic interests come into play) (ibid: 5-6) as well as insufficient communication (ibid: 7).

No claim can be made that the ineffective implementation stems from disagreement between various stakeholders. Identifying concrete reasons for implementation deficits should remain a priority to policymakers. The role that emerging technology, as well as fintech (financial and innovative technology) and big data have to play in biodiversity conservation still remains to be seen. Asking parties to simply generate more data is an issue of capacity, and often does not fix the underlying problem itself. Interoperability of different datasets, resourcing additional data collection efforts (e.g. in collaboration with non-governmental organisations) and developing tools and methods still remain as significant challenges to be tackled in the near future (Affinito et al. 2025: 1286). Fintech can support conservation efforts by making human-environment relations more visible, measurable and fixable. It is expected that while offering technical solutions, emerging technologies also bring along a pre-existing set of consolidated power dynamics amongst actors in the finance and technology sectors (Corson/Campbell 2023: 3).

3. Theoretical framework

3.1. Initial focus

In the original research design, I wanted to focus on the framings used to discuss the scientific aspects of the indicators. In this regard, I preliminary considered two theoretical concepts.

Indicators (as well as numerical measurement standards, or audits) may seem neutral at first but can increasingly function as the opposite: active instruments of governance, shaping what is considered valid, measurable, and actionable in environmental policy (Loconto et al 2024: 4). I wanted to draw on Vadrot's research on IPBES, where epistemic

selectivities are used “to structure the context within which, and the problem perception against which, actors formulate their strategies to defend specific interests” (2014: 285). Epistemic selectivities can show “how selectively-structured discourses about controversial issues contribute to the development of political and scientific self-evidences on how to govern biodiversity and biodiversity knowledge” (ibid). While I still think this framework would fit very well with the overall discussion on the indicators, it was surprising to me how the discussions in SBSTTA focused very little on the methodological and scientific knowledge issues at hand, which is why I would consider a different set of data might be more fitting to apply this concept (see section 6.4. below).

At first, I considered to combine the abovementioned theoretical approach as the basis with a second concept to divert the framing towards implementation. I found Bühler’s ecogovernmentality (or “ecological governmentality”) to be useful to formulate how ecological challenges appear to demand the presence of a central authority capable of enforcing strict interventions and controls (Bühler 2018: 32). This partially goes into the direction of the CBD Secretariat’s reasoning that the Aichi targets largely failed due to the lack of a monitoring framework. Bühler seeks for a central authority capable of enforcing an intervention and control as the solution for ecological crises (2018: 182), but this is not yet reflected in the monitoring framework: states still need to ‘control’ themselves, and there is a lack of enforcement opportunities as part of the CBD framework. While again seeming to fit the direction of the research, it seemed to me that this framing concerns one step further than what I was trying to do in this thesis. In that sense, Bühler’s radical ecogovernmentality approach as a solution to an ineffective biodiversity regime could very well be discussed - but only after the GBF monitoring framework is put to the test, which will only happen at COP17. It could well be argued that there is a need for a more strict control mechanism to actually achieve biodiversity goals (as Bühler puts it, “ecodictatorship”). It can be considered for future research, or a next step rather following the formulations in the current thesis.

As described more into detail below in sections 3.2. and 4.1. below, I decided to adapt theoretical framing to better reflect the data but also to take into consideration that most of the technical discussions take place outside of SBSTTA itself. As outlined above, this shift fits the larger criticism of SBSTTA swaying away from its mandate, which made me

consider to focus on how to explain this shift in development using the available data. How the theories in this section could be tackled by future research is further outlined in section 6.2. The original theoretical framing still might be useful for future research and using different types of data, such as focusing on the national reports: as outlined in Affinito et al (2025: 1281), the real test of the monitoring framework lies in its use by states in practice, which is the only way to truly assess its improvement of target implementation.

Regardless of that outcome, this adapted research design will look at the negotiations after the Aichi targets failure and the GBF adoption, to see how scientific and technical debates were shifted out of focus in order to achieve consensus on the GBF. It is evident from the decisions at COP15 as outlined above in section 2.5. that delegates only reached consensus by introducing unclear language in several targets and agreeing that the GBF monitoring framework will be adopted despite the unclarities remaining.^{43 44} Therefore, the adjusted theoretical framework will seek to explain this apparent shift.

3.2. Shifted focus on the role of ambiguity in negotiations as part of global environment agreement-making

It should be noted that elements from the original framing are still necessary for understanding the discussion below: the meaning of effective implementation of international commitments, as well as the role of scientific knowledge in producing targets that can actually be implemented. If something cannot be measured with existing tools, it is not fit for purpose to serve as a baseline for an implementation goal (as outlined above). While implementation is not the main focus of this research, the persistent problem of previous CBD efforts clearly lies in their lack for implementation. As a reminder, outlined in section 2 above, not a single Aichi Target was achieved during the intended timeframe (CBD Secretariat 2020: 12-17).

⁴³ Decision CBD/COP/DEC/15/5 on the GBF Monitoring Framework lists the indicators that remain unclear and simultaneously establishes an ad hoc technical expert group to advise SBSTTA on the further operationalisation (paras 8-9; Annex II).

⁴⁴ Reportedly addressed in the COP15 closing plenary by a delegate: “First things first. Let us adopt the framework and then, there is so much more to say and analyse on the road to implementation.” (Tsioumani et al 2022: 2).

Therefore, the GBF should by logical conclusion aim to positively surpass this goal by achieving at least some of its targets. Carter (2012: 261) pointedly notes the shortcoming of approaching effective implementation as ‘successful’ when an institutional framework results in a change of behaviour by states, such as reaching consensus on a contentious matter or “stricter” targets: this works on the assumption that political commitments will be implemented. Carter calls this a “heroic” assumption (ibid), which is particularly on point for previous CBD efforts.

Considering how the CBD Secretariat has framed its report on the Aichi targets while conducting the literature review and first-read-through the negotiation data, I started to consider adapting the theoretical framing to better fit my desired research direction. Generally, it follows Hughes&Vadrot’s (2023) concept of environmental agreement-making - instead of only looking at outcomes only, this conception of international environmental negotiations goes beyond their final output and argues for a focus on the ‘multiple actors, sites, and processes through which environmental agreements are made’.

A global environmental conference, be it a COP or a smaller intergovernmental meeting, is considered the “nucleus” of agreement making and observing the negotiation process and its discourses, practices and institutional dynamics help researchers analyse key moments and contribute to shaping the field of agreement-making by producing knowledge and by cultivating meaningful relationships while producing said knowledge (ibid: 13). Agreement-making looks beyond the formal negotiation setting and constitutes that the process itself has an impact on the negotiation outcome: states have been known to divert from pre-determined positions during negotiations, putting even more emphasis on a better understanding of the negotiation process. It opens the study of global environmental governance to a wider set of sites and actors and highlights the importance of understanding what happens before, during, and after the formal negotiation processes (ibid: 10). Considering agreement-making as a process further helps better reflect past struggles and remain open for future changes, keeping the research attentive to historical forces that are shaping the present and the future (ibid: 12).

In the specific case of research and as seen in the state of the art above, there is a clear benefit of extending the analysis site beyond the formal negotiation setting of SBSTTA, as substantial scientific and technical discussions actually happen in between sessions in different working group formats. Yet observing all of these discussions is a whole other topic. Through ethnographic observations collected during negotiations, struggles invisible in the final output text are brought to light (Vadrot 2020a: 234). It should be kept in mind that researchers that were not present on site during negotiations must use different types of text and data available to best understand negotiation priorities that occurred outside of their sight, piecing together multiple data sources to best “read” meeting outputs (Allan/Chasek 2023: 164-165).

I have decided to focus on the literature concerning ambiguity in IR to explain my findings. After familiarizing myself with the data and researching different theoretical concepts, this is the one that I find to stand out when looking at the GBF negotiation process. Best (2012) conceptualises ambiguities in the day-to-day actions of IOs, noting that they can pose both problems and possibilities (ibid: 674). Ambiguous policies which leave room for interpretation can create opportunities for IOs, particularly in tackling complex problems and uncertain policy environments. Best develops the argument that IOs, almost counterintuitively, choose to not reduce ambiguities of their policies and practices intentionally, choosing instead to increase them. This perception reflects the perspective of IOs and their actions,⁴⁵ which is why a similar theoretical approach but focused on actions of States acting through IOs is a better fit for this research project. While some of the classic IR theories followed the view that IOs are mechanisms through which states act, they are not actors themselves, it has long also been argued that the role IOs play can transcend what power was invested in them by their founding frameworks (Barnett/Finnemore 1999: 699-700). This research does not contradict this line of thought but still primarily looks for a theoretical tool to frame the actions of states themselves, notwithstanding that the CBD (represented through its Secretariat) is an IO that also participates in the GBF negotiations.

⁴⁵ Best focuses on the case of the International Monetary Fund (IMF)’s conditionality policies, which are revised by the IMF Executive Board. While the members of the IMF Executive Board are elected by states, the whole process of revision of the internal policies is not well comparable to analysing negotiations of the GBF indicators.

In the discussion section, I would like to situate the constructive ambiguity used to describe particular notions in GBF negotiations into the historical perspective of a recurring practice (Adler/Pouliot 2011: 7) of diverting actual discussions on technical and scientific matters outside of SBSTTA, setting a hypothesis for future research and consideration. If the hypothesis can be positively assessed at the end of this research, a more in-depth analysis into this Adler/Pouliot define a practice as the process of doing something that exhibits a regularity over time and space - reminiscent of a routine, practices are repeated and can reproduce similar behaviours (ibid). This practice is socially meaningful and recognisable, and implicitly makes the claim that ‘this is how things are’ (ibid: 7-8). Practices are performed both by individual and by communities of practice (ibid: 15). To confirm that something is indeed what it is through repeated practice requires reflexivity and judgement (ibid: 16). This gives rise to this thesis’ hypothesis that the repeated displacement of substantive technical and scientific discussions outside SBSTTA may, over time, contribute to or produce the constructive ambiguity in the negotiations.

While not directly relevant for this analysis, it should be noted that the concept of ambiguity also appears in literature on public international law, albeit with a different meaning. Goldmann (2024: 584) argues how several aspects of colonial international law have been fraught by ambiguities, using it as an instrument and deliberate strategy by one party (the colonial powers) to enable exclusion of certain subjects, sources or objects by the other party (the colonised peoples and territories).⁴⁶ The main use of ambiguity stems from the rules of treaty interpretation, as codified in Articles 31-33 of the Vienna Convention on the Law of Treaties (VCLT). In a situation of dispute, if the ordinary meaning of a treaty text is deemed ambiguous or uncertain, the meaning that best helps attain the object and purpose of the treaty shall prevail. This however does not help to determine the instrumental relationship between the ordinary meanings of a treaty text and the treaty’s object and purpose (Linderfalk 2015: 175).

⁴⁶ Goldmann uses the case of the 1904-1907 Namibian Genocide to delve into the different aspects of ambiguity and argue against Germany’s view on their past actions: even after concluding a draft agreement with Namibia on reconciliation and compensation, Germany maintains the position that it is not under a legal obligation to pay reparations for its actions.

3.3. Constructive ambiguity

It is no new finding that states are reluctant to acknowledge failure in international negotiations. Either under pressure from public reactions or internal political reasons, states often put off difficult questions after the signature, after the decision, after this meeting - in the hopes that new political dynamics might help with the current obstacles (Le Prestre 2017: 36). Jegen and Mérand (2013) analyse the concept of “constructive ambiguity” while looking at European energy policies and how ambiguity may promote European integration. Referencing Henry Kissinger in the definition that they use (constructive ambiguity as “the deliberate use of ambiguous language in a sensitive issue in order to advance some political purpose”), they gather positive aspects of ambiguity found in literature to make their case: ambiguity that reduces negative reactions and experiences in financial markets, in public administrations as well as policy reforms (ibid: 183-184). Within their research design, which is focused on the institutionalisation of the EU, Jegen and Mérand look at two main aspects: the conditions under which ambiguity is likely to be used, and the conditions under which ambiguity is likely to be constructive; by comparing two policy domains - energy and defence (ibid: 184-185).

The reason why their research design can be well applied to the CBD case lies partially in the comparative aspect, which already provides for two lines of development that a new case can be framed against. The historical aspect is another: by analysing how ambiguity strategies have failed in the past in both their domains of comparison (ibid: 186) it is easier to identify variations in the ambiguity strategies, making application to a new case easier. While their research does not only work with states’ actions which would have been my preference, their use of “political entrepreneurs” (actors which push for a policy proposal, trying to mobilise a coalition of other actors behind it) within their design can easily be adapted to a definition of negotiation party in the CBD case.

Their baseline of constructive ambiguity as an “attractive strategy when member state preferences are heterogenous” (ibid: 185) particularly seems fit to explain the intense negotiations prior to GBF’s adoption, as is therefore described in detail within section 6 below. Heterogeneity of preferences in this case can be understood through scholarly reflections on past negotiations that stalled because scientific and technical issues were too complex or because scientific uncertainty was significant (Le Prestre 2017: 36). Most

importantly, in using this framework, this thesis will aim to answer the question if constructive ambiguity was used as a negotiation strategy to enable the adoption of the GBF, and at what cost - as Jegen and Mérand note, ambiguity can be found “everywhere in politics, but it is not always used as a strategy” (Jegen/Mérand 2013: 199). The opposite of ambiguity is a strategy of “clarity”, with ambiguity appearing in circumstances where a strategy of clarity would face strong opposition (ibid: 185).

Jegen& Mérand then test their hypothesis in two empirical cases on the European level, in EU energy policy and EU defence policy respectively. They conduct an empirical comparison while tracing both policy fields over time. This thesis does not employ a comparison, but it attempts to follow an adapted process tracing the development of CBD political strategies over time. In the state of the art section above, the relevant episodes, documents and negotiations have been summarised as the basis for the analysis. Through the data analysis as outlined below, I will aim to explain the context which has made ambiguity an attractive strategy for the actors in the CBD negotiations. In Jegen& Mérand’s framing, ambiguity emerges when “preferences are heterogeneous and the (EU) legal basis is weak” (ibid: 186). This thesis aims to highlight the first element through the data analysis, the heterogenous preferences, and round up constructive ambiguity as a strategy used in the CBD. It is important to note that the state of the art section already shows that the CBD’s legal basis is weak when it comes to strengthening implementation on its own, so this does not need to be proven from the data.

Jegen&Mérand approach constructive ambiguity as a strategy. They seek to anchor it and identify the institutional opportunity structure where actors use it, but in the CBD case the institutional opportunity structure has been made clear above. The political strategies of the CBD, and more specifically the GBF which is analysed here, present the institutional structures for ambiguity to matter. The question that can then posed for further research and thought is *what exactly does ambiguity enable within that institutional structure* (e.g. for the case of the CBD, institutional continuity and functioning, but at the cost of failure to effectively halt biodiversity loss). Further research steps that can be taken under the Jegen&Mérand framework include clearly identifying the actor that mainly uses the ambiguous strategy and the actors that need to be persuaded by the strategy. This is showcased by identifying in the data situations where

actors attach different meanings to the same formulation, underscoring the heterogeneous opinions.

In the broader sense and if constructive ambiguity can be well-established through this research thesis, I consider additional theoretical work might also be able to allow for constructive ambiguity as potentially being situated within practice-theoretical IR as a type of diplomatic practice. For the purpose of this thesis, the analytical structure developed by Jegen&Mérand will be applied to the results from the available CBD negotiation data to assess whether there is evidence of constructive ambiguity taking place during the GBF negotiations.

Constructive ambiguity may serve as an effective strategy for a time, but it has its limits. The last few years have seen an unprecedented set of crises for multilateralism. From the Brexit referendum to the Covid-19 pandemic and Trump's pullout from international organisations,⁴⁷ mechanisms of international governance and cooperation are put under an increased pressure. These developments follow a rising disenchantment with IGOs that has been steadily growing since the 1990s where they are perceived as bureaucratic, paternalistic and unaccountable for their actions (Steffek 2023: 2). In fact, when applied, constructive ambiguity does come with a certain set of repercussions: if the produced outcome is indeed too ambiguous, it may fail to fabricate any action or may backfire if states request clarification (Jegen/Mérand 2013: 184). This will serve as the basis of the outlook and what can happen to the CBD mechanism if the GBF fails to overcome the habit of constructive ambiguity that this thesis hypothesises.

Future research could therefore address the likelihood and path of the negative implications of this constructive ambiguity. Additionally, with a different set of data, the original theoretical framework of epistemic selectivities could still be used for further research on this topic. Vadrot (2014: 5) distinguishes between explicit and implicit conflicts. Explicit conflicts occur openly during negotiations, while implicit conflicts remain unspoken during negotiations but are at the base of the broader field of

⁴⁷ For the full presidential memorandum from 7 January 2026 "Withdrawing the United States from International Organisations, Conventions, and Treaties that Are Contrary to the Interests of the United States" see here: <https://www.whitehouse.gov/presidential-actions/2026/01/withdrawing-the-united-states-from-international-organizations-conventions-and-treaties-that-are-contrary-to-the-interests-of-the-united-states/>.

biodiversity politics. The epistemic selectivity lens, why certain forms of knowledge prevail over others, and how implicit conflicts become explicit in negotiation settings, would be an approach well-suited for continued research.

4. Methods and data

4.1. Research design

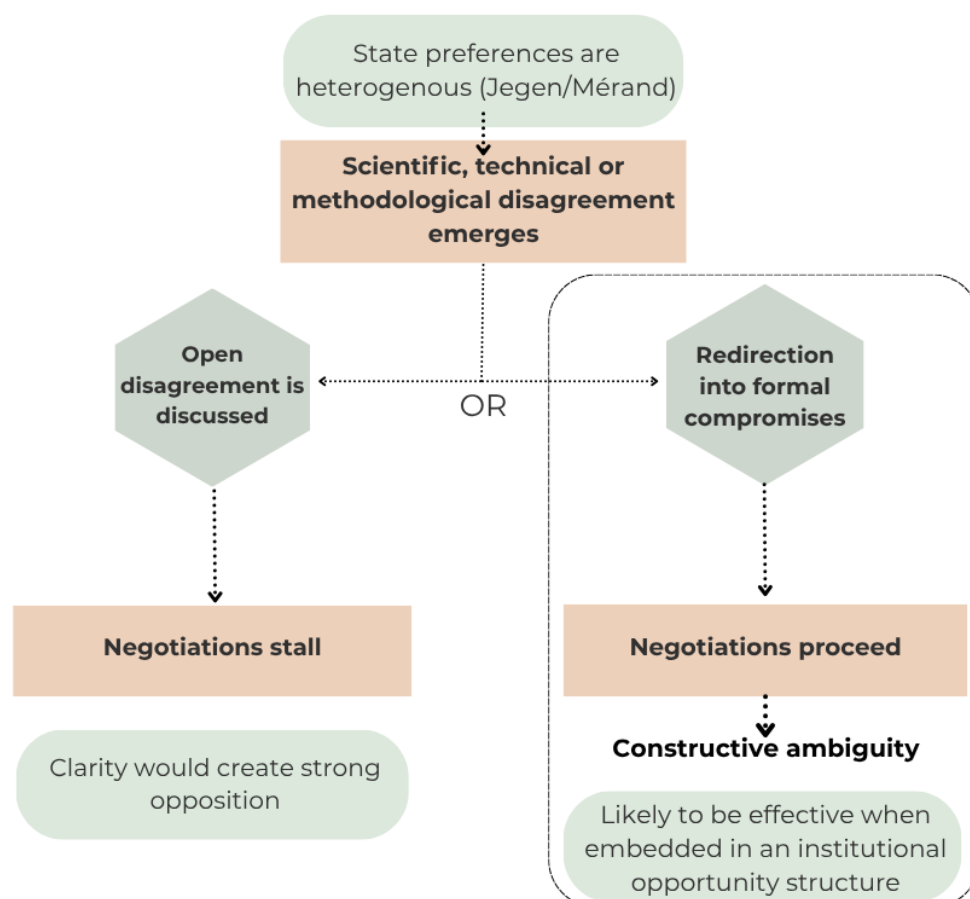
When framing the original research design, I knew I wanted to study the negotiations around the GBF monitoring framework and explore if past failures in implementation had been addressed or not. One of the first things that stuck out to me during initial research was specifically that none of the Aichi Targets had been achieved. As outlined above, the CBD had remained positive in their reporting and managed to push this perceived failure onto the lack of a monitoring framework. As the negotiations data that was available both from past data collection and from the opportunity to collect data due to the research timeframe was mainly from SBSTTA, I wanted to focus on the way that science was addressed during the negotiations, if it was perhaps politicised, or what other issues and conflict lines might have emerged that influenced the negotiation process. Before looking at the data, I had therefore followed the hypothesis that there were indeed contentious topics in the GBF Monitoring Framework

The overall aim was always to produce an output that could be useful in preventing past mistakes in the future, particularly in light of the planned global review of the GBF for COP17 in 2026. For this purpose, I started with the direction that I wanted to study conflict in negotiations around the GBF monitoring framework because I wanted to know whether it was too politicised to be successful in order to understand how to improve in the future. This remains a vague direction but it was my starting point, so I wanted to record it here. When trying to define processes of politicisation, I wanted to draw a concrete focus. Through the data analysis, it became clear that instead of turning scientific discussions political, there was a shift towards redirecting scientific and technical challenges to formal compromises through substituting them with negotiations on the monitoring framework structure. Instead of a direct debate on scientific and technical issues (in a “scientific, technological and technical” subsidiary body) most of

negotiations focused on the GBF monitoring framework architecture. This was used to coin success, when in reality it solved little of the existing issues, which is where I saw the theoretical framework of constructive ambiguity best applied to the case.

From this, I formulated the main research question on “*how international negotiations redirect scientific and technical challenges into formal compromises that constitute constructive ambiguity*” before proceeding with finalizing the data analysis and the discussion chapters. For the purpose of the research, a “formal compromise” indicates “formal diplomatic or practice-oriented negotiation outputs” and therefore reflects decisions that were achieved by reaching a consensus in the designated plenary (as opposed to an informal compromise, which while not addressed here, would refer to the same outputs reached in an informal setting).

Figure 3. Process of constructive ambiguity



To guide my own thoughts during the discussion, I also developed hypotheses, only one of which however I aim to answer for this research thesis and with this research question. I wanted to firstly prove that there was indeed constructive ambiguity happening in

SBSTTA discussions and give concrete empirical examples from the data where this was happening. Therefore, for H1: *“Scientific and technical disagreement in SBSTTA negotiations on GBF indicators is managed through constructive ambiguity, produced by redirecting unresolved substantive issues into formal compromise devices.”* For this purpose, the “scientific and technical disagreement” serves as the “independent variable”. More concretely, it is more complex than it seems - delegations are not merely disagreeing for the sake of disagreeing, and a sub-set of issues such as uncertainties in methodology, not sufficient funding for research, different understandings of science, are already analysed in existing literature and can be further explored in-depth in future research if desired. On the other hand, the “constructive ambiguity” serves as the “dependent variable” and seeks to result from noting down whether, how and where redirection occurred. Constructive ambiguity in this case is the theoretical framing that I use to interpret the “redirection, or sometimes omission, of scientific and technical disagreements”. Therefore, I can answer if constructive ambiguity is happening (H1) and how it is happening (RQ). Of course, this hypothesis is not claiming experimental causality, but it does serve as a guiding direction for the qualitative analysis.

Further two hypotheses that I consider relevant but cannot be tackled in the scope of this research are the following - for H1a: *“The greater the methodological or scientific uncertainty surrounding an indicator, the more likely delegates are to shift discussion away from substantive technical resolution and toward questions of framework architecture, reporting/implementation, or institutional competence”*. This would require (a) a more in-depth analysis of the indicator’s methodologies to connect them to negotiations, and perhaps (b) a supplemented dataset through new data collection for a more complete picture of the negotiations’ timeline. Both of these are feasible: indicator methodologies, as well as their historical development, are available online; and many SBSTTA meetings are also available online. Limitations apply when conducting digital ethnography on past meetings as opposed to following the discussions in real-time, more on this in the section below.

For H1b: *“Where scientific and technical disagreements are managed primarily through constructive ambiguity rather than substantive discussion, negotiation outputs are more likely to leave implementation-relevant issues unresolved, thereby risking weaker*

monitoring effectiveness in later review and implementation phases”. This would require (a) an analysis of the negotiations and/or output of COP17 and the global review of the GBF framework, as well as (b) an analysis of the 7th national reports submitted by CBD parties which outline the national implementation conducted under the scope of the GBF. Both of these are equally feasible as well: the 7th national reports are all available online, the COP17 negotiations will be largely available to the public and therefore open for either on-site or digital event ethnography.

In its present form, the research design still seeks to contribute to a body of literature that critically analyses the work of the CBD, and hopefully help raise possibilities of understanding how unresolved issues remain unresolved and are further referred to future review cycles rather than being solved in the present. This habit, which I summarise under “constructive ambiguity”, may undermine the actual work conducted by the CBD through the GBF (and its monitoring framework) and reintroduce implementation shortcomings which are already associated with the CBD’s previous biodiversity strategies. While acknowledging my limitations, I consider the approach and future research prospects to have an added value to the existing literature not only through the conceptual design but by its empirical backing (an element which is often found lacking when addressing environmental governance, (Le Prestre 2017: 27).

4.2. Data collection

The data collection method draws on Vadrot (2024) in which collaborative event ethnography (CEE) is used for participant observation and collaborative fieldnote taking (Vadrot et al. 2024: 153). This systematisation differs from approaches by other CEE scholars as it seeks to achieve an objective fieldnote baseline that can be analysed with a number of methodological approaches, separating data collection and analysis (ibid: 154). With this method, the fieldnotes collected are organised in such a way that would allow researchers not present on site to be able to use the data for their own analytical purposes and research questions (ibid). This method of ethnography solves existing problems that have been raised about this type of data: most ethnographic manuals address how to work with existing fieldnotes, instead of focusing on the lack of systematic structured procedure in writing fieldnotes (Emerson et al. 2011: xiv).

The aim of ethnographers to produce a written account of what they observe, which usually requires an immersion in an activity in order to turn experience to observation (Emerson et al. 2011: 21). Agreement-making processes before and after treaty formation serve as equally relevant sites of research to COP meetings (Bach/Martin 2023: 93). Observing these negotiations regardless of their size can provide an opportunity to understand power relations and discussions that are not reflected in the final output text (ibid). Oftentimes, fieldnotes are recorded after the observation of ongoing scenes, events and interactions in order to not disturb the field (Emerson et al. 2011: 24). This could reflect the quality of the fieldnotes, as ethnographers need to recall as much details as possible of what has occurred earlier in the day (ibid: 51). Participation at global environmental agreement meetings can follow this pattern, but the data collection method developed by Vadrot (2024) foresees simultaneous participation and fieldnote taking, elevating the quality of the fieldnotes due to its temporal proximity.

The first part of the dataset was collected by researchers from the MARIPOLDATA team in 2022 and 2024 using the CEE approach by Vadrot as described above. In the original data collection, one observation did not necessarily reflect one statement - instead, multiple observation rows could relate to one statement (Vadrot et al. 2024: 156). The second part of the dataset was collected by myself through digital event ethnography, slightly adapting the CEE approach by Vadrot as described above, by following the SBSTTA27 meeting “live” from 20 to 24 October 2025.

Digital video ethnography is generally described as using specific methods in relation to video recordings or livestreams on the internet, which can be shared on a number of platforms, and their use in research processes (Pink 2013: 135). Access to field is also treated differently in on-site and online cases. Practical (e.g. time zones) as well as technical (e.g. bandwidth) barriers are considered when planning online meetings under the CBD framework, which results in a schedule featuring a maximum of two sessions per day and three hours per session for online (or online-transmitted) meetings (Corson/Campbell 2023: 3).

While for digital ethnography there can also be limitations and access issues, for the purpose of this research, it can be noted that SBSTTA plenary meetings are livestreamed on UN Web TV in real-time and are further available in an online archive repository

afterwards. Some sessions which result in SBSTTA delegates negotiating in informal plenary are not livestreamed. For SBSTTA27, out of ten scheduled plenaries (five days, each with a plenary AM and PM sessions as per the structure outlined above) only two were not livestreamed (Wednesday, 22 October 2025 AM session and Thursday 23 October 2025 AM session).

For transparency purposes, it is relevant to note that delegates on site continue to work even after the scheduled plenary sessions in informal settings, which are never broadcast to the public through UN Web TV and are only partially available to participants on site.⁴⁸ Not only do informal and contact groups run late into the night, they also spill into hallways, lunch tables, hotel rooms and other spaces around the negotiation area (Corson/Campbell 2023: 3). These types of cultural implications and practices through which digital videos and images are shared is also necessary to be considered when conducting the research (Pink 2013: 136). CEE also requires having a good overview of the activities prior to the data collection (Campbell et al. 2014b: 10), so I had made sure to conduct sufficient research into the GBF beforehand and also familiarise myself with the available meeting documents.⁴⁹

I used the matrix developed by Prof. Dr. Vadrot and thus remained as closely as possible to the described approach while not being on-site. I only collected data for the substantial discussions of agenda items, and followed the adoption of the reports and reading of conference room papers live while taking personal notes, but not following the systematic field note taking method. Differing from data collection in 2022 and 2024, I initially recorded one statement per line instead of multiple observations in different lines for one statement. This makes no difference in the end result, only for the data cleaning process which is described in detail in Vadrot et al. (2024: 157-158). A total of 1786 lines of observation from 2022 to 2025 were analysed as part of the coding process described below. From those lines of observation, 1045 were from 2022 and 8 from 2024 (by the MARIPOLDATA team). They were extracted from an even larger dataset⁵⁰ by the search

⁴⁸ Even on-site, restrictions between delegate participants and observers may apply.

⁴⁹ Meeting documents are available before, during and after the session under: <https://www.cbd.int/meetings/SBSTTA-27>.

⁵⁰ The data collected in 2022-2024, as well as the data collected by myself in 2025 is not yet publicly available. Data cleaning is ongoing to ensure confidentiality of necessary aspects, and future publication could fall under the auspices of the Environmental Politics Research Group (EPRG) of the University of

term “*indicator*”. Further 733 lines of observation were collected in 2025 by me during the abovementioned SBSTTA27 meeting. I observed the full meeting but only collected data during agenda items relevant for my research question. The data is not yet publicly available as data cleaning is ongoing under the auspices of the EPRG

What would also complement the available data in the spirit of agreement-making is making use of the Covid-19 circumstance which allowed for several briefing webinars of SBSTTA working groups to be available to the general public.⁵¹ While due to time capacity it was not included in the data for this thesis, analysing this would allow an unprecedented “peak behind the curtain” for an outside non-state observer, as the content of SBSTTA working groups is usually not shared with the public in a manner outside of official meeting documentation and meeting livestreams. It could be an opportunity for further research on this topic.

4.3. Data analysis

When considering the analysis part, it should be noted I purposely chose to not apply any type of discourse analysis (DA) to the data used for the present research for several reasons. As Hajer (1995: 264) outlines, discourse analysis is not to be counterposed with institutional analysis, as they can actually be complementary to understand the insides of functioning of these institutions.

After the research design was adapted as outlined above, I considered that the mix of theoretical approaches and my desire to approach the data inductively and see what themes were used in the negotiations were better fitted with the type of qualitative content analysis as described in this section. While the science deficit problem as such remains part of my hypothesis, I would consider an adapted set of data or future research to be better suited for employing DA. The coding process is aligned with the methods developed by Kuckartz (Kuckartz/Rädiker 2023), more specifically starting with inductive category development using the available data (ibid: 50).

Vienna. When made available in the future, data will be found here: <https://envpol.univie.ac.at/databases/>. To access data used from 2022 and 2024, select CBD meetings for those years and indicate the search term indicator. To access data used from 2025, select CBD meetings/SBSTTA27.

⁵¹ See here: <https://www.cbd.int/article/briefing-webinars-sbstta-24-sbi-3>.

The first step of the coding therefore consisted of systematically coding the entire data material. Initial research into the context of the data (particularly researching state of the art, and official meeting documents) was conducted prior to the coding. As indicated in Kuckartz/Rädiker (2023: 66), the first step was to determine the goal of the category building. I decided that I wanted to form analytical categories, as my research question in the end went beyond being simply descriptive, but asking about the inter-connection of negotiation themes.

Analytical categories are defined as “*the result of the researchers’ intensive examination of the data, that is, the categories move away from the description that is provided by thematic categories*” (ibid: 36). This fits with the guidance that the categories should be closely relates to the research question (ibid: 41).

The second step was conducting several coding cycles and developing the categories (ibid: 80-81) as described directly below and in section 5. The forming and defining of the actual analytical categories for me would not have been possible in a first-pass review of the data, which is why I chose to first conduct a coding which was simply thematic, describing the content of negotiation statements, and then develop the analytical categories (ibid: 84).

Thematic categories are described by Kuckartz/Rädiker when “*refers to a specific content, such as a topic, a specific argument, a specific figure of thought, etc*”. I applied this definition of the approach for categories to the application of codes. The authors also describe the relationship between category, code and theme in detail, underlining that they are often inter-changeably used or used for different purposes (ibid: 38). For the purpose of my research, I use the term “code” for the first-pass coding and the term “category” for the second review of data where I group codes into analytical categories in the understanding of Kuckartz/Rädiker.

It is further recommended that the categories are clearly defined. This is described in the results section below in alignment with the “*General scheme for category definitions*” (ibid: 43, in Fig. 2.1):

- Name of category
- Content description

- Category application
- Examples of quotations from the category
- Differentiation from other categories

The overall coding process can be described as an adapted version from Kuckartz/Rädiker's structuring qualitative content analysis (QCA). I combined steps 1 and 3 (initial work with the text and first coding cycle) with the above described thematic coding approach, and only then did I develop the main categories (step 2) and code data again (step 4) (ibid: 102). Instead of having a "first cycle - main categories" and "second cycle - sub-categories" approach, I applied a "first cycle - thematic codes" and "second cycle - main categories" approach. In the end, the result was the same. The "adapted" phases of structuring QCA as followed for this thesis research are therefore:

1. Initial work with the text and first coding cycle (thematic codes)
2. Developing of main categories inductively
3. Coding data with the main categories
4. Analysis
5. Writing up results, document process

Figures used are manually made by myself and are not made using automated softwares. I have used Canva (www.canva.com), SankeyMatic (<https://sankeymatic.com/build/>), MaxQDA (<https://www.maxqda.com>). Appendix coding data is extracted from MaxQDA.

4.4. Limitations

The research output in its current form has several limitations. Firstly, the data I collected myself was collected through digital ethnography as described above which limited my access to the field. Some meeting sessions during the SBSTTA27 were not broadcasted on the livestream due to the sensitivity of discussions. Additionally, even on site, some meetings are closed to observers and remain open only for state delegations which limits access to the field. Furthermore, the data collected in 2022 by other researchers does not feature verbatim (word-for-word) negotiation statements

As I did not have a comprehensive overview or access to every single SBSTTA negotiation conducted either pre- or post-GBF, I cannot claim to feature a complete dataset from

which results are drawn. However, as I am conducting a qualitative analysis of the negotiation data, I consider the parts of the data that is available to be a sufficient sample from SBSTTA GBF negotiations to be able to draw conclusions (Silverman 2017: 544-546).

All of these limitations do not directly affect the research results. The data analysis, supplemented with the literature review in the state of the art chapter above, seeks to highlight a pattern in SBSTTA negotiations and also draws on secondary data. Even if the results only show part of the picture, what is relevant for my research is if I can identify sufficient data for furthering my hypothesis, which can in the future be tested with additional and more in-depth research. I also do not see it as a problem to not have been present on-site. After exchanging with the original data collectors, I am convinced that keeping a distance from the field is even necessary in some cases to critically reflect on the data. The adoption of the GBF was seen as a milestone achievement and improvement from the old framework, something that on-site participants of meetings felt reflected in the “feeling in the room” when leaving the negotiations. Looking at the data from a distance, I cannot say I truly share their joy and excitement, which is precisely what I am trying to showcase in this research thesis.

Furthermore, while the data from 2022 and 2024 was collected by multiple researchers often attending the field site at the same time, in 2025 I collected the data myself and so did not directly have any collaborative aspect in data collection. However, the CEE approach as described above is particularly designed in such a way that an individual researcher can draw on the work of others and as such should not be a setback in itself. I acknowledge that explorative or semi-structured interviews would have supplemented the analysis quite well.

It is well noted that a good approach to studying negotiations is the “triangulation” of attending a conference to collect primary data, interviewing attendees and piecing together multiple documents to be able to truly “read” and understand a meeting output (Allan/Chasek 2023: 165). Due to financial limitations and time capacity, I particularly leave the options of in-person attendance and interviews open for future work on the topic. Finally, I acknowledge that the strength of CEE lies in its collaborative nature. Previous research particularly during CBD COP meetings has been conducted in groups of up to 17 researchers (Campbell et al. 2014b: 1).

4.5. Ethical considerations

Agreement-making is not only a methodology - negotiations are also a site for world order-making, and as such, the ethics of studying global environmental negotiations (Hughes et al. 2021: 4) have been considered. The term itself aims to expand the sites and processes that are studied in connection to global environmental politics, i.a. by developing a sensitive understanding towards the role that researchers may serve in these processes, and what impact their research may hold (ibid). Through greater awareness of the stakes at global environmental negotiations, scholars 'may better serve the actors and organisations that challenge power asymmetries and steward the Earth' (ibid). Despite this research only taking place through online ethnography, the discussion section of the thesis is particularly aiming to showcase such power asymmetries and contribute to understanding and combatting pre-existing inequalities.

This research is fully aligned with the mission statement of the Ethics Committee of the University of Vienna, which is committed to research that respects the dignity and integrity of humans, animals and the environment.⁵² As this research is part of the TwinPolitics project which is funded by the European Research Council (ERC) it also follows relevant applicable EU guidelines.⁵³ The data collection in 2022 was aligned with the ethical standards of the MARIPOLDATA project, which was also funded by ERC.⁵⁴

The ethnographic data collected by me came from an open public source (UN Web TV live stream) and collected in the manner described above, it was therefore not subject to consent (Przybylski 2021: 24). There is no sensitive personal data that is handled, analysed, collected or imported further as part of the dataset. The ethical guidelines mentioned above also applied to the data collection by the MARIPOLDATA team in 2022 and 2024. Names of persons included in the data have been anonymised. For the data collection in 2025, no prior approval for attending the sessions online was necessary.⁵⁵

⁵² The full statement can be found here: <https://ethikkommission.univie.ac.at/en/mission-statement/>.

⁵³ More information on TwinPolitics: <https://twinpolitics.eu> and on the ERC requirements: <https://erc.europa.eu/manage-your-project>.

⁵⁴ More information on MARIPOLDATA: <https://www.maripoldata.eu/about/>

⁵⁵ The recordings remain available in the UN Web TV archive: https://webtv.un.org/en/search?query=SBSTTA&sort_by=newest&antibot_key=mXK6fLmImDorvRBnxcLwQ6VKv9pOtaEA69cu9lplxSI&page=1.

5. Results

After the coding process described above, I have identified five main categories that I will use to describe the negotiations. Each statement is in a second coding layer also sorted into an orientation direction category which should help lead into the discussion section and into answering the RQ.

Concrete example statements for each category are provided in the sections below. A full list of the categories which lists their sub-codes can be found in the Appendix.

Main categories:

Scientific and technical contestation: This category is used to describe statements that relate to the translation of technical uncertainties into the GBF framework, considering the selection of indicators on the basis of their methodology and data readiness; definitions; scope of measurement (of natural phenomena through science); relation to prior indicator baselines and frameworks; and well as relationships between indicators (such as i.a. alternatives/proxies; substitutions).

States do also consider mentioning direct suggestions (e.g. Colombia suggesting preference for the GINI indicator (SBSTTA24, 2022)) but resort to commenting on indicator readiness with either no call for action, or a vague comment that it needs to be worked on the national level, it needs to be worked on, or it needs development (Mexico, Argentina; SBSTTA24, 2022). Repeated references to the Aichi targets and previous indicator frameworks are included. This category shows the elements of actual methodological developments that need to be conducted.

GBF + Monitoring Framework architecture: This category is used to describe statements that mainly focus on the placement of indicators within the GBF monitoring framework. Placement can relate to the formal categorizing into headline, component, complementary, binary or other types of indicator use (see above). This category shows how methodological discussions that need to be conducted are sidelined.

While it is presupposed that this placement can indicate the readiness of indicators (and thus, that placement within the framework could combat contestations), this notion is

challenged here through separately viewing statements that actually address scientific and technical contestation (above), and statements that are simple descriptive in their content in either a constructive (e.g. Argentina, “should be complementary indicator not headline indicator” (SBSTTA24, 2022)) or a contesting manner (e.g. Australia, “we are in favour of the GBF [...] the structure is very complex” (SBSTTA24, 2022)).

Outright criticism of the framework content that reflects existing power structures and inequalities (Brazil, “deeply frustrated by negotiations prepared by very few hands to continue discussions without outcomes”, SBSTTA24, 2022) is also reflected within, as well as criticism of SBSTTA negotiations swaying from their original mandate or simple support (Colombia, SBSTTA24, 2022, we “support the indicator”).

Reporting and implementation: This category is used for statements that relate not to technical or scientific contestations and formal structure of the GBF Monitoring framework, but to referral of contestations to the reporting phase and how reporting and implementation should be factored in when considering indicators. Statements often address i.a. reporting of indicators, aggregation/disaggregation, adaptation from the national to the global scale. Questions of scale, applicability, and feasibility are often transferred to the national level when unable to be tackled in consensus during the negotiations. Other times, successful cases of national examples are listed for actions that can be considered at the global level.

Statements in this category describe the relationship between the national and global levels, including how data and indicators are aggregated from national to global scales and disaggregated for national use, as well as considerations on the different opportunities to “calculate” indicators to best bridge these two levels (e.g. South Africa, “indicators should not be calculated on a top down way, but should be aggregated from a national level and then go [to] the global level”, SBSTTA24, 2022).

For these three categories, I tried to have underlying guiding questions which helped me with the process. Statements coded within these categories roughly reflect the following:

- Category “Scientific and technical contestation”: *Is an indicator that cannot be measured useful?*

- Category “GBF + Monitoring Framework architecture”: *Is an indicator that is not part of the GBF Monitoring Framework useful?*
- Category “Reporting and implementation”: *“Is an indicator that cannot be reported on by states useful?”*

Additional categories:

Mandate boundaries and institutional redirection: This category is used to highlight the statements that refer to indicator text referencing mandates outside of the CBD (e.g. UNFCCC, Ramsar Convention), ergo situations where the CBD could be overstepping its mandate. While not covering many statements, it is relevant (along with the category “Science-policy authority”, see section 5.2. below) to understand how SBSTTA views its own competence of work in this area in relation to others’ competences.

A coding category of “*Procedural*” was applied to non-substantive statements that only relate to meeting management (e.g. opening the session/leading up to breaks/thanking the chair). Those statements are not considered useful for my current analysis.

For the data analysis of SBSTTA27, I decided to identify one additional category. It was purposeful to separate these statements from the rest, although I am conscious of the fact that it is closely related to the nature of the agenda-item that was discussed.

Science-policy authority: This category is used to describe the relationship between the CBD and IPBES, more specifically the nature of endorsement/comment of IPBES assessments conducted by the CBD COP. As such, while it describes the work of an external science-policy interface, I find it interesting to analyse not only how external work is presented but also how it is perceived by SBSTTA, which in itself should serve as a science-policy interface within the CBD framework.

5.1. CBD meetings in 2022 and 2024

For the meetings in 2022 and 2024, selected statements are presented per category below. Before the analysis, a graph overview shows the overall number of coded lines related to actors.⁵⁶

⁵⁶ In this method of data collection, one line did not amount to one statement, so these are separate lines of fieldnotes which were filtered with the method described in section 4.2. above.

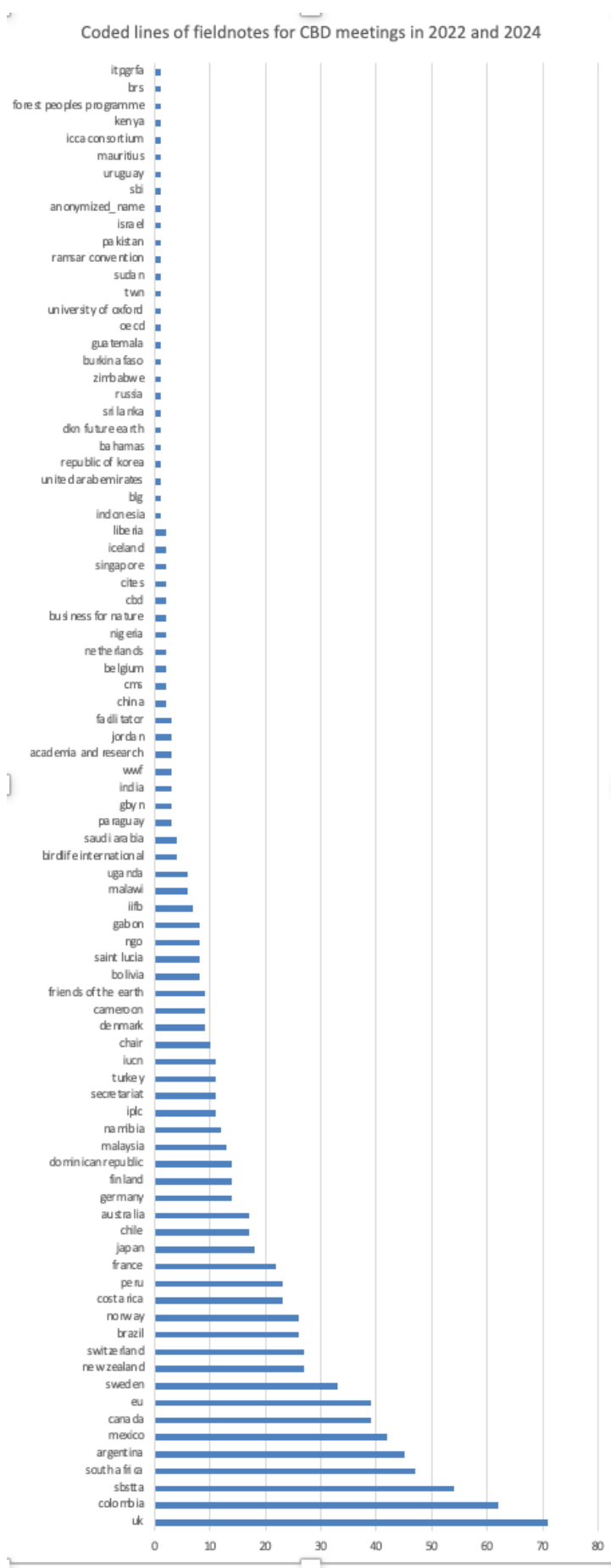


Figure 4. Coded lines of fieldnotes for CBD meetings in 2022 and 2024⁵⁷

⁵⁷ Excluding here for better visibility of the graph the statements of the Co-Lead (88 lines), as well as statements where the names of the speaker is a given personal name and needed to be anonymised.

Scientific and technical contestation:

It is relevant to note that originally, targets and goals were discussed separately from the indicators. Gradually, the discussions were intended to be conducted more and more on the parallel level, with discussions on indicators aiming to “inform” (CBD Secretariat, SBSTTA24, 2022) the discussions on targets and goals. Moreover, states (e.g. Brazil, GBF Contact Group, 2022) recognised that “We started negotiating indicators before we had the targets and that is why we are in this situation right now” (referencing the fact that there was no agreement until the last days before the adoption).

Prepared by the CBD Secretariat, states were presented with a set of questions to discuss the indicators when starting to converge the two streams of discussions outlined above:

- (1) Is the indicator relevant to key elements of the target, any other goals and targets and the framework as a whole?*
- (2) Is the indicator technically feasible to use at the national level, are national level data available, can they be aggregated?*
- (3) Is the indicator technically feasible at the global level, can it be disaggregated?*
- (4) Is the indicator ready to use now or in the near future?*

Methodology: When discussing the indicators, states very often referred to unresolved methodological issues of the indicators and were cautious to decide where situations seemed like there was a displacement of information related to feasibility, baseline methodology or indicator design. Statements could often include a positive and a negative aspect, e.g. “we support the indicator and view it as relevant to the target”, yet “the methodology is not yet developed” (Colombia, SBSTTA24, 2022); “it is important that TK has been included in the indicator”, but “there is a gap in financing and education (Sweden, SBSTTA24, 2022); “this indicator is relevant for the target, we need to work on it, but needs further developing” (Argentina, SBSTTA24, 2022). Several indicators were named as “important, but not ready to use yet” (Canada, SBSTTA24, 2022).

This is particularly relevant when taking into account that while there was intersessional work since the GBF’s creation, the additions to the Monitoring Framework conducted by COP16 in 2025 still do not cover all the relevant gaps.

It is clear from the negotiations that the non-readiness of indicators was known to the states that were parties to the negotiations (e.g. “none of the indicators cover the scope of the target” -Denmark, SBSTTA24, 2022; “not covering entire objectives of this target” - Colombia, SBSTTA24, 2022, “we would like to say that this indicator is not technically feasible at the national and global level” - Belgium, SBSTTA24, 2022). The United Kingdom clearly stated that as of the moment of negotiations in March 2022, 39 headline indicators “might not be technically feasible” (SBSTTA24).

This remained a major topic throughout the year 2022 leading up to the adoption of the GBF. Disagreements continued until the last night (see section 2.5.3). In the contact group on the GBF, days before COP15, United Kingdom noted that there were significant gaps in the proposed framework, and “many goals and targets seem to be empty” (GBF Contact Group, 2022), with some indicators being ready to use but others in need of further development. Seven days before end of COP15, Brazil noted that “there is no consensus on B because we do not agree with the suggested indicators. They do not capture well what they are supposed to capture. the same applies to C. Much more work needs to be done to refine this”.

It is also clear that almost all states considered it necessary to progress on the developments of criteria and methodologies for the indicators (Mexico, Peru, Canada, Costa Rica, Namibia, Argentina, to name a few). The Secretariat seemed to acknowledge this as well, while also noting that at least for the headline indicators, “the data or metadata would be available, the methodology has been peer-reviewed, the data can be regularly compiled” (GBF Contact Group, 2022). Connections to the previous Aichi Targets were also noted (“..this is not clear in the proposed indicator. We have the same problem as we had in Aichi”, Colombia, GBF Contact Group, 2022).

What is unclear from the data and does not align with the GBF’s intention is why subsequent work of the AHTEG, SBSTTA or other intersessional formats have not substantially developed the missing methodologies since, other than the adjustments adopted at COP16. The need for collaboration in this regard was evident, as noted by Colombia during SBSTTA24: “The CBD Secretariat together with organisations identified in the metadata sheets as reported, such as GEOBON, IUCN, among others will be providing guidelines and enhancing the capacities of parties to design and implement

national monitoring systems to support the collection of data and the calculation of headline indicators”. Increased capacity building needs and the development of technical and scientific cooperation were also underscored (Costa Rica, SBSTTA24, 2022).

Scope: When it comes to the scope of the indicators, negotiations covered a broad spectrum from wanting to address adjacent problems such as plastic pollution (referenced as a “most critical” problem effecting not only humans, but animals and wildlife, including leakages into the ocean” (Indonesia, SBSTTA24, 2022) to wanting to stick closer to the overall aim of biodiversity loss (Brazil, SBSTTA24, 2022). The topic of climate change trends and their relevance to biodiversity were also discussed, with the Climate Index suggested as part of the Monitoring Framework (Colombia, SBSTTA24, 2022).

Availability as other indicators, e.g. from the SDGs, and their readiness for use was mentioned (United Kingdom, GBF Contact Group, 2022) as well. This is linked to the fact that states (e.g. Namibia, OEWG-4, 2022) underscored that financial investments are often needed to make indicators available at the national level, even when the methodology might be available, because of missing data. Prior to the adoption of the GBF, a scientific and technical review was discussed. SBSTTA24 recommended this scientific and technical review which took place in the form of a three day workshop in Bonn, Germany (29 June - 1 July 2022).⁵⁸

Data: The issue of data availability was also reoccurring throughout the negotiations, coming so far as Colombia noting that the questions of the Secretariat (above) are useless if there is no minimum common information to go from (“it sounds relevant but because there is no information for the indicator, the data it uses or it is based upon, it is difficult for us to understand and fully answer the questions you are asking”). Some indicators particularly seemed to gather support from states while still highlighting the

⁵⁸ The workshop report is available and also features the list of participants: Only 25 state governments participated in the workshop; accompanied by two UN Specialised Agencies officials, 3 IGO representatives, 2 NGOs and 2 IPLC representatives, 1 industry representative, 2 Academia representatives, one participant labelled “other”. 10 persons from the CBD Secretariat supported the workshop on-site. See more: <https://www.cbd.int/doc/c/3190/c3f4/1d9fe2d2dedc8c8b97023750/id-om-2022-01-02-en.pdf>.

data gap between the national and global level (Mexico, SBSTTA24, 2022). It was particularly made clear that indicators should be broken down in regional and national levels, and that data gaps should be clearly stated when going forward with the GBF. Even when an indicator was considered feasible in principle, some states indicated concern where “many countries do not the technical capacities to measure this” (Chile, SBSTTA24, 2022).

This is particularly also a situation states indicated readiness to push indicators from the headline to the complementary category (see more below). Oftentimes, states clearly stated that it is unclear how an indicator would be measured, highlighting that a proposed indicator lacks “national reporting processes”, and global datasets “do not exist” (France, SBSTTA24, 2022).

Furthermore, at the GBF Contact Group prior to COP15, Namibia listed data gaps and missing data as hindering the implementation particularly of Goal A (“we need to have indicators that address the complexity of that goal”; “all other indicators cannot really work well for the time being until all parties have data for Goal A”; GBF Contact Group, 2022). When it comes to the development of methodologies, data is a key element which is related not only to policy aspects but also to financial aspects as well. Also in the GBF Contact Group, Malaysia linked indicator development to data (“we cannot do this because there is simply no data”), with a clear reference to the need of clear terms of reference for future resource mobilisation. Data availability particularly in developing countries and megadiverse countries as well as the lack of technical capacity (e.g. GIS processing) to process and report was identified as an issue (Brazil, Argentina, Saint Lucia, SBSTTA24, 2022).

Data providers such as IUCN were also available to lobby for their existing infrastructures. At SBSTTA24, IUCN noted that a “phylogenetic diversity indicator (Goal B) already used by IPBES”, and that “the data is globally available in terms of phylogenetic trees and is continuously updated. IUCN assessments are already available. We do not expect countries to undertake new tasks to implement this indicator”. This indicator did end up being a complementary indicator for Goal B, but it should be noted that states do not always readily agree with the assessment of data availability expressed by the data

providers. Data used by other Conventions (CITES, CMS) was also mentioned as ready-to-use (Germany, Mexico, SBSTTA24, 2022).

IPLC rights: Indigenous peoples and local communities were also at the forefront of discussions. ILPCs were represented at the negotiations and repeatedly called for adequate indicators that address their specific needs. During SBSTTA24, IPLC representatives were advocating for an indicator addressing land-use change and land tenure in traditional territories of IPLCs. The implementation of the indicator should be complemented by a disaggregation by type of land tenure (type of land). They requested state support in this matter. Although ultimately taking a while, this indicator ended up being adopted as headline indicator for target 22 (CBD/COP/DEC/16/31, Annex II, p.21).

IPLC representatives were also present in the meetings leading up to COP15, noting that “IPLCs are the most affected protectors of biodiversity. We play a crucial role in implementing the objectives of the Convention. The GBF rests on the protection of our rights. ...” while also linking the necessity to recognise IPLC rights to clear financial decisions and commitments (GBF Contact Group, 2022).

Many parts of statements that were coded under this category also indicate positive diplomatic formalities (“this indicator is very relevant”, “there is no doubt this indicator is relevant”, “this is relevant but we have concerns”) which reflect answers to the CBD Secretariat’s questions, however on their own are not sufficient enough to mention in terms of actual progress towards solving open issues as framed in this particular research context.

GBF + Monitoring Framework architecture:

Statements in this category reflect a large part of the negotiations. Oftentimes, states would state that an indicator is e.g. unsuited for a headline indicator, but will not specify the issue they have with it. One can relate these statements to the unreadiness of methodology, but the reason they are coded different is that these statements do not really make a suggestion for improvement of this unreadiness. Similarly, statements could indicate that “we support this headline indicator”, or “we should streamline

headline indicators” (Colombia, South Africa, SBSTTA24, 2022) but not specify further. Monitoring “of the implementation of the GBF” was considered “very weak” in the structured framework design as proposed at SBSTTA24 (e.g. Argentina), i.a. because of the abundance of headline indicators proposed which was considered unnecessary by some states (e.g. Canada).

Already during the negotiations, states expressed insights into how the indicators had been prepared. Prior to the Bonn Workshop, Brazil expressed “deep frustration” in how “these negotiations were prepared by very few hands and to continue discussions without outcomes” (OEWG-3, 2022). The GBF was criticised as a “northern field” of a “south framework”. Australia also notes that “for us, who have not spent many years negotiating the framework, it is difficult to understand how it was put together. The structure is very complex” (OEWG-3, 2022). A lot of statements related to “milestones”, a feature which was ultimately dropped from the GBF altogether, some of its contents merged into other aspects of the Monitoring Framework. It represented a bureaucratic burden adding to the complexity of the GBF structure, and it was still discussed throughout the year while being slowly integrated. Time was spent discussing if and how to cut the milestones, to cut them all together or partially, and states going back and forth with many supporting the milestones, and many supporting their deletion.

States were shown to criticise the process of negotiating the GBF and the Monitoring Framework, particularly relating to the fact that target and indicator texts were laid for discussion that were not negotiated in forum (presumably prepared by the Secretariat or friends of the Chair groups, which were referenced by group co-leads), and then states were asked to comment on indicators often in absence of indicators. The questions (see the category above) were criticised for this reason (e.g. Brazil, African Group, SBSTTA24, 2022). It is also clear that the targets themselves were negotiated first separately from the indicators, then in parallel, which could have contributed to the unclarities of the process (e.g. states indicating desire to discuss in parallel, Co-Lead noting that “we are to discuss the indicators and not the target, so we are not taking comments on the target, SBSTTA24, 2022).

However, the work of SBSTTA often seemed hindered exactly by the distinction between targets as states had inter-connected interventions to make (“we have some language

for the target, so I am not sure we can answer the question without that language being resolved”, Paraguay, SBSTTA24, 2022). The Contact Group Co-Leads received strong pushback from states on the way that negotiations were structured in this particular regard, and had to many times repeat that they do not accept any comments on targets. The SBSTTA Secretariat also seemed to be aware of the fact that the “nature of headline indicators” (SBSTTA24, 2022) were a matter of deliberation in the SBI (SBI-3 to be precise). It was explicitly stated that work of SBI should not be duplicated in SBSTTA, as their work was to “review the headline indications” while SBI’s work was to discuss how the headline indicators should be used in practice (and how they would be used for the upcoming global review). One could understand that review reflects considerations of methodology (or the “how” in suitability) of headline indicators, and the SBI should actually consider their “use” in the broader framework architecture.

Oftentimes, statements related to the fact that an indicator that was proposed as a headline indicator should instead be a component or complementary indicator, or that an indicator does not fully address the elements of the target it was proposed for or that “it could be improved” (e.g. South Africa, United Kingdom, Canada, SBSTTA24, 2022). When suggesting that another element should be addressed, oftentimes just this element was stated in words, but was not complemented by information on what methodology should accompany it for certain.

Some statements often indicate “we need...” without following up on how to get what is needed, so simply stating the lacking elements of the text. Statements that referred to such aspects in connection with desires for the GBF Architecture placement (e.g. France, SBSTTA24, 2022 “we would like for this indicator to have a matrix such as food security or else”) are quite rare. Some statements also included proposals to e.g. expand a headline indicator to include more, or a different aspect other than currently reflected. While this falls in line with the desired division of work, where the interconnectedness is missing is that these propositions did in most cases did not come with suggestions for improved or advanced methodologies.

States were asked to “construct” the headline indicators, with the CBD Secretariat urging them to do that, including “headline indicators that do not exist yet” (Mexico, OEWG-5, 2022) as well as even discussing headline indicators for “targets that do not exist yet”

(with Brazil calling it a “schizophrenic” situation, SBSTTA24, 2022). Essentially this means come up with a headline indicator even when methodology is lacking, not knowing for certain if data is available, and so on (essentially constructing a house not from the bottom up, but from the roof and going down).

The closer the discussions were to the adoption of the GBF, the more pressure seemed evident in negotiations. The CBD Secretariat referred to sending work to AHTEG (e.g. “maybe we do not need the list of binary indicators. We could send this as part of the notes for the AHTEG, so that we can have a clean text...” as well as “there is no need to have a table with elements [in the final Monitoring Framework] we have not discussed because we do not have the time” (OEWG-5, 2022, see also i.a. Mexico, United Kingdom).

The issue here particularly was the timing: the binary indicators were a result of the Bonn workshop (“the Bonn workshop had this idea”), and “parties did not have the chance to provide feedback” (EU, OEWG-5, 2022), therefore parties did not feel comfortable including the binary indicators in the Monitoring Framework at COP15. This work was pushed to COP16. The direction of negotiations was however clear, a failure to adopt a Monitoring Framework would be seen as a major step back for CBD efforts. The EU noted in this regard: “We are here to ensure that societies, economies and communities continue to thrive. That will not continue without transformative action, it will not happen if we fall below the level of ambition of the Aichi Targets. A monitoring framework and headline indicators are necessary” (OEWG-5, 2022).

Reporting and implementation:

Although taking place prior to the adoption of the GBF, negotiations already considered the matter of implementation and adequate reporting. Although implementation was a big issue with the Aichi Targets as outlined in state of the art above, this did not seem to be a large focus of negotiations. Still, there was a clear direction for focusing on indicators that “should not be calculated top-down, but should be aggregated from a national level to the global level”. Only when this is “unavoidable” should states consider the other way around (South Africa, SBSTTA24, 2022). Most of the statements in this category reflect this preference, indicating the current or future status for indicators (e.g. “it can be

aggregated at national level after capacity-building. It could be used in the near future”, Peru, SBSTTA24, 2022). References to the Aichi Targets and difficulty in their implementation was only mentioned in very few statements.

Reasons for flagging indicators as problematic could be a limited consideration in certain areas, e.g. “this indicator does not consider freshwater fish, only marine, and the estimation of the stocks in this issue quite problematic”, and the lack of possibility to disaggregate at the subnational level and be compared between countries (Colombia, SBSTTA24, 2022). Suggestions were also made for some indicators to be disaggregated by sector (United Kingdom, Paraguay, SBSTTA24, 2022).

Indicators must be technically feasible at the national level for reporting and implementation to happen (South Africa, SBSTTA24, 2022). Some states mentioned that methodologies used in targets (e.g. Target 14, System of Environmental-Economic Accounting (SEEA)) are not used in their country and thus would be hard to use the specific assigned indicators (Dominican Republic, SBSTTA24, 2022) or expressed interest in checking how many countries actually use SEEA (South Africa, SBSTTA24, 2022). This was part of the negotiations prior to the adoption. SEEA is in the end now also part of the GBF Monitoring Framework.

Finland also expressed the opinion that indicators are useful “when based on sincere reporting” (SBSTTA24, 2022), addressing also the issue of data reliability which is crucial for the actual impact of the GBF. This particularly relates to monitoring solely planned through corporate sustainability reports which is closely questioned (Sweden, SBSTTA24, 2022). The methodology of the related Target 15 remains disclosure-based, so some of these concerns remain. Also on this matter, IPLC representatives noted their special character and insisted on minimum standards that GBF should fulfil towards their community. The EU also spoke on the inclusion of nature-based solutions in the indicators (SBSTTA24, 2022).

There are also positive statements in this category, particularly relating to indicators with already existing methodologies that countries are already reporting on. Even in positive statements and well-established methodologies, cases were raised where these methodologies do not cover all existing diversifications available, e.g. the realities of

mega-diverse- countries are not covered (Australia, SBSTTA24, 2022). There was also a discussion around how to include national indicators in the GBF. States were very much against a clear framework of national indicators for the GBF (Costa Rica, SBSTTA24, 2022), and the final text also features a mention of national indicators only as voluntary and supplementary. Colombia indicated the “essential need” for an “enhanced mechanism for planning, monitoring and review”, while “strongly supporting a section on responsibility and transparency” (Colombia, United Kingdom, OEWG-4, 2022).

Realities of implementation were also shared, e.g. Bolivia speaking about preserving “what we already have in our countries” and sharing their experience to protected areas: *“...it is very difficult for many developing countries to strengthen the good management of protected areas. Considering that protected areas are trying to create sustainable livelihoods, considering the needs of also developing countries of address issues of eradication of poverty in protected areas, it is really key to connect the provision of finance for strengthening the protection of these areas in developing countries...”* (OEWG-4, 2022). Singapore shared their efforts in developing and protecting biodiversity, by launching their national strategy 2030 and transforming their city by finding innovative ways to integrate biodiversity in city life. This includes providing access to nature, planting 1 million trees, improving the carbon footprint, a better air and water quality, improve coastal resilience by strengthening the population of coastal mangroves. Singapore also shared the successful development of the “Singapore Index on City Biodiversity”, and noted they hope “this index might be useful for others” (High-Level Segment, COP15).

Mandate boundaries and institutional redirection:

While negotiating, states also reiterated their boundaries when it came to negotiating areas that would either fall outside of the CBD objectives (e.g. to not discuss the “high seas when there will be a High Seas treaty”), or are part of existing CBD protocols (e.g. Cartagena, biosafety), or refer to areas that would require consultations with different national focal points, particularly on resource mobilisation and finance.

References to other Conventions (e.g. Ramsar Convention, CMS, CITES, UNFCCC) are also mentioned in this context. Some of them are also mentioned within other categories

(e.g. data availability (scientific and technical contestation) above) regarding the opportunities they can provide, but the question of “who can negotiate what” also comes up when discussing if a certain issue should even be part of a GBF indicator. A liaison group of international biodiversity governance (BLG), made up of representatives of several environmental conventions (e.g. CITES, Ramsar Convention, CMS, International Plant Convention, International Whaling Commission) was present at negotiations, with a mandate to facilitate cooperation and “full use and action under each convention” for a best-possible alignment with the GBF (Joint Plenary Opening, Geneva Biodiversity Conference, 2022).

Overall, this category also shows the limit of negotiations. Those actors negotiating the GBF come to the negotiations with a certain mandate and can make decisions reflected on that. Insinuating drastic changes to appear on paper as opposed to previous CBD strategies fails short when considering that those negotiating are not only well aware of their mandate, but come with a specific arsenal of very limited possibilities (delegates negotiating in SBSTTA or working groups are oftentimes not high-level officials).

For the meetings in 2024, only very few statements were available in the negotiations dataset about the indicators. Those available refer to states not yet having started with monitoring the GBF (Mexico, COP16, 2024) and states starting to identify the relevant data for reporting (“how are we going to collect all the data, how to analyse and how to store it”, Uganda, COP16, 2024), conducting assessments for monitoring capacities for the relevant data (South Africa, COP16, 2024). Related to the monitoring capacities, South Africa shared their process and challenges: *“We gather all the data needed for the headline indicators, process them so they link to the indicators, then develop a dashboard for data sharing. We meet a lot of challenges, such as data sharing agreements, data science capacity, server space for database and dashboard, etc”*. This is particularly relevant when thinking about the timeline of the GBF, and the necessary resources and technical capacities needed to progress with implementation.

As part of the opening day of COP16, the Alexander von Humboldt Biological Resources Research Institute in Colombia shared several of its efforts alongside the Colombian

government in establishing the data needed for adequate monitoring. In that context, their intervention is very relevant and has wide-reaching implications for the GBF Monitoring Framework:

“There is an ongoing process figuring out which data and variables to streamline across regions within Colombia. There is a lot of discussions about data gaps across countries, but this is also important for [data gaps] within countries. We also have a lot of indicators for implementation, but not a lot on the impact that these measures have had on biodiversity itself. As the Humboldt Institute, we do only provide some of the data, other data comes e.g. from the Agricultural Ministry. So we have a lot of bits and pieces and we need a lot of capacity to make it coherent. But having this capacity need to be national because if we want e.g. a mayor in a local town to stick to the GBF, we need have a lot of collaboration. we believe both globally and nationally, things need to be built from the bottom up and a lot of work needs to go into standardisation.”

5.2. CBD meetings in 2025

Otherwise, the examples from the other categories are provided below. Of course, the context of the SBSTTA meeting in 2025 differs from that of the meetings in 2022. While those were mainly focused on reaching consensus for the GBF and initial set of indicators, in 2025 discussions followed some unresolved topics but mainly focused on the structure of the global report, and thus the basis of the global review for the GBF. The way that this matter was approached during the meeting is also critically reflected.

Delegates from 92 CBD parties were present for the meeting, as well as members of civil society. The aim of SBSTTA meetings in general is to provide recommendations to the COP, and also for this one the SBSTTA Chair stated his desire to provide ‘clean’ (ergo unbracketed) recommendations to the COP. In his opening statement, he stated that “*our [SBSTTA] task is to ensure that our deliberations are technically sound, practical and implementable*”. The main goal of this SBSTTA meeting was to discuss the structure of the global report, which would form the basis of discussion for the global review. In this regard, the structure of the report did not relate to its content but mostly to descriptions of its content parts as part of an “annotated outline”.

Coded statements per actor SBSTTA27 Day 1, 2, 3

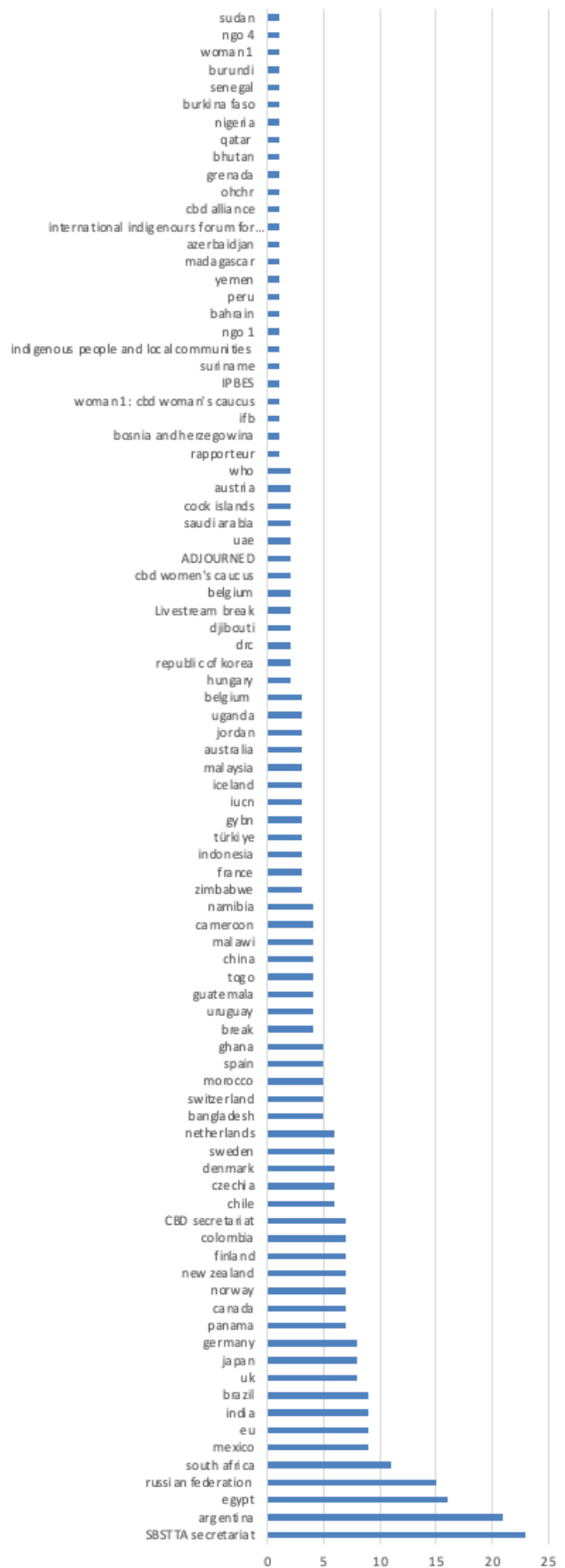


Figure 5. Coded statements per actor SBSTTA27 Days 1, 2, 3⁵⁹

⁵⁹ Excluding the statements of the Chair, which are also coded but with “procedural”, as well as other non-verbal statements or interruptions.

Scientific and technical contestation:

At the beginning of the meeting, the CBD Secretariat clearly frames the work of the SBSTTA to have a scientific and technical focus: SBSTTA “*must provide clear guidance on the scientific and technical needs to support the GBF implementation, including through the crucial strategic review of our programs of work*” by “*advancing the critical work on the scientific and technical basis*”. When discussing the progress on the indicators, states seem aware of the fact that 2030 is nearing and that it is the time of a “key juncture in reviewing our collective progress”, where a global review based on a clear global review is important, but “a good outline is meaningless without the data and information that will underpin the global report” (United Kingdom, SBSTTA27, Day 1, 2025).

The global report was also noted as “well placed to provide scientific input, not just on identifying the gaps and challenges, but also on the best available science, on the most effective actions to address them”. Many statements reiterated the importance of submitting the 7th national reports on time. The national reports were viewed by some states to be the “primary source of information” for the global report (Norway, SBSTTA27, Day 1, 2025). Other states saw an issue with this, considering that “this assessment should be able to take into account all relevant sources, where relevant and applicable, including but not limited to national reports and indicator data” (New Zealand, SBSTTA27, Day 1, 2025).

Which data should be used was continuously coupled alongside with the discussions on the structure of the report (e.g. Russian Federation, SBSTTA27, Day 1, 2025, “in these conditions, the review should have a special section about the limitations to the preparation using global data, it would be possible only to use information from verified sources above all materials seen by the states beforehand and approved by them”). The data that stems from outside national reports “might not be the same quality and reliability” (Argentina, SBSTTA27, Day 1, 2025). Here, opinions were divided between states wanting to focus on the national reports and those wanting to expand the sources (e.g. Finland, SBSTTA27, Day 1, “importance of considering other contributions, such as those by non-state actors, including but not limited to indigenous peoples and local communities, civil society and the private sector, as well as the international environmental agreements and organisations”). Similarly, the development of new

indicators that are GBF-adjacent,⁶⁰ such as those for biodiversity and health, the view was expressed that focusing should lie in proactive prevention instead of recovery, and that indicator methodologies should reflect the application to national and local levels.

Regarding data, it was noted that national reports are likely to contain disparate data, so that a global synthesis made by international organisations is also needed to aggregate global trends. Some states warned for exercising caution when trying to use global datasets as a substitute for national data, as this can lead to skewed outcomes (e.g. Uruguay, Spain, SBSTTA27, Day 1, 2025). Science and data were reiterated as “underpinning coherent policy responses” (Uganda, African Group, SBSTTA27, Day 2, 2025). The matter of definitions of new concepts was also addressed, i.a. Togo on behalf of the African Group noting that “there is still no consensus definition of biodiversity spatial planning section, since this concept is new”, and taking initiative to further the discussions “[we] would like the draft decision to address this gap” (SBSTTA27, Day 2, 2025). In terms of efficiency, New Zealand noted that when updating work programs, delegates should be careful to not “just create endless churn and ongoing revisions to all of the work areas. Instead, we should ensure that our approach to updating other work areas is focused, prioritised and time limited” (SBSTTA27, Day 2, 2025).

Discussions related also to the possibility of establishing new task forces and the coherent engagement with other subsidiary bodies and their work. But the matter of personal and financial capacity and limits was clear, with the approaching “deadline” of 2030 states were mindful to focus any plans of work to only the utmost necessary work required for the implementation of the GBF. Other matters such as risk assessment, guidance material on living modified organisms, genomes and such were discussed following the work of expert groups, in preparation of the work prior to the upcoming COP17. Particularly in this regard, Austria noted that caution is required as “technology is developing at an ever-increasing speed, and we think that it's necessary to adapt to this situation by continuing the discussion on possible guidance for risk assessment and risk management” (SBSTTA27, Day 2, 2025).

⁶⁰ Should take into account the GBF but themselves are not part of the Monitoring Framework; however, following these intersessional thematic development processes may see some of these indicators integrated into the GBF either at COP17 or COP18.

It was particularly evident here that due to time and capacity reasons, discussions on actual methodologies or scientific and technical issues are still not discussed in SBSTTA itself. Almost every area of discussion saw a type of expert/liaison group prepare the work alongside the Secretariat, with the role of SBSTTA being to decide on a “clear and structure” “technical scientific roadmap” (Colombia, SBSTTA27, Day 2) which can then be in practice developed outside of SBSTTA.

However, this process was also challenged. South Africa on behalf of the African Group noted inconsistencies in the work presented before SBSTTA, highlighting “the need for more effort to address all deficiencies that led to such results”, with examples for efforts to address these deficiencies being “enhancement of institutional capabilities, capacity building and resource mobilisation” (SBSTTA27, Day 2, 2025) as well as “regular knowledge exchange” (Ghana, SBSTTA27, Day 2, 2025).

Overall, towards the end of the meeting, as discussions became progressively bureaucratic, the Chair had tried to reel in the negotiations back to the core topics of SBSTTA. Delegates also reiterated the fact that if a scientific and technical body cannot make up its mind on a scientific and technical issue, then there “we have a problem of credibility” and “set a terrible precedent in SBSTTA”. The Chair’s repeated words echoed the concerns in this regard:

“...just to remind that we are losing some time on non-scientific elements. SBSTTA, as you know, is a body that gives scientific and technical and technological advice, and we are spending a lot of time on elements that don't necessarily have anything to do with deep science. I would like to make a proposal: Anything that is outside of science, we could put that in brackets and then move forward.

[...]

We should only be discussing science. We will spend time on that. If the issues are not scientific, if it's to encourage, invite or the like, then we will put it in brackets and we will move forward. Do you agree with me? And I would ask the Secretary to read once again and whatever is not directly related to science, we will put in brackets and then move forward.”

GBF + Monitoring Framework architecture:

The structure of the GBF was critically assessed in negotiations, noting that although existing, the “comprehensive suit of headline indicators and other parts of the Monitoring Framework, [many of which] are still being refined” (Indonesia, SBSTTA27, Day 2, 2025). Of course, the core structure itself was not debated in a way that can mimic 2022, however there were several negotiation statements referring to the already existing “architecture”. States discussed i.a. the harmonisation of programmes of work under the CBD framework to be best aligned with the GBF.

The existing architecture of GBF was not directly criticised, but indirectly states were very cautious of the existing time pressure with 2030 approaching, with Canada noting: *“But looking at the proposed approach, we fear we are not bold enough as parties. We need to ask difficult questions. We agree the current activities contribute to the goals and targets, but are they all doing so in a meaningful, substantive way? Are we focusing our collective time and limited resources on the areas in most need of support?”* (SBSTTA27, Day 2, 2025). Strengthening regional and sub-regional cooperation, enhancing capability and assessing financial resources was noted as “critical” (China, SBSTTA27, Day 2, 2025) to achieving the targets of the GBF.

The main discussions during this SBSTTA27 meeting that related to the GBF architecture was the discussions about the global report. The global report which serves as the basis for the fourth global review of the GBF was seen as an essential matter in this meeting and as necessary for implementation of the GBF, with states spending a lot of time discussing a draft annotated outline of this report. Issues considered were the quality of the data in order to promote a “balanced and inclusive global review” while reflecting ongoing challenges in reporting by some states (Zimbabwe on behalf of the African Group, SBSTTA27, Day 1, 2025). The global review is essential because it is considered as a factor to “accelerate GBF implementation” (Japan, SBSTTA27, Day 1, 2025).

The global report is further thought to be a step towards understanding the relationship between the national targets and the global targets in practice. Such which targets are covered by each country's goals, which targets are inadequately covered and which targets need additional support. However, it was clearly mentioned by many states that

they want to avoid a “finger-pointing” exercise and highlight challenges e.g. by one specific country. Japan also noted that they would like the report to highlight positive and successful cases (SBSTTA27, Day 1, 2025). The goal is to have a “comprehensive fact base” on the state of implementation of the GBF (Switzerland, Day 1, 2025), in order to know how to proceed further. The GBF timeline was considered one of the main challenges alongside financial aspects (“it took us almost a year to make people understand what’s GBF”, Egypt, SBSTTA27, Day 1, 2025). Some states also focused on the matter of missing data, arguing that the global report should have a chapter on “collecting data and reducing the data gap”, for which new projects and research initiatives might be needed (Bangladesh, SBSTTA27, Day 1, 2025).

For several agenda items, particularly when negotiating the structure of the global report as the basis of the global review, negotiations became increasingly focused on “line-by-line text-based negotiations”, where the Chair again had to try and bring discussions back to the core SBSTTA mandate: “We’re not to the stage of negotiating text here, and I would remind you of SBSTTA’s mandate. It’s scientific, technical and technological, and we mustn’t reopen negotiations here as if we were in the COP.”. Criticism also related towards the delegates’ addressing the Secretariat’s shortcomings (e.g. agenda of the meeting is too big) but at the same time, these same delegates spend their time “leaving everything in brackets for COP to deal with”. Mexico also clearly reiterated Norway’s criticism and noted that “SBSTTA is not a mini COP, and by putting brackets in like this, we are stealing the thunder of COP”, advising the SBSTTA should not be doing the job of the COP and instead should give scientific advice. This related particularly to the matters of developing the new, GBF-adjacent indicators (e.g. biodiversity and health) that will also be discussed in other COPs such as the UNFCCC one.

Reporting and implementation:

The CBD Secretariat noted that they can account for “progress” as “55 parties have submitted updated or revised national biodiversity strategies and action plans (NBSAPs) incorporating national targets. To date, a total of 3300 national targets were submitted by 140 parties to align with the GBF”. However, states did address implementation burdens

carried by developing countries “endowed with rich mega biodiversity (Indonesia, SBSTTA27, Day 2, 2025). And what the Secretariat is calling progress, states (e.g. Egypt, SBSTTA27, Day 1, 2025) call “only” 55 states, arguing that the trend of submitting revised NBSAPs is quite slow (Canada, SBSTTA27, Day 1, 2025). The necessity for adequate financial resources for GBF implementation was noted in multiple instances. Guatemala also echoed the statements of several states by noting that not submitting national reports is not a lack of commitment but a lack of adequate financing and “limited institutional capacities to meet the deadlines for the national reports, and this is something which should be addressed in the global report (see above also; e.g. also Bosnia and Herzegovina, SBSTTA27, Day 1, 2025).

The importance of the national reports, supplemented by “relevant UN and partner assessments” (Indonesia, SBSTTA27, Day 1, 2025) was repeatedly mentioned by many of the states. They underlined that the nature of collecting progress should be a facilitative, non-intrusive and non-punitive process, minimising additional reporting burdens (particularly for developing countries). As such, it seemed that while reporting was hailed as the pivotal step in ensuring progress, issues in reporting were already coming through the statements of many states (lack of financial and technical support, limited institutional capacities were mentioned repeatedly).

On developing additional elements for reporting, e.g. the GBF-adjacent indicators for biodiversity and health, Jordan noted that ‘capacities of the developing countries in particular’ should be taken into account, including ‘provision of resources to help and build the national capacities’ while taking into consideration ‘regional specificities’. Other states considered “new guidance” is insufficient at this time, preferring instead to focus on existing mechanisms (e.g. New Zealand, SBSTTA27, Day 2, 2025).

Cross-sector cooperation, including between related organisations (WHO, FAO, WOA and UNEP) was underlined as necessary for the implementation of the GBF (SBSTTA27, Day 3). The Democratic Republic of Congo, among other states, also raised “*calls for support for recognition of the roles of traditional knowledge of the indigenous peoples and local communities, and to take those into account*” when implementing (SBSTTA27, Day 3).

Mandate boundaries and institutional redirection:

During negotiations, there was particular relevance put on “urgent, effective and transformative action at all levels, in all sectors and from all actors” (Norway, SBSTTA27, Day 2, 2025) and a call for strengthened policy coherence and synergies “across the Rio Conventions”. It was reaffirmed by delegates that climate and biodiversity are challenges that should be tackled together. Some inclusions of broader other frameworks (e.g. SDGs reference, references to Inter-American Court of Human Rights) were removed from the final negotiated texts, with a reference from some states that only “references to multilateral agreements on the environment” are appropriate (Argentina, SBSTTA27, Day 2, 2025). Other delegates called for linkages between biodiversity and climate change to address real life concerns “beyond the conventions” (Uganda, SBSTTA27, Day 2, 2025), also calling for not minimising discussions to simple bureaucratic matters of mandate.

Civil society engaged in discussions warned from the increasing negative impacts of climate change on biodiversity, warning that “false solutions, market based approaches, [carbon] offsets and techno fixes” can destroy biodiversity as well as postpone urgent climate action (SBSTTA, Day 2, 2025). Work of other international organisations (e.g. FAO) was noted as relevant, with a caution to not duplicate such efforts in order to save time and resources. On the matter of chemicals and pollution, some states proposed separate fora such as ad hoc expert groups for these discussions, others preferred focusing on the work of the newly established intergovernmental science policy panel on chemicals, waste and pollution. Particularly with the time pressure of 2030, the possibility of “partner organisations” supporting areas of work was seen as necessary to best conserve resources and time by multiple delegates, in order to avoid duplicating existing efforts on the international, regional and national levels.

Science-policy authority:

The CBD Secretariat is very welcoming to the work of IPBES, calling it “tremendously important” (SBSTTA27, Day 1, 2025). While it was first introduced in a mostly positive light to the SBSTTA27 meeting, once the discussions on the SBSTTA output began there was a very strong division between delegates on how to best describe the work of IPBES. The

Secretariat had prepared a document which was positively “welcoming” the work of IPBES. This aligned with the desire of some states, but was quickly called out by other states (e.g. Russian Federation, Argentina, Brazil, India, SBSTTA27, Day 3, 2025) which stated that their comments were completely not taken into consideration in the drafting process. Citing the fact that they have not had the chance to study the new thematic assessments in detail, they were strongly against “welcoming” the work of IPBES, instead wanting to include “take note” in the document. Others, such as Egypt and Malawi quickly countered this, saying that it was actually a CBD request to conduct these assessments (SBSTTA27, Day 3, 2025) and that they “deserve welcoming”.

Although this discussion may seem bureaucratic, it actually shows the direction towards the work of IPBES as a science-policy authority that has larger implications than simply the use of the word. The Russian Federation specifically noted that “this is not the first time this discussion is happening” and referenced the last CBD COP while also stating that there “is no universal approach to all assessments, each assessment has to be dealt with [separately]” (SBSTTA27, Day 3, 2025). There was a lot of back and forth on the wording (i.a. welcomes, takes note, encourages, with almost a full 3h plenary session being used for this specific question). Norway criticised this conduct, citing that “*IPBES is to CBD what the IPCC is to the UNFCCC, the knowledge provider that can enable SBSTTA to come with recommendations, scientific advice that can be taken at the CBD. So we have to try to keep these discussions unpolitical. They are seemed to be based very much on policy, politics now, more than on scientific basis.*” (SBSTTA27, Day 3, 2025).

Particularly also for issues where there seemed to be concrete and well-documented evidence in terms of science (e.g. invasive alien species) and no scientific doubt about the results, issues were still left bracketed in the SBSTTA27 negotiations almost until the end of the meeting. Criticism of delegates of this conduct (see also comments on the ‘architecture’ in the category below) considered the fact that it is an issue, for which there is “incredible knowledge, about what needs to be done, there is materials, training databases”, what is the value of SBSTTA putting brackets on a text. IPBES was praised for “doing their job” in providing a global assessment on invasive alien species and the word “unbelievable” was mentioned in connection to the fact the SBSTTA considered bracketing text for matters where scientific conduct was actually quite clear.

6. Discussion

For the purpose of my research, I wanted to understand ‘how international negotiations redirect scientific and technical challenges into formal compromises that constitute constructive ambiguity’ through the case of GBF negotiations. The results derive directly through primary data from the negotiations, collected through event ethnography and focused on the wide range of actors, sites and processes that contributed to the creation of the GBF and its Monitoring Framework. The concept of constructive ambiguity as a strategic process is adapted to fit the current research orientation.

6.1. Conditions under which ambiguity is likely to be used

Jegen&Mérand note that ambiguity can be found in different areas of politics, but is not always used as a strategy. In doing so however, it can prove an attractive strategy for when preferences appear heterogenous. Where the opposite of ambiguity, clarity, would face strong opposition, the need for ambiguity arises. In the case of the CBD framework, the GBF negotiations started from the problem point of the Aichi Target failure. The scientific uncertainty of how to progress was significant.

It is therefore identified that the negotiation contestation was not in the element of political will, but in the element of scientific and technical contestation. This is hereby used as a broad term to define the uncertainty in how to proceed when the political will becomes disconnected from the practical implementation of the CBD biodiversity strategies (there are a lot of indicators for implementation, but not a lot on the impact that these measures have had on biodiversity itself).

The institutional setting of the CBD framework allowed for the problem point to be discussed in various settings, i.a. the SBSTTA, as well as OEWG meetings and dedicated workshops. The adoption of the GBF and the Monitoring Framework served as the starting point for further negotiations in the same or similar settings, as many elements remained open (e.g. binary indicators agreed upon at COP16, further discussions on indicators proceeding in the intersessional period before COP17). While the Monitoring Framework itself is framed as the solution to the problem point of the Aichi Targets failure, this

research challenges this notion by drawing attention to elements of the negotiations which point to the fact that it is actually a result of an effective ambiguity strategy.

The political pressure to agree on a strategy after the Aichi Targets failure was clear. The then-EU Commissioner for Environment, Oceans and Fisheries spoke towards the COP15 and indicated that societies, economies and communities will not continue to thrive without transformative action, and this will not happen if the new CBD strategy falls behind the ambition of the Aichi Targets. Biodiversity challenges are recognised as part of the triple planetary crisis alongside climate change as well as pollution and waste management.

A Monitoring Framework, for which the headline indicators which are considered mandatory for all states to use, was considered essential as a step forward for combatting biodiversity loss from the Aichi Targets failure. However, CBD parties were open to using terminology of the Aichi Targets indicators in the GBF negotiations. If existing indicator methodologies were available and useful, duplication of efforts was to be avoided, and these indicators were to be used when fitting.

Negotiations saw a focus on headline indicators, a mandatory set of indicators that are envisioned as ready-to-use by every CBD party in their national reports. Headline indicators provide the common ground for national data that is reported to be aggregated into the global level and help assess progress towards the GBF goals and targets. These indicators are supplemented by complementary, component and national indicators as well as binary indicators which provide a structured form of qualitative reporting. The effectiveness of headline indicators was a subject-matter in negotiations up until the last days of COP15, as well as the failure to adequately acknowledge the rights of IPLCs.

The discussions around the Monitoring Framework, although arguably founded in science and methodology, consensus on the scientific and technical aspects proved incredibly difficult. Not only was there an issue trying to discuss indicators for matters which lacked the basic data infrastructures (with CBD parties saying they cannot discuss some proposed indicators because there is simply no data), the whole timeline of discussing the GBF and its Monitoring Framework were out of sync for a long time. Some CBD parties were extremely frustrated with the timeline and process, which had

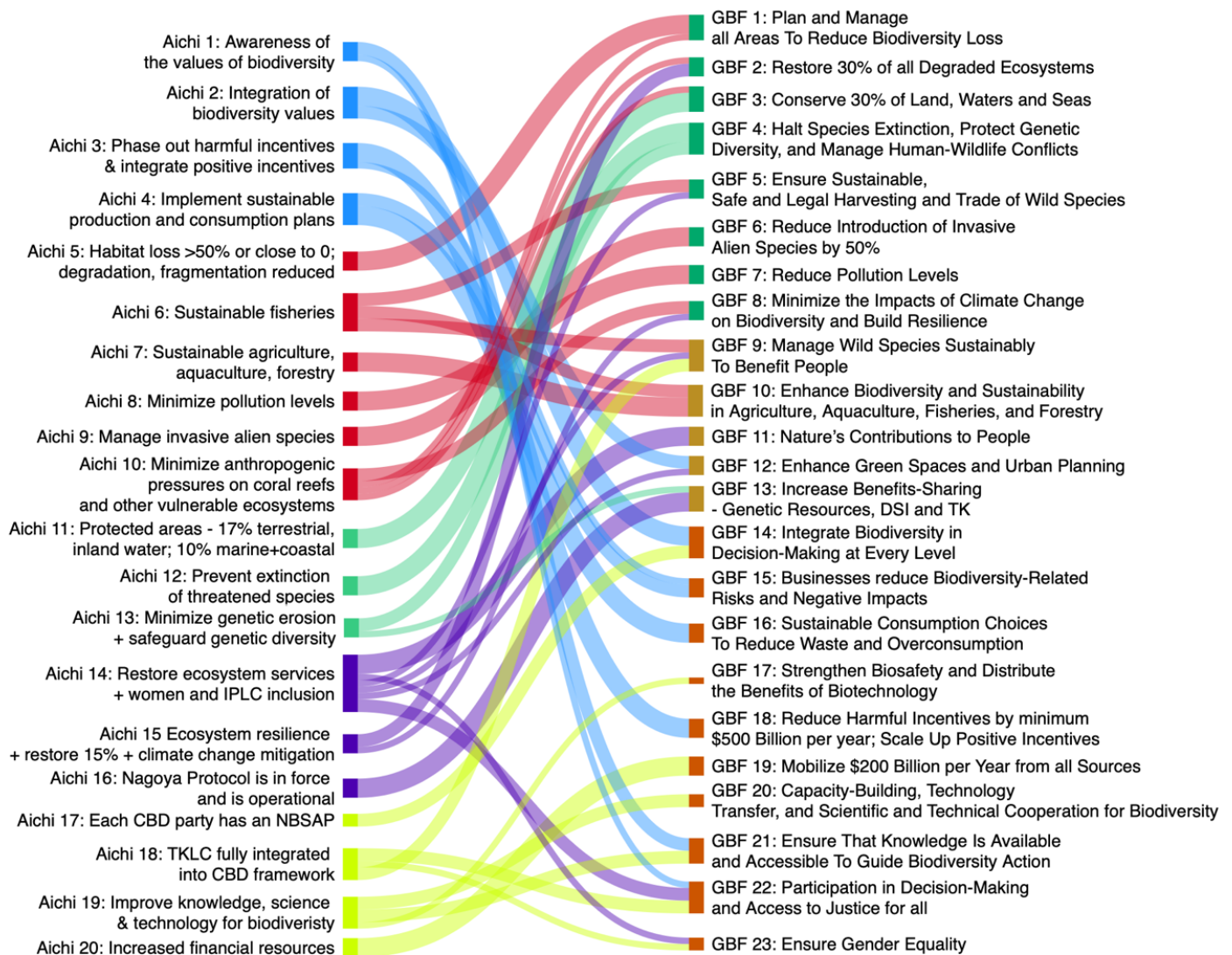
negotiations on headline indicators of the Monitoring Framework and negotiations on the GBF goals and targets be separate for a long time, with negotiations on indicators starting long before the negotiations on the targets.

In fact, at the beginning of COP15, CBD parties expressed surprise when viewing the amount of work left to be done on the targets, which also led to tensions throughout and towards the end of COP15, with parties fearing the whole matter will fall through the cracks and adoption will fail. Negotiations cannot happen without preparation, with states expressing frustration that they cannot figuratively take ideas out of their pocket when presented with new ideas but had to adequately consult with experts and academia within their respective countries.

When approaching the start of COP15, some parties were really adamant to note that agreeing to start discussions does not mean they were agreeing on the indicators put on the table. They pointed to the Chairs and Secretariat for driving the timeline pressure forward. Criticism repeatedly reflected flawed methodologies and the abstract nature of some indicators, noting they basically do not exist outside of these negotiations. More problematically, some indicators were not even seen as adequate to achieve results which contribute to combatting biodiversity loss.

Overall, it can be noted that only headline indicators were a major subject in negotiations; binary indicators were even an idea of a separate workshop (the Bonn workshop) attended by only several CBD parties, with results being presented to the CBD parties only shortly before COP15. There was definitely awareness for the shortcomings of the process, with states themselves recognising that indicators can only help part of the way (e.g. establishing a PA does not necessarily mean that biodiversity loss will be halted; it is important if an indicator recognises the rights of IPLCs but recognising this without proper methodology or science-based approaches cannot lead to actual practical impact, otherwise it is not useful). These shortcomings are not new and can be linked to existing criticisms of the CBD framework that have been persisting for the past decades.

The GBF targets themselves have not reinvented the “CBD wheel” but are instead broadly linked to the Aichi Targets. Additionally, almost half of the GBF indicators’ methodologies were already available prior to the GBF adoption.



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Figure 6. Broad relationship between the Aichi Targets and the GBF targets.⁶¹

6.2. Conditions under which ambiguity is likely to be constructive

The difference between the conditions during the time of GBF negotiations as opposed to the conditions e.g. 10-15 years ago is the urgency with which the triple planetary crisis is now addressed, as well as the clear failure of the Aichi Targets. The experience of having

⁶¹ Labels were shortened from the official target names here: <https://www.cbd.int/sp/targets> and here: <https://www.cbd.int/gbf/targets>. For the Aichi targets, colours were used to indicate the alignment with strategic goals (as outlined on the website, and in official communication). For the GBF, targets were not assigned to the four broad goals but instead to three sub-sections, however no colours were assigned to these subsections in official communication. Colours are interpretably chosen from the official GBF graphic: <https://www.unep.org/interactives/biodiversity-sdgs-tool/global-biodiversity-framework.html> to align as best as possible. The thickness of the lines represents how I estimated the connection between targets (for a rough estimate: 0 - no line ergo no connection, 1, 2 or 3 line thickness: weak, moderate, strong connection) through an analysis of the official target texts.

to report on the Aichi Targets also raised some awareness of how detrimental unclear wording in political strategies may be: if unresolved scientific or technical wording is passed to the ministers (for decision at COPs), they face challenges because they cannot solve technical-operational problems at the political level. Some of the open issues from decades ago remain unresolved to this day.

The redirection of scientific and technical matters does not occur in one single moment. Instead, it can be observed throughout the whole dataset of negotiation statements. SBSTTA, a scientific and technical subsidiary body, whether in plenary or contact groups, does not seem to be resolving or discussing scientific and technical issues during negotiations. Very few statements actually relate to the fact of how to progress on existing methodologies, or how to improve their utilisation. SBSTTA seems to provide a descriptive overview rather than a diagnostic evaluation of issues, which is exactly what in the past has led to the failure of previous strategic frameworks. This however provides the institutional structure needed for ambiguity. The CBD has been described as a hard law instrument with a soft law core, which reflects the weak legal basis described as necessary by Jegen&Mérand for ambiguity to be used as an attractive strategy.

Ambiguity is used as successful strategy, and therefore can be framed as constructive, because the negotiations are moved from scientific and technical issues towards formalities familiar in COP discussions: line by line negotiations, top-down approaches and diplomatic language dynamics reflective of political discussions (e.g. repeated performative phrasing that are repeated over and over again; the lack of data is mentioned but not how to progress towards generating more of it; basically thinking of what should be done but not how to actually do it). This is also clearly visible to CBD parties (*“Am I attending a COP, or a scientific and technical body?”*, SBSTTA27), as well as outsiders: academia has consistently acknowledged that SBSTTA discussions have become inherently political, dubbing it a ‘mini-COP’.

Some criticise this development within literature, while others have claimed it actually makes discussions more productive. In reality, discussions surrounding the GBF Monitoring Framework were highly bureaucratic, with statements often following a pattern of indicating ‘support’ but also noting the indicator ‘is not ready’ or ‘has no (adequate) methodology’ without an actual suggestion how to improve it. In fact, many

new wordings or suggestions for indicators were proposed, so it is not like the negotiations were going in circles, however the approach seemed incredibly top-down.

Within an already incredibly packed agenda, where delegates often have to sit multiple hours a day outside designated plenary sessions to progress on agenda items, substituting scientific discussions with diplomatic phrases takes up a lot of time. It does however prove constructive, as moving discussions from clearly contentious matters of science, technology and particularly indicator methodology which seem to have persisted for years, to a formal negotiation of the framework architecture ultimately led to bypassing differences in the spirit of taking a step forward that represented the political will of CBD parties. The GBF Monitoring Framework is a representative product of the constructive ambiguity strategy: contained within one COP decision, hailed as a solution to previous problems, yet leaving a lot of points open for further work in the intersessional period. It represents the transposition of scientific and technical issues into a document of formal compromise. This perceived productivity can be a byproduct of constructive ambiguity. As a strategy, Jegen&Mérand have analysed how it can seem to strengthen policy within an institutional structure.

When analysing the GBF negotiations as well as the final text it is evident that ambiguity emerged through the negotiation dynamics. SBSTTA statements go far beyond scientific input and move closer to policy and management discussions, full of diplomatic language and key words without actually addressing scientific and technical issues. Not only is this clear to delegates participating in the negotiations as several have addressed it, it can also be found in literature. The CBD parties as well as the CBD Secretariat were aware of these shortcomings and contributed to the production of ambiguity. Rather than identifying a single political actor that pushed for this strategy under the framework of Jegen&Mérand, the GBF Monitoring Framework can be identified as the outcome of a joint agreement-making process. The ‘political entrepreneur’ which they identify in this case is not a single actor. The actions of the political entrepreneur are distributed across the process of agreement-making. Despite not solving scientific and technical issues, decisions with the constructed formal architecture were put forward to the COP which left important elements for future technical refinement under only partially specified conditions. In fact, it is scientifically shown that if states only report on the headline

(mainly discussed before COP15, 2022) and binary indicators (mainly discussed in the intersessional period before COP16, 2024-2025) they would barely cover 19% of the scope of the GBF goals and targets. This counteracts the argument (i.a. made by Koetz) that SBSTTA has become more effective by giving it room for political debates.

Furthermore, transposing scientific and technical debates into negotiations of the Monitoring Framework serves another purpose from the strategy of constructive ambiguity, to produce the outcome that can be perceived differently by different actors. Most of the headline indicators were negotiated in detail, but the binary, complementary and component indicators were not. As part of these negotiations, the understanding of the indicators and their methodologies differed across CBD parties. Oftentimes, an indicator was considered as potentially relevant, but much more work was needed to assess its methodology. Under the political pressure, these uncertainties turned into compromises: adopt the indicator now, develop the methodology later.

The different stances were clear between developed and developing countries. Many developing countries considered that they are not at the same level in terms of being able to implement even headline indicators, and called for additional capacity building and resources to be transcribed to the adoption of indicators. The North-South divide was not verbatim mentioned often but it was obvious throughout the negotiations. States of the Global North wants to opt for more intersessional work, more reports. States of the Global South wanted more emphasis on capacity building and resources. This is why the indicators represent the ambiguous wording that allowed for the strategy to be constructive. Under the strategic viewpoint of constructive ambiguity, compromise and the adoption of the GBF can be attributed to the plural meanings that CBD parties ascribed to the content of the GBF Monitoring Framework.

Even after the GBF's adoption when clarifying further aspects remain on SBSTTA's agenda, large parts of subsequent meetings is spent on a back and forth of diplomatic language nuances: for a full day, SBSTTA27 discussed if it takes note, or it welcomes (in this case) IPBES assessments; whether a long list of actors or a short list of actors should be encouraged to consider contributing to the GBF global report. What scientific value does it add to SBSTTA's work whether it welcomes or takes note of the assessment? Actual implementation of anything in this document would still require a subsequent

review. More concretely, after the Aichi Targets failed, nobody seemed to be designated to take the blame. While planning the upcoming GBF global review, care was taken to ensure that no ‘fingers are pointed to those who are not delivering’. This was repeatedly addressed at SBSTTA27. Indeed, after all, if everyone is complicit, who points the finger?

This comes against the backdrop of an overloaded agenda, where CBD parties sit in contact groups for hours after the regular plenary sessions. Delegates particularly from developing countries have mentioned the struggle of having only one delegate member on site that has to maintain presence in multiple contact groups that often run in parallel. CBD parties also mentioned often having very little time before receiving information documents and having to discuss them in negotiations, placing a burden on delegations with fewer responsible persons for the CBD dossier. This current mechanism continues to reinforce the North-South divide. Further in depth-analysis would be required to elaborate on how this contributed to the constructive ambiguity strategy, particularly also extending the dataset to include more negotiation statements or collecting data retrospectively from meetings to fill gaps.

6.3. Can the GBF overcome constructive ambiguity?

Even when an ambiguity strategy proves constructive and leads to a desired outcome such as the adoption of a new biodiversity strategy for the CBD, it does not automatically mean a positive outcome for conservation efforts and halting biodiversity loss. The halfway point towards 2030 has now passed. CBD parties have undertaken their first efforts in submitting national reports on their progress. Of course, one could say that “these things take time”, but there is no time to be taken. Biodiversity rates are declining, and scientific evidence points to the fact that even if all GBF indicators are implemented, the GBF targets cannot be comprehensively monitored.

Even if all types of indicators are considered by all parties (although a commitment only exists for headline and binary indicators), roughly 40% of the GBF targets’ elements can be covered. Almost half of the GBF indicators’ methodologies were already available prior to the GBF adoption. This already slightly contradicts the narrative that the Aichi Targets failure rested on the lack of a monitoring framework. Another contradiction arises in the

fact that states chose to not duplicate existing efforts, transposing valid methodologies from the Aichi Targets' voluntary indicators into the GBF Monitoring Framework.

Constructive ambiguity itself is not yet the problem, the problem is how to overcome it. By avoiding the actual heterogeneous topic of discussion for too long, constructive ambiguity may become destructive. This is particularly also supplemented by the criticism drawn to SBSTTA: if a technical body cannot do its job of addressing scientific and technical shortcomings, who will? Despite the parallels drawn with the UNFCCC's global stocktake, there is a major difference in the upcoming global review for the GBF. In the global stocktake, a technical assessment, scientific evidence and data provided the baseline for discussion. For the global review, the baseline of discussions is centred around the global report which stems mainly from national reporting, and only where appropriate, other sources.

Even if implemented to their fullest extent, the GBF Monitoring Framework remain insufficient unless there are practicable long-term actions put in place to measure progress. Joint scientific, technical and policy attention is needed to tackle biodiversity challenges, including investment in data generation, research, new technologies and capacity-building. Implementation depends on concrete practical actions planned in the long-term, not simple the adoption of indicators or strategic frameworks. Several aspects should be considered both for practical relevance of involved CBD parties and for potential future research on this topic.

Delegates are aware of what is happening in SBSTTA, with some pushing back on the status quo: what is needed are not more reports, or frameworks of coherence. What is needed are common indicators, without which resources remain fragmented and time remains wasted. Harmonising indicators is not just a technical matter, it is a matter of policy emergency. Inability to agree on whether to 'welcome' or 'take note of' IPBES assessments is not a scientific and technical discussion, yet it took more than two plenary sessions of SBSTTA²⁷. Agenda items which neither have a clear measurable goal nor allow for actual scientific or technical discussions seem to contribute to the performative element of the constructive ambiguity strategy. SBSTTA continues to work, but heterogeneity of scientific and technical matters is kept at a distance.

I would consider the current timing to be extremely fitting to continue with more in-depth research. In parallel to upcoming subsidiary meetings and COP17 which will see CBD parties negotiate the global review of the GBF, an analysis of the 7th national reports would give a valuable insight into effects of the constructive ambiguity strategy as part of the CBD framework. Does the nature of ambiguity threaten to become destructive and destabilise the CBD mechanism through the lack of adequate implementation and results? States would need to address the problem of implementation, their different opinions on generalising global datasets and solutions that are not always qualified to substitute national data. Can the GBF Monitoring Framework overcome its performative elements, move beyond the constructive ambiguity through which it was created, and serve as the basis of substantive scientific and technical negotiations, the gathering of resources, and capacity building efforts?

The relationship between IPBES and the CBD will also be interesting to explore. The tensions at SBSTTA27 could have reflected specific political pressure at the time of the meeting, or could recur at SBSTTA28. A certain North-South divide could also be analysed through identifying the countries (India, Argentina, Brazil, Russia) that were most vocal against welcoming IPBES assessments in the SBSTTA recommendations, and following their respective further actions. Elements which do not substantially contribute to SBSTTA's work can be seen as adding noise to discussions, perhaps already showing that some delegates recognise and start to resist the ambiguity strategy embedded in the process.

Further intersessional work designated for expert groups could also deepen tensions. As part of the current mechanism, scientific and technical discussions are transferred outside the SBSTTA and towards the work of working groups (liaison groups, technical expert groups and so on). The problem with these groups, as well as with 'expert workshops' is that they do not provide the same level of representation as in SBSTTA or COP. Some CBD parties express reservations regarding the establishment of new expert groups, arguing they may pose additional implementation challenges and reinforce the capacity asymmetries between delegations.

7. Conclusion

Summits and conferences are partially performative by nature. One attends and feels the diplomacy at work, feels like something is actually happening. But the reality on the ground is far away and far more unpleasant. Diplomatic formalities may have their place in a COP, but keeping SBSTTA's agenda busy with negotiations largely made up of such formalities defeats the whole purpose of its mandate, which is to give scientific and technical advice.

The retrospective perspective has largely shaped this research. The adoption of the GBF in 2022 was praised as a great political success. This feeling of accomplishment that was perceived by state and non-state actors in the room however does not translate into reviewing the negotiations data three years later, nor does it reflect observations during the SBSTTA27 meeting. I experienced many ups and downs in my attitude towards the GBF during this writing process and I hope I can revisit open points in the near future.

An aspect of great value in the CBD process is its transparency. Meeting documents, meeting records and official decisions, as well as additional historical process are well documented on the CBD website. The national reports are freely available, easing a comparison between the recent submissions of the 7th national report and previous versions. This makes tracing back elements in its operation and drawing on past experiences for research purposes much easier than for other international organisations, and could serve as an excellent baseline for further research.

At the same time, the SBSTTA is not a detached entity operating in a vacuum, it is part of the wider system of biodiversity governance within the CBD and other international frameworks involved in biodiversity protection and conservation efforts. Overcoming constructive ambiguity and producing real tangible efforts requires more than consensus. It requires the willingness to address existing power asymmetries, invest the appropriate resources in data, technology, science and capacity building and repeatedly deliver not only on the political, but also on the practical level. I hope that this research contributes to drawing attention to the conditions under which formal agreement can be achieved and how these conditions can obstruct meaningful technical and scientific discussions in the long run.

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Appendix: Codebook

The final list of categories and sub-codes has been exported through MaxQDA on 02.06.2026.

Code System	Frequency
Code System	4414
Mandate boundaries and institutional redirection	61
who	1
ipcc	3
avoid duplication of indicators	22
bbnj	2
cartagena protocol	4
CBD mandate	12
cites	5
cms	2
cooperation	16
economy indicators	2
fao	4
global level	7
ilo	1
intl plant convention	3
intl whaling commission	2
nagoya protocol	2
ramsar	3
sbi	1
uncdd	9
unfccc	18
Scientific and technical contestation	302
global report	2
Aichi Targets	10
biodiversity loss	84
biopiracy	1
capacity building	34
circular economy	6
climate	32

climate index	3
convention mandate	6
cultural and social	17
data	57
developing countries	22
ecological footprint	9
ecosystem based approach	27
ecosystem restoration	35
environment safety	4
food consumption	2
food loss index	1
further work needed	51
global level	19
human health	25
measure connectivity	4
methodology	31
national legislation	5
national level	40
nature-based solutions	14
pesticides	20
plastic	9
precautionary principle	3
Red List	8
regional level	16
regulatory framework	10
reporting	36
resource mobilisation	26
risk assessment	25
scientific research	34
SDG	13
spatial planning	9
species	28
stakeholders	20
technical feasibility	24
tk & iplcs	25

GBF+Monitoring Framework architecture	654
"pull indicators out of our pockets"	2
"agreeing to discuss does not mean we are agreeing on the indicators"	1
"using indicators for qualitative measures carries risks..."	1
"we are here to discuss the indicators and not the target"	9
"you ask us to comment on an indicator in the absence of that indicator"	5
ABS clearing house	5
action-oriented	2
benefit sharing	10
capacity building	26
complementary	42
component	34
conservation	10
CSR	5
data	47
developing countries	15
difficult to monitor	33
disaggregate	22
equity	4
food waste	2
freshwater and coastal systems	3
frustration	44
gaps between indicators and targets	79
global level	29
headline	91
insufficient coverage	40
knowledge gap	9
land use change	13
language problem	3
legal framework	11
Living Planet	4
marine ecosystems	9
milestones	13
mining sector	1

national developments / progress	27
national level	97
new proposal	68
nitrogen	1
North-South divide	1
outcome-oriented	5
outside institutions	12
overconsumption	3
PAs	12
positive incentives	5
private sector	19
public policy	8
ready to use	6
Red List	19
resources	24
rights based indicators	2
scientific incentives	8
SDG	11
species	29
stakeholder participation	11
streamlining necessary	26
support	42
sustainability	15
targets and goals	45
technically feasible	37
tk & iplcs	28
Reporting and implementation	82
"descriptive overview rather than a diagnostic evaluation"	1
"non intrusive non punitive"	4
"should not reopen old discussions"	4
avoid duplication of provided information	5
capacity building	25
conservation	7
data	32
developing countries	14

disaggregate by sector	5
disaggregated by country	12
disaggregated by governance type	3
gap analysis financing	5
global review	30
implementation impossible	8
measurement	27
national level	38
negative incentives	2
positive incentives	8
progress toward 2030	11
tk & iplcs	19
weak implementation	13
Science-Policy authority	89
"welcome"	29
"take note instead of welcome"	17
link biodiversity human health	4
meaningful exchange CBD IPBES	34
national level	14
cross-sectoral approach	22
tk + iplcs	15
scientific evidence	17
nexus assessment	25
social equity	8
transformative change	24
Procedural	592
all should get chance to speak	1