

ARTICLE

Mind the Compliance Gap: How Insights from International Human Rights Mechanisms Can Help to Implement the Convention on Biological Diversity

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Abstract

Humanity is at a crossroads in addressing biodiversity loss. Several assessments have reported on the weak compliance with the Aichi Biodiversity Targets by the parties to the Convention on Biological Diversity (CBD). To address this lack of compliance, the challenges in implementing and enforcing CBD obligations must be understood. Key implementation challenges of the CBD are identified through a content analysis of policy documents, multi-stakeholder interviews, and participant observation at the recent CBD Conference of the Parties. Building on this analysis, the article explores the extent to which the review mechanisms of international human rights law, with their various strategies for eliciting compliance, can help to improve CBD mechanisms. The findings of this article reveal insights that the CBD can draw from international human rights law to address these compliance challenges, such as facilitating the participation of civil society organizations to provide specific input, and engaging independent biodiversity experts to assess implementation. The article concludes that insights from human rights review mechanisms are useful for improving the emerging peer review mechanism of the CBD, which is important for strengthening accountability within the post-2020 global biodiversity framework.

Keywords: Accountability, Human rights review mechanisms, Gender equality, Human right to a healthy environment, Convention on Biological Diversity, Post-2020 global biodiversity framework

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1. INTRODUCTION

Comprehensive approaches are needed to safeguard life on earth. A system-wide reorganization of economic, social, political, and technological factors is needed if we are to meet our goals for the sustainable use of nature.¹ Fostering transformative change, from current trends of biodiversity loss towards more sustainable and equitable pathways, requires cooperation between countries and across sectors.² There is an emerging literature which examines the potential (and limitations) of human rights law in this system-wide reorganization.³ Nonetheless, further research is needed to understand the cross-fertilization between human rights law and specific multilateral environmental agreements such as the Convention on Biological Diversity (CBD).⁴

The CBD, which entered into force in 1993, has three main objectives: (i) the conservation of biodiversity; (ii) sustainable use of its components; and (iii) the fair and equitable sharing of benefits arising from the use of genetic resources.⁵ The CBD has near-universal membership with 196 parties. As a framework convention, the CBD builds upon existing environmental agreements such as the Convention on International Trade in Endangered Species (CITES) and the Convention on Wetlands of International Importance (Ramsar).⁶ While these multilateral environmental agreements specifically protect certain species or habitats, the CBD adopts a broad ecosystem approach to biodiversity conservation and sustainable use,⁷ which makes the CBD one of the most far-reaching legal approaches to biodiversity. A wide range of guidelines have been developed to facilitate implementation of the CBD.⁸ These guidelines target different focus areas while aiming to safeguard biodiversity and social-ecological issues in decision-making processes.

¹ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (S. Díaz et al. (eds)), *Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of IPBES* (IPBES Secretariat, 2019).

² *Ibid.*, p. 7.

³ See, e.g., L.J. Kotzé, 'Human Rights and the Environment in the Anthropocene' (2014) 1(3) *Anthropocene Review*, pp. 252–75; D. Boyd, 'Catalyst for Change', in J. Knox & R. Pejan (eds), *The Human Right to a Healthy Environment* (Cambridge University Press, 2018), pp. 17–41; C. Ituarte-Lima & M. Schultz (eds), *Human Right to a Healthy Environment for a Thriving Earth* (SwedBio, 2019).

⁴ Rio de Janeiro (Brazil), 5 June 1992, in force 29 Dec. 1993, available at: <http://www.cbd.int/convention>.

⁵ *Ibid.*

⁶ CITES: Geneva (Switzerland), 3 Mar. 1973, in force 1 July 1975, available at: <https://www.cites.org/eng/disc/text.php>; Ramsar: Ramsar (Iran), 2 Feb. 1971, in force 21 Dec. 1975, available at: <https://www.ramsar.org/about/the-convention-on-wetlands-and-its-mission>.

⁷ D.M. McGraw, 'The CBD: Key Characteristics and Implications for Implementation' (2002) 11(1) *Review of European Community and International Environmental Law*, pp. 17–28.

⁸ Several CBD guidelines help to facilitate implementation. These include Secretariat of the Convention on Biological Diversity (CBD Secretariat), COP-7 Decision VII/16, 'Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities', 27 Feb. 2004, UN Doc. UNEP/CBD/COP/DEC/VII/16, Annex, section F; and United Nations Environment Programme (UNEP), CBD COP-14 Decision 14/15, 'Safeguards in Biodiversity Financing Mechanisms', 29 Nov. 2018, UN Doc. CBD/COP/DEC/14/15; available at: <https://www.cbd.int/guidelines>.

The CBD is a multilateral agreement which adopts decisions with commitments via the consensus of the parties; thus, the parties themselves negotiate and set commitments under the CBD. One example is the Strategic Plan for Biodiversity 2011–2020, which contains the 20 Aichi Biodiversity Targets.⁹ Parties agreed to implement this overarching international framework through national laws and policies. The existing monitoring mechanism for this is the submission to the CBD Secretariat of each country's National Biodiversity Strategies and Action Plan (NBSAP).¹⁰ Each country is obliged to conduct national planning to map its biodiversity targets to the Aichi Targets and report their progress to the CBD governing body: the Conference of the Parties (COP). As the Strategic Plan for Biodiversity 2011–2020 ends, a new set of targets will be negotiated at the 15th meeting of the COP (CBD COP-15) under the post-2020 global biodiversity framework.¹¹

However, several assessments of the Aichi Targets show that parties have yet to comply fully with their self-determined commitments. In 2018, the CBD COP-14 acknowledged that very few parties had established targets in their NBSAPs with a level of ambition and scope commensurable with the Aichi Targets;¹² none of the Aichi Biodiversity Targets will be met fully.¹³ Weak compliance with international environmental agreements has been identified as a global trend.¹⁴ Unsurprisingly, the issue of compliance is a recurring topic in CBD COP discussions.¹⁵

Concerns about the failure to comply with commitments to safeguard ecosystems have been raised not only at biodiversity fora, but also within the United Nations (UN) Human Rights Council. The failure to protect biodiversity also has implications for human rights, as full enjoyment of human rights depends on a healthy and sustainable environment.¹⁶ Healthy biodiversity and ecosystems represent core substantive elements of the human right to a healthy environment.¹⁷ Compared with other areas of international law, the legal and policy landscape of human rights has evolved further

⁹ UNEP, CBD, Decision 10/2 'The Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets', 29 Oct. 2010, UN Doc. UNEP/CBD/COP/DEC/X/2.

¹⁰ CBD, Art. 6.

¹¹ Draft targets of the post-2020 global biodiversity framework can be found in UNEP, CBD, 'Zero Draft of the Post-2020 Global Biodiversity Framework', 29 Feb. 2020, UN Doc. UNEP/CBD/WG2020/2/3.

¹² UNEP, CBD, 'Analysis of the Contribution of Targets Established by Parties and Progress Towards the Aichi Biodiversity Targets', 29 Nov. 2018, UN Doc. UNEP/CBD/COP/14/5/Add.2.

¹³ CBD Secretariat, *Global Biodiversity Outlook 5* (CBD Secretariat, 2020); Forest Peoples Programme, 'Local Biodiversity Outlooks 2', 2020, available at: <https://www.forestpeoples.org/en/node/50431>.

¹⁴ P.G. LePrestre, 'The CBD at Ten: The Long Road to Effectiveness' (2002) 5(3) *Journal of International Wildlife Law and Policy*, pp. 269–85; A. Chandra & A. Idrisova, 'CBD: A Review of National Challenges and Opportunities for Implementation' (2011) 20(14) *Biodiversity and Conservation*, pp. 3295–316; UNEP, *Environmental Rule of Law: First Global Report* (UNEP, 2019).

¹⁵ UNEP, CBD, COP-12 Decision 12/2 'Review of Progress in Providing Support in Implementing the Objectives of the CBD and the Strategic Plan for Biodiversity 2011–2020', 17 Oct. 2014, UN Doc. UNEP/CBD/COP/DEC/XII/2; COP-13 Decision 13/3 'Strategic Actions to Enhance the Implementation of the Strategic Plan for Biodiversity 2011–2020 and the Achievement of the Aichi Biodiversity Targets', 16 Dec. 2014, UN Doc. UNEP/CBD/COP/DEC/XIII/3; UNEP, CBD, 'Preliminary Synthesis and Analysis of Views on the Scope and Content of the Post-2020 Global Biodiversity Framework', 30 Oct. 2018, UN Doc. UNEP/CBD/COP/14/INF/16.

¹⁶ D. Boyd, 'The Constitutional Right to a Healthy Environment' (2012) 54(4) *Environment*, pp. 3–14.

¹⁷ Boyd, n. 3 above.

as it has its own mechanisms for action, such as review mechanisms at international (see Table 3) and regional levels.¹⁸ There is therefore good reason to examine human rights law mechanisms to understand how compliance within the CBD can be improved.

Moreover, ‘mainstreaming biodiversity’ – that is, integrating biodiversity issues into all policy sectors and cross-sectorally – is crucial for implementing the Convention. Several CBD articles refer to mainstreaming issues,¹⁹ as well as adopted CBD COP decisions which specifically mainstream biodiversity in sectors spanning agriculture, forestry, tourism, and more.²⁰ The importance of mainstreaming was also highlighted by the former UN Special Rapporteur on human rights and the environment, who reported:

States are not meeting the standards they themselves have set for the protection of biodiversity Unless States effectively address the drivers of biodiversity loss, including by mainstreaming obligations of conservation and sustainable use into broader development policies and measures, the continuing degradation of biodiversity will undermine the enjoyment ... of human rights.²¹

Mainstreaming is often related to the wider ‘green economy’ concept, which emerged over recent decades to recognize the role of biodiversity and ecosystem services in economic activities.²² An underlying assumption of the green economy is that economic growth is desirable for all countries and is possible to achieve within environmental limits. Although the green economy has helped in engaging the private sector to account for its dependence and impact on biodiversity,²³ the emphasis of the concept on the economic benefits of biodiversity has raised significant concerns.²⁴

In this article we address the following questions.²⁵ Firstly, what review mechanisms for fostering compliance are used in international human rights law and biodiversity agreements? Secondly, why have the Aichi Biodiversity Targets not been fulfilled, despite the fact that states set targets for themselves and several guidelines exist for their implementation? Thirdly, what insights can be gained from international human rights law to foster implementation and enforcement of the CBD? To improve implementation of the CBD in the forthcoming post-2020 global biodiversity framework, we

¹⁸ S. Nicholson & D. Chong, ‘Jumping on the Human Rights Bandwagon: How Rights-based Linkages Can Refocus Climate Politics’ (2011) 11(3) *Global Environmental Politics*, pp. 121–36.

¹⁹ CBD, Arts 6, 10, 14, 11, 7 and 8.

²⁰ Decision 13/3, UN Doc. UNEP/CBD/COP/DEC/XIII/3, n. 15 above; UNEP, CBD, COP-14 Decision 14/3 ‘Mainstreaming of Biodiversity in the Energy and Mining, Infrastructure, Manufacturing and Processing Sectors’, 29 Nov. 2018, UN Doc. UNEP/CBD/COP/DEC/14/3.

²¹ UN General Assembly, Human Rights Council, ‘Report of the Special Rapporteur on Human Rights Obligations [J.H. Knox] relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment’, 19 Jan. 2017, UN Doc. A/HRC/34/49, p. 15 (Knox Report 2017).

²² K.J. Willis & A. Gasparatos (eds), *Biodiversity in the Green Economy* (Routledge, 2015).

²³ *Ibid.*

²⁴ U. Brand, ‘Green Economy: The Next Oxymoron?’ (2012) 21(1) *GAIA: Ecological Perspectives for Science and Society*, pp. 28–32; IPBES, n. 1 above.

²⁵ Some materials in this article are revised from the Ph.D. licentiate thesis of one of the author; see N.S. Koh, *Unravelling the Social and Ecological Implications of Policy Instruments for Biodiversity Governance* (Ph.D. licentiate thesis, Stockholm University (Sweden), Feb. 2020), available at: <http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-179561>.

need to understand why the Aichi Targets lack compliance pull. As the human rights regime has significant experience in promoting compliance,²⁶ analyzing the compliance strategies used within human rights law could help to address challenges faced by the CBD.

This article unfolds as follows. In Section 2 we outline key concepts often used in international environmental and human rights law: procedural and substantive obligations, implementation, compliance, and enforcement. We present, in Section 3, the methodology and methods used. Section 4 examines the compliance mechanisms used in human rights law and biodiversity agreements and the implementation of the CBD. In Section 5 we discuss the main challenges in implementing, complying with, and enforcing the CBD. We also discuss the extent to which the review mechanisms of international human rights law, with their various strategies for eliciting compliance, can help to improve CBD mechanisms. The concluding section argues for addressing the CBD compliance gap by prioritizing an enhanced review mechanism in the post-2020 global biodiversity framework, with insights from human rights law.

2. INTERNATIONAL ENVIRONMENTAL AND HUMAN RIGHTS LAW

2.1. *Substantive and Procedural Obligations*

As a clear link has been identified between environmental harm and human rights violations, states have obligations under human rights law to protect against such harm.²⁷ To understand the human rights obligations that apply in the biodiversity context, it is useful to explore the distinction between substantive and procedural obligations²⁸ in international law. This conceptual distinction clarifies the types of commitment that states have set for themselves.

Substantive obligations define rights and duties, while procedural obligations entail processes for enforcing those rights and duties.²⁹ Substantive obligations enshrined in international law and national constitutions seek to sustain the environmental qualities conducive for a life in dignity, referring directly to the conditions for a healthy planet.³⁰ These obligations can help to address environmental concerns that affect human livelihoods, such as the rights to life, property, and health.³¹

²⁶ V. Carraro, 'Promoting Compliance with Human Rights: The Performance of the United Nations' UPR and Treaty Bodies' (2019) 63 *International Studies Quarterly*, pp. 1079–93.

²⁷ Knox Report 2017, n. 21 above, p. 10.

²⁸ Although we distinguish between substantive and procedural safeguards, we also acknowledge that they are inherently interlinked; see, e.g., D. Shelton, 'Human Rights, Environmental Rights, and the Right to Environment' (1991) 28(1) *Stanford Journal of International Law*, pp. 103–38.

²⁹ C. Ituarte-Lima et al., *CBD Voluntary Guidelines for Safeguards: Implementation Pathways* (CBD Secretariat, 2018), p. 27; N.S. Koh, T. Hahn & C. Ituarte-Lima, 'Safeguards for Enhancing Ecological Compensation in Sweden' (2017) 64 *Land Use Policy*, pp. 186–99.

³⁰ C. Rodríguez-Garavito, 'A Human Right to a Healthy Environment?', in J. Knox & R. Pejan (eds), *The Human Right to a Healthy Environment* (Cambridge University Press, 2018), pp. 155–68.

³¹ For more on substantive rights, see, e.g., C. Brush et al., 'Constitutional Environmental Law: Giving Force to Fundamental Principles in Africa' (2001) 26(1) *Columbia Journal of Environmental Law*, pp. 131–211.

Procedural obligations sustain a society's ability to engage in public dialogue³² and enable the effective governance of social-ecological systems. They refer to opportunities and abilities to exercise environment-related rights, and include duties to provide information, meaningful public participation in decision making, as well as access to justice and remedies.³³ The Framework Principles on Human Rights and the Environment, developed by a former UN Special Rapporteur, include both substantive obligations (such as Principle 11 on environmental standards) and procedural obligations (such as Principle 10 on access to effective remedies).³⁴

At least 155 UN member states have recognized the right to a safe, clean, healthy, and sustainable environment through their national laws or their recognition of international agreements.³⁵ Linking social and ecological safeguards to existing human rights obligations provides an institutionalized pathway for claimants to seek enforcement of their rights.³⁶ The former Special Rapporteur on human rights and environment has recommended that the UN formally recognize the right to a healthy environment to help in addressing the gap between its legal recognition in national constitutions and effective implementation measures on the ground.³⁷

There has been an ongoing cross-fertilization of ideas between human rights and biodiversity domains.³⁸ In the biodiversity domain the CBD voluntary guidelines on safeguards call explicitly for considering international human rights treaties when designing biodiversity financing mechanisms.³⁹ In the human rights domain several international processes, such as the Inter-American Court of Human Rights, the UN Development Group, and the Special Rapporteur on the rights of Indigenous peoples, have emphasized the role of the CBD Akwé: Kon Guidelines.⁴⁰

³² Rodríguez-Garavito, n. 30 above.

³³ For more on procedural rights see, e.g., E. Hey, 'The Interaction Between Human Rights and the Environment in the European Aarhus Space', in A. Grear & L.J. Kotzé (eds), *Research Handbook on Human Rights and the Environment* (Edward Elgar, 2015), pp. 353–76, at 354.

³⁴ UN General Assembly, Human Rights Council, 'Report of the Special Rapporteur on Human Rights Obligations [J.H. Knox] relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment', 24 Jan. 2018, UN Doc. A/HRC/37/59 (Knox Report 2018).

³⁵ UN General Assembly, 'Report of the Special Rapporteur [J.H. Knox] on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment', 19 July 2018, UN Doc. A/73/188.

³⁶ A. Savaresi, 'REDD+ and Human Rights: Addressing Synergies Between International Regimes' (2013) 18(3) *Ecology and Society* online articles, article 5, available at: <http://www.ecologyandsociety.org/vol18/iss3/art5>.

³⁷ Knox Report 2018, n. 34 above.

³⁸ See, e.g., R.P. Hiskes, 'The Right to a Green Future: Human Rights, Environmentalism, and Intergenerational Justice' (2005) 27(4) *Human Rights Quarterly*, pp. 1346–64; E. Morgera & E. Tsioumani, 'Yesterday, Today, and Tomorrow: Looking Afresh at the CBD' (2010) 21(1) *Yearbook of International Environmental Law*, pp. 3–40; C. Ituarte-Lima, 'Transformative Biodiversity Law and 2030 Agenda: Mainstreaming Biodiversity and Justice through Human Rights', in B. Butter (ed.), *Risk, Resilience, Inequality and Environmental Law* (Edward Elgar, 2017), pp. 84–107.

³⁹ Decision 14/15, UN Doc. UNEP/CBD/COP/DEC/14/15, n. 8 above.

⁴⁰ See, e.g., E. Grant, 'The American Convention on Human Rights and Environmental Rights Standards', in S. Turner et al. (eds), *Environmental Rights: The Development of Standards* (Cambridge University Press, 2019), pp. 60–92; UN Development Group (UNDG), 'Guidelines on Indigenous Peoples' Issues', Apr. 2009; UN General Assembly, Human Rights Council, 'Report of the Special Rapporteur

Hence, there are good reasons to draw on human rights law when examining implementation of the CBD. Learning from existing human rights obligations and mechanisms can be used to assist parties in improving their compliance with CBD obligations. In particular, this article aims to examine the ways in which the CBD's own emerging peer-review mechanism can be developed on the basis of practices and lessons learnt from international human rights monitoring and review mechanisms.

2.2. *Implementation, Compliance, and Enforcement*

The CBD is an international treaty and its 196 parties all have expressed consent to be bound by this treaty.⁴¹ Yet, the formal consent procedures of international treaties are not the only factor in achieving the CBD objectives. An interactional account of international law is relevant here in that it helps to understand the CBD in practice and contributes to building the foundations for legitimate international biodiversity governance.⁴² This includes not just examining the CBD text, but also the principles and guidelines negotiated by CBD parties that are then adopted at CBD COPs. This interactional approach assumes a degree of flexibility for states to work out complex problems,⁴³ which is appropriate for environmental issues as the choice of biodiversity governance instruments should be tailored to the different economic and political contexts of states.⁴⁴ The global structure of the CBD promotes international cooperation, while emphasizing national implementation within state jurisdictions via a framework of general obligations for parties.⁴⁵

The terms 'implementation', 'compliance', and 'enforcement' are often used interchangeably in discourse, but these terms incorporate different concepts in agreements. Implementation of international agreements refers to the extent to which parties have translated agreed provisions into their legal and political systems.⁴⁶

Compliance occurs when the 'legal requirements of international agreements are met by the state parties to them'.⁴⁷ Various levels of compliance can exist with the same set of regulations;⁴⁸ it is therefore useful to distinguish between complying with procedural

on the Situation of Human Rights and Fundamental Freedoms of Indigenous People, James Anaya', 19 July 2010, UN Doc. A/HRC/15/37.

⁴¹ See the list of CBD parties at: <https://www.cbd.int/information/parties.shtml>.

⁴² Although 'hard' and 'soft' law are classic distinctions in international law, other approaches, such as an 'interactional' perspective, go beyond this dichotomy. An 'interactional' approach emphasizes that law-making is a continuous interactional process between actors, institutions, and norms; see J. Brunnée, 'COPing with Consent: Law-Making under Multilateral Environmental Agreements' (2002) 15(1) *Leiden Journal of International Law*, pp. 1–52.

⁴³ K.W. Abbott & D. Snidal, 'Hard and Soft Law in International Governance' (2000) 54(3) *International Organization*, pp. 421–56.

⁴⁴ T. Hahn et al., 'Purposes and Degrees of Commodification' (2015) 16 *Ecosystem Services*, pp. 74–82.

⁴⁵ McGraw, n. 7 above.

⁴⁶ LePrestre, n. 14 above.

⁴⁷ I.F. Shihata, 'Implementation, Enforcement, and Compliance with International Environmental Agreements' (1996) 9(1) *Georgetown International Environmental Law Review*, pp. 37–52.

⁴⁸ E. Weiss, 'Strengthening National Compliance with International Environmental Agreements' (1997) 27(4) *Environmental Policy and Law*, pp. 297–303.

Table 1 Distinction between Substantive and Procedural Obligations within the CBD

Types of Obligation	Examples from the Text of the CBD
Substantive obligations	<ul style="list-style-type: none"> • Conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits (Art. 1: Objectives) • Biodiversity integrated into national law and policy (Art. 6: General Measures for Conservation and Sustainable Use) • Research and training on conservation, sustainable use, and access and benefit sharing (Art. 12: Research and Training) • Technical and scientific cooperation (Art. 5: Cooperation, Art. 16: Access to and Transfer of Technology) • Resources devoted to biodiversity protection and sustainable use (Art. 9: Ex-situ Conservation, Art. 10: Sustainable Use of Biological Diversity, Art. 20: Financial Resources, Art. 21: Financial Mechanism) • Equitable sharing of benefits (Art. 15: Access to Genetic Resources, Art. 19: Handling Biotechnology and Distribution of Benefits)
Procedural obligations	<ul style="list-style-type: none"> • Accountability (Art. 3: Principle) • Monitoring and evaluation (Art. 25: Subsidiary Body on Scientific, Technical and Technological Advice) • Transparency, e.g., guiding principles of the forthcoming post-2020 global biodiversity framework (Art. 17: Exchange of Information) • Participation, e.g., guiding principles of the forthcoming post-2020 global biodiversity framework (Art. 8: In-situ Conservation) • Reporting CBD implementation (Art. 26: Reports)

Source Adapted and modified from LePrestre (2002), n. 14 above.

and substantive obligations when evaluating compliance,⁴⁹ as seen in the CBD context in Table 1. The Aichi Targets include mainly substantive obligations with which the parties should comply, although procedural dimensions are needed to operationalize such obligations. The main procedural obligations of parties are to create a NBSAP and to submit a national report every five years.⁵⁰ These two obligations are interconnected. The NBSAP reflects the sequence of steps that the CBD party intends to take to fulfil the objectives of the CBD and comply with its respective obligations. In their national reports parties describe the measures taken to implement their NBSAPs and progress towards the Aichi Targets.⁵¹

To encourage compliance within international agreements, three main strategies are used: (i) positive incentives through administrative, financial, and technical assistance; (ii) sunshine methods, such as monitoring, transparency, and the participation of non-state actors; and (iii) negative incentives via sanctions and penalties.⁵² Enforcement is part of the compliance process, referring to ‘coercive measures to induce compliance

⁴⁹ E. Weiss, ‘Understanding Compliance with International Environmental Agreements: The Baker’s Dozen Myths’ (1999) 32(5) *University of Richmond Law Review*, pp. 1555–89.

⁵⁰ CBD, Arts 6, 26.

⁵¹ S. Harrop & D. Pritchard, ‘A Hard Instrument Goes Soft: The Implications of the CBD’s Current Trajectory’ (2011) 21(2) *Global Environmental Change*, pp. 474–80.

⁵² Weiss, n. 48 above.

with obligations'.⁵³ While coercive measures are commonly associated with negative incentives, international environmental agreements usually rely on sunshine methods, including publishing information about infringements, in order to trigger social pressure from non-state actors.⁵⁴

The scholarly debate on what promotes compliance with international regulatory agreements has often been framed by two perspectives: enforcement and management.⁵⁵ Enforcement theorists stress a coercive strategy of monitoring and the threat of sanctions, whereas management theorists advocate a problem-solving approach of capacity building, rule interpretation, and transparency.⁵⁶ As monitoring can take many forms⁵⁷ it is used in both enforcement and management approaches, albeit with slightly different aims: to expose possible infringements within the former, and to increase transparency by facilitating coordination on treaty norms within the latter.⁵⁸

Although these two strategies tend to be portrayed as distinct alternatives, in practice they are complementary and mutually reinforcing.⁵⁹ Both strategies may also be more effective when combined.⁶⁰ One prominent example of complementarity is compliance building in the ozone regime, where both formal and informal bodies collaborated over problem solving through various managerial efforts of economic capacity building, technological assessment, and implementation review.⁶¹ When faced with persistent failures to comply with regulatory commitments, institutions resorted to enforcement measures and threatened penalties. On a similar note, the decision to protect one-third of the Great Barrier Reef in Australia started as a collaborative learning process with fishers, which increased legitimacy for the ultimate coercive measures.⁶²

The distinction between procedural and substantive obligations helps to clarify the types of commitment that states have set for themselves under the CBD. Substantive obligations lay the groundwork for a country's intent to comply with biodiversity conservation, sustainable use, and benefit sharing, while procedural obligations help with building the capacity to comply. Specifically, this distinction contributes to frame the analysis of levels of compliance across CBD procedural and substantive obligations, as well as the reasons why the Aichi Biodiversity Targets have not been met in full.

⁵³ Weiss, n. 49 above, p. 1564.

⁵⁴ *Ibid.*, p. 1585.

⁵⁵ A. Chayes & A.H. Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Harvard University Press, 1995); J. Tallberg, 'Paths to Compliance: Enforcement, Management, and the EU (2002) 56(3) *International Organization*, pp. 609–43.

⁵⁶ Tallberg, *ibid.*

⁵⁷ Monitoring can include off-site monitoring through scientific baselines, reports by parties or NGOs, on-site monitoring by parties, and international review of materials submitted by parties or gathered from other sources; see Weiss, n. 48 above.

⁵⁸ Tallberg, n. 55 above, pp. 612–14.

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*

⁶¹ *Ibid.*, p. 635.

⁶² P. Olsson, C. Folke & T.P. Hughes, 'Navigating the Transition to Ecosystem-based Management of the Great Barrier Reef, Australia' (2008) 105(28) *Proceedings of the National Academy of Sciences*, pp. 9489–94.

Conversely, distinguishing between implementation, compliance and enforcement enables us to determine where action can be taken to improve overall effectiveness in implementing CBD commitments in an integrated manner. Improvements within implementation alone will not be effective without both strong compliance and proper enforcement, and vice versa. Thus, using these concepts together provides an integrated approach to assess challenges faced by the CBD in implementing the Aichi Targets and identify insights from human rights law to support achievement of the CBD objectives.

3. METHODOLOGY

In order to improve compliance with the substantive and procedural obligations of the CBD, we need, firstly, to identify the challenges faced in implementing the CBD and determine the enforcement measures utilized. We used methods consisting of a content analysis of policy documents, multi-stakeholder interviews, and participant observation at CBD COP-14.

Addressing the first research question, we carried out a content analysis of review mechanisms from human rights law and biodiversity agreements. Secondary data sources were used, including CBD and UN documentation, scientific articles, and policy reports. While there have been advances in review mechanisms for upholding human rights law at the regional level,⁶³ our focus is the international level given that the CBD is a global treaty. At the international level the Human Rights Council is the intergovernmental body responsible for the protection of human rights. We examined the review mechanisms of international human rights law and identified two mechanisms as highly relevant to the CBD based on their similarities in terms of the focus on dialogue and procedural obligations: these mechanisms are (i) the Universal Periodic Review (UPR), and (ii) Special Procedures of the Human Rights Council. We contrasted these human rights mechanisms with an emerging review mechanism from the CBD, the Voluntary Peer Review (VPR).

The second research question with regard to compliance is more complex, and various qualitative methods were used to address this. Firstly, we analyzed CBD documentation and the fifth (or most recent) national reports of 21 countries in order to determine obstacles encountered in implementing the Aichi Targets.⁶⁴ The selection of national reports was based on criteria which included: (i) representation from the five CBD regional groups; (ii) countries visited by the Special Rapporteur on human rights and the environment; and (iii) participation in the CBD VPR. These criteria reflect the explorative nature of this research process.

⁶³ Regional systems localize international human rights standards to reflect national concerns. Three well-established regional systems are the European human rights system, the Inter-American human rights system, and the African Court on Human and Peoples' Rights; see, e.g., T. Buergenthal, 'The Evolving International Human Rights System' (2006) 100(4) *American Journal of International Law*, pp. 783–807.

⁶⁴ The 21 countries whose national reports were assessed are Brazil, Canada, Egypt, Estonia, Ethiopia, Fiji, India, Kenya, Lao People's Democratic Republic, Madagascar, Malaysia, Mongolia, Montenegro, Norway, Papua New Guinea, Seychelles, South Africa, South Sudan, Sri Lanka, Sweden, and the United Kingdom.

We then interviewed biodiversity experts and conducted participant observation at CBD COP-14 in Sharm El-Sheikh (Egypt) in November 2018. The purpose was to gather information on the challenges in implementing CBD guidelines and principles. The CBD voluntary guidelines on safeguards in biodiversity financing mechanisms⁶⁵ served as an entry point to discuss more broadly how global biodiversity guidelines were interpreted at (sub)national scales to foster compliance. The interviews were semi-structured⁶⁶ and based on an interview guide consisting of three general themes: (i) an example of a safeguard being implemented; (ii) the challenges faced in implementation; and (iii) how this process could be improved (for the interview questions see [Supplementary Material](#), Box S1, available online only).

Snowball sampling was used to identify interviewees, beginning with previous participants of multi-actor dialogues on biodiversity and human rights, and safeguards in biodiversity financing mechanisms.⁶⁷ The respondents selected were experts in biodiversity and human rights issues spanning country delegates, international organizations, civil society organizations (CSOs), non-governmental organizations (NGOs), independent consultants, youth representatives, and Indigenous groups. Care was taken to ensure representation from the five CBD regional groups so that the respondents' cumulative experiences would reflect geographical diversity. Eighteen people were interviewed in total, with each interview lasting between 20 and 40 minutes. The interviews were recorded, transcribed, and coded thematically,⁶⁸ using qualitative data analysis software (Atlas.ti).

Certain limitations are associated with this methodology, such as the potential for bias from snowball sampling and the number of national reports examined. Nevertheless, the various qualitative methods used enabled an exploratory approach and triangulation of results, which is especially important in human rights research with empirical work.⁶⁹

4. THE INTERSECTION OF HUMAN RIGHTS AND BIODIVERSITY LAW

4.1. *Compliance Mechanisms in Human Rights Law and in Biodiversity Agreements*

The analysis covers three review mechanisms in human rights law and biodiversity agreements: (i) the UPR and (ii) Special Procedures, both conducted by the Human Rights Council, and (iii) the CBD VPR (see [Table 2](#) below).

⁶⁵ Decision 14/15, n. 8 above.

⁶⁶ S. Kvale & S. Brinkmann, *Interviews: Learning the Craft of Qualitative Research Interviewing* (SAGE, 2009).

⁶⁷ M.F. Farooqui & M. Schultz, *Co-chairs' Summary of Dialogue Seminar on Scaling up Biodiversity Finance* (CBD Secretariat, 2012); Ituarte-Lima et al., n. 29 above.

⁶⁸ J. Saldaña, *The Coding Manual for Qualitative Researchers* (SAGE, 2013).

⁶⁹ L. McConnell & R. Smith, 'Mixing Methods: Reflections on Compatibility', in L. McConnell & R. Smith (eds), *Research Methods in Human Rights* (Routledge, 2018), pp. 150–64.

Human Rights Council: UPR

Established in 2006, the UPR aims to ‘undertake a universal periodic review ... of the fulfilment by each State of its human rights obligations and commitments’.⁷⁰ During each four-and-a-half-year review cycle, all UN member states have their human rights records reviewed. The reviews are conducted by the UPR working group, which consists of members of the Human Rights Council. Council members are elected by the UN General Assembly through a secret ballot. Membership is based on an equitable geographical distribution (African states hold 13 seats, Eastern European states hold 6 seats, and so on).

Each state review is conducted by three states drawn from other members of the Human Rights Council. Reviews are based on a national report of the human rights record provided by the state, a compilation of UN documentation from independent experts, and a stakeholder report from NGOs (the so-called ‘shadow report’). This collaboration has led to governments recognizing the role of CSOs in providing input to the human rights agenda.⁷¹ Based on these three documents, the Council members engage in an interactive dialogue and assessment of the country under review to provide recommendations for improvement.

The UPR process emphasizes bilateral, state-to-state relations.⁷² The state under review decides which recommendations to accept or reject, and is obliged to take action. In the subsequent review states report back on their progress (or lack thereof). If necessary, the Council will address cases where states do not respond to the recommendations. States’ human rights records are reviewed by other states rather than independent human rights experts.⁷³ This peer review process highlights the political nature of the UPR, which mixes both enforcement and managerial approaches to human rights implementation.⁷⁴

However, one challenge of the UPR is the significant time constraint in reviewing states during the Working Group reviews.⁷⁵ Each state review is around two to three minutes, which may turn what should be ‘a dynamic space for peer-to-peer debate and exchange into a stale forum of rushed and often unconnected monologues’.⁷⁶

While there is scope for improvement, the UPR provides an innovative space for countries to criticize each other’s human rights record constructively and share lessons learnt. It also appears to have a positive impact on human rights at the country level.⁷⁷

⁷⁰ UN General Assembly, Res. 60/251 ‘Human Rights Council’, 15 Mar. 2006, UN Doc. A/RES/60/251, p. 3.

⁷¹ R. Chauville, ‘The Universal Periodic Review’s First Cycle: Success and Failures’, in H. Charlesworth & E. Larking (eds), *Human Rights and the Universal Periodic Review: Rituals and Ritualism* (Cambridge University Press, 2015), pp. 87–108.

⁷² E. McMahon & M. Ascherio, ‘A Step Ahead in Promoting Human Rights? The Universal Periodic Review of the UN Human Rights Council’ (2012) 18(2) *Global Governance*, pp. 231–48.

⁷³ E. Domínguez-Redondo, ‘The Universal Periodic Review: Is There Life Beyond Naming and Shaming in Human Rights Implementation?’ (2012) 4 *New Zealand Law Review*, pp. 673–706.

⁷⁴ *Ibid.*

⁷⁵ S. Gujadhur & M. Limon, *Towards the Third Cycle of the UPR: Stick or Twist?* (Universal Rights Group, 2016).

⁷⁶ *Ibid.*, p. 4.

⁷⁷ *Ibid.*, p. 19.

The self-assessment requires governments to coordinate their ministries to write the national reports, which makes civil servants more aware of domestic human rights issues and increases their sense of ownership of the process.⁷⁸ Furthermore, the dialogue among states has a media presence and is streamed online, which increases transparency and puts public pressure on governments.

Human Rights Council: Special Procedures

The Special Procedures of the Human Rights Council are conducted by independent experts with mandates to report and advise on human rights from a thematic or country-specific perspective. They can be either individuals (namely, the Special Rapporteur) or a working group of five members, one from each UN regional grouping. There are currently 44 thematic and 12 country mandates.⁷⁹

Special Procedures act on alleged violations by sending communications to states, undertaking fact-finding missions to a country, elaborating on human rights norms, and raising public awareness. During country visits Special Procedure representatives assess the human rights situation and meet with government institutions, CSOs, victims, and other stakeholders. After the mission they report their findings to the Human Rights Council and UN General Assembly. In these sessions the visited country may respond while other countries and CSOs may comment.

The flexible nature of mandates has allowed Special Rapporteurs to respond to changing needs in specific problem areas.⁸⁰ One outcome from a Special Rapporteur communication involves the case of the Sengwer people in Kenya, who faced forced evictions in the wake of a conservation project funded by the European Union (EU). This case was elevated internationally as the Special Rapporteur appealed to the Kenyan authorities and other involved international organizations to halt the evictions, which led to the EU suspending the project funding.⁸¹ Moreover, freedom of movement during country visits enables Special Rapporteurs to draw attention to specific violations, such as in Madagascar where conflict occurred arising from a mining permit being issued without consulting local communities.⁸²

Conversely, flexible mandates make it difficult to assess the impact of Special Procedures. Some impacts are visible and short-term, such as an appeal to a state to release environmental defenders being held on unfounded criminal charges.⁸³ Longer-term impacts may not be easily visible, such as recommendations to enhance

⁷⁸ Chauville, n. 71 above.

⁷⁹ UN Human Rights Council, 'Special Procedures', available at: <https://www.ohchr.org/EN/HRBodies/HRC/Pages/SpecialProcedures.aspx>.

⁸⁰ R.K.M. Smith, 'The Possibilities of an Independent Special Rapporteur Scheme' (2011) 15(2) *International Journal of Human Rights*, pp. 172–86.

⁸¹ J.H. Knox, M. Forst & V. Tauli-Corpus, *Indigenous Rights Must Be Respected during Kenya Climate Change Project* (OHCHR, 2018).

⁸² UN General Assembly, Human Rights Council, 'Report of the Special Rapporteur [John H. Knox] on Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, on His Visit to Madagascar', 24 Mar. 2017, UN Doc. A/HRC/34/49/Add.1.

⁸³ UN General Assembly, Human Rights Council, 'Report of the Special Rapporteur on the Situation of Human Rights Defenders, Michel Forst', 23 Mar. 2018, UN Doc. A/HRC/37/51/Add.1.

judicial independence.⁸⁴ Additionally, mechanisms to track how states have responded to recommendations are yet to be institutionalized; Special Procedures have limited resources to engage in repeated visits or communications.⁸⁵

Nevertheless, Special Procedures have been described by a former UN Secretary-General as the ‘crown jewel’ of the human rights system.⁸⁶ They play a unique role as an entry point for the public into the larger UN human rights system spanning treaty bodies, political resolutions, and the Office of the High Commissioner for Human Rights (OHCHR).⁸⁷ Special Procedures also shape international soft law norms by elaborating on a legal framework for human rights. For example, a former Special Rapporteur established the UN Guiding Principles on Internal Displacement, which several states then integrated into national legislation.⁸⁸

CBD: VPR

While certain agreements under the CBD – such as the Cartagena Protocol⁸⁹ and the Nagoya Protocol⁹⁰ – have their own compliance committees, there is no overarching compliance mechanism to monitor state-level implementation of the Convention.⁹¹ The CBD COP does not review individual national reports, but rather draws conclusions based on the CBD Secretariat’s synthesis of these reports.⁹² Current evaluations focus on report submission and quantitative analysis of overall developments rather than conducting a qualitative analysis of the contents of the report.⁹³ This highlights a significant limitation of current CBD reporting processes: there is no established mechanism yet for evaluating each state’s self-assessment.

One emerging review mechanism in the CBD context is the VPR of NBSAPs, which is currently in its pilot phase. In 2014 the Executive Secretary proposed a peer review

⁸⁴ S.P. Subedi et al., ‘The Role of the Special Rapporteurs of the UN Human Rights Council in the Development and Promotion of International Human Rights Norms’ (2011) 15(2) *International Journal of Human Rights*, pp. 155–61.

⁸⁵ T. Piccone, ‘The Contribution of the UN’s Special Procedures to National Level Implementation of Human Rights Norms’ (2011) 15(2) *International Journal of Human Rights*, pp. 206–31.

⁸⁶ K. Annan, ‘Secretary-General Urges Human Rights Activists to “Fill Leadership Vacuum”’, UN Press Release, 8 Dec. 2006, available at: <https://www.un.org/press/en/2006/sgsm10788.doc.htm>.

⁸⁷ Smith, n. 80 above.

⁸⁸ A.M. Abebe, ‘Special Rapporteurs as Law Makers’ (2011) 15(2) *International Journal of Human Rights*, pp. 286–98.

⁸⁹ Montreal (Canada), 15 May 2000, in force 11 Sept. 2003, available at: <http://bch.cbd.int/protocol>.

⁹⁰ Nagoya (Japan), 29 Oct. 2010, in force 12 Oct. 2014, available at: <https://www.cbd.int/abs>.

⁹¹ Morgera & Tsioumani, n. 38 above. The Nagoya Protocol and Cartagena Protocol each have separate compliance committees within the CBD as a result of their transboundary nature; the national legislation of both the provider and the user country is indispensable for implementing the protocol. Nonetheless, the effectiveness of the Nagoya Protocol is a work in progress: as of 2018 only 34% of parties had complied with domestic legislation on access and benefit sharing (UNEP, CBD, Decision 3/1 adopted by the Parties to the Nagoya Protocol, ‘Assessment and Review of the Effectiveness of the Protocol (Article 31)’, 29 Nov. 2018, UN Doc. UNEP/CBD/NP/MOP/DEC/3/1).

⁹² Y. Xiang & S. Meehan, ‘Financial Cooperation, Rio Conventions and Common Concerns’ (2005) 14(3) *Review of European Community and International Environmental Law*, pp. 212–24.

⁹³ Morgera & Tsioumani, n. 38 above.

process, drawing from existing international review processes including the Human Rights Council UPR, the Organisation for Economic Co-operation and Development's Environmental Performance Reviews, and the UN Climate Change national reviews.⁹⁴

The VPR is the only established mechanism under the CBD in which a party's implementation is reviewed, with the objective of helping to improve the individual and collective capacities of parties. A peer review team of biodiversity experts conducts a desk study of the national reports and the NBSAP, as well as a country visit to interview government institutions and local stakeholders. Civil society engagement is limited to a consultation during the country visits, and the list of local stakeholders is agreed beforehand between a national coordinator and the CBD Secretariat.⁹⁵ The review team then produces a report with recommendations, which is sent to the reviewed party for response.⁹⁶

Parties are invited to volunteer for review. Ethiopia, India, Montenegro, Sri Lanka, and Uganda have participated thus far.⁹⁷ Although the VPR is dependent on willingness to participate, information disclosed throughout the process enables a sharing of experiences with all CBD parties. The VPR does not have an avenue for the behaviour of an individual state to be discussed openly by other states, which may reduce barriers to participation.⁹⁸

The strengths and limitations of each review mechanism are summarized in Table 2.

From an overview of the mechanisms, it is apparent that a mix of strategies is used to support compliance. Compliance strategies emphasize cooperation rather than confrontation, focusing on repair and results rather than coercion.⁹⁹ We analyzed each review mechanism to identify compliance strategies and compare them in Table 3.

All three review mechanisms enable the universal involvement of members and offer opportunities for peer learning. We found that the UPR has the most comprehensive approach, with formal cycles to facilitate follow-up on recommendations, and civil

⁹⁴ UNEP, CBD, Decision 12/25 'Proposal for Voluntary Peer-Review of the Preparation and Implementation of National Biodiversity Strategies and Action Plans', 28 Aug. 2014, UN Doc. UNEP/CBD/COP/12/25/Add.3.

⁹⁵ UNEP, CBD, 'A Methodology for Voluntary Peer Review of the Revision and Implementation of National Biodiversity Strategies and Action Plans', 1 Nov. 2016, UN Doc. UNEP/CBD/COP/13/INF/2.

⁹⁶ A.M. Ulloa, S. Karlsson-Vinkhuyzen & K. Jax, 'Enhancing Implementation of the CBD: A Novel Peer-Review Mechanism Aims to Promote Accountability and Mutual Learning' (2018) 217 *Biological Conservation*, pp. 371–6.

⁹⁷ UNEP, CBD, 'Report of the Testing of the Provisional Methodology for the Voluntary Peer Review of the Review and Implementation of National Biodiversity Strategy and Action Plans in Ethiopia', 18 Apr. 2016, UN Doc. UNEP/CBD/SBI/1/INF/31; Government of India, 'Voluntary Peer-Review under the CBD – Case Study 2: India', available at: <https://www.cbd.int/doc/nbsap/in-vpr-en.pdf>; UNEP, CBD, 'Voluntary Peer Review of the Preparation and Implementation of the National Biodiversity Strategy and Action Plan of Montenegro', 11 Nov. 2018, UN Doc. UNEP/CBD/COP/14/INF/19; CBD Secretariat, 'Voluntary Peer Review of NBSAP Revision and Implementation', available at: <https://www.cbd.int/nbsap/vpr>.

⁹⁸ Ulloa, Karlsson-Vinkhuyzen & Jax, n. 96 above.

⁹⁹ N. Gunningham, 'Compliance, Deterrence and Beyond', in M. Faure (ed.), *Compliance and Enforcement of Environmental Law*, Elgar Encyclopaedia of Environmental Law (Edward Elgar, 2017), pp. 63–73.

Table 2 Review Mechanisms of the Human Rights Council and the CBD, with their Contributions to and Limitations in Supporting Compliance

Review Mechanism	Contribution to Compliance	Limitation in Supporting Compliance
Human Rights Council: UPR	<ul style="list-style-type: none"> • Requires all member states to be reviewed, while enabling states to review one another. • CSOs have a formal reporting role through submitting 'shadow' reports. 	<ul style="list-style-type: none"> • Reliant on self-assessment, self-reporting, and peer-to-peer international diplomatic exchange rather than independent experts.
Human Rights Council: Special Procedures	<ul style="list-style-type: none"> • Flexible nature of mandates allows Special Procedures to respond to changing needs in specific problem areas. • Special Procedures can receive and act upon individual complaints. • Freedom of movement and inquiry with civil society during country visits enables Special Procedures to draw attention to specific cases of human rights violations. 	<ul style="list-style-type: none"> • Difficult to measure the overall impact of their work. • No institutionalized mechanism for follow-up to a country visit. Limited resources for repeated visits or communications.
CBD: VPR	<ul style="list-style-type: none"> • VPR enables peer feedback, greater transparency, and accountability for countries' development of their NBSAP. • Peer review team consists of independent biodiversity experts who do not represent a country. 	<ul style="list-style-type: none"> • The review's voluntary nature makes it subject to the willingness of actors to engage with accountability mechanisms. • Engagement with non-state actors must be agreed beforehand between national coordinator and the CBD Secretariat.

society able to engage critically and independently through shadow reports. However, the peer review is not conducted by thematic experts and the process may be subject to international diplomacy. Special Procedures benefit from a flexible mandate, with independent experts able to respond to changing needs in specific problem areas and to engage independently with civil society. Certain elements of human rights review mechanisms were emulated in the VPR, such as self-assessment and peer review performed by thematic experts. As the VPR is still at the pilot stage, its current distance from diplomatic exchanges and controlled civil society engagement may be strategic moves to encourage state participation.

Table 3 Comparison of Compliance Strategies Used in Human Rights Council and CBD Review Mechanisms

Compliance Strategy	Review Mechanisms		
	HRC UPR	HRC Special Procedures	CBD VPR
Universal participation of member states	✓	✓	Still at voluntary pilot stage
Country under review conducts a self-assessment	✓	✗	✓
Peer review by thematic experts	✗	✓	✓
Peer review by all member states	✓	✗	✗
Engagement of civil society	✓	✓	Subject to approval of state under review
Country visit	✗	✓	✓
Formal follow up mechanism with posed recommendations	✓	✗	✗

4.2. Implementation of the Convention on Biological Diversity

CBD documentation and national reports

Almost all of the parties to the CBD (97%) are in compliance with their procedural obligation of developing a NBSAP and submitting national reports.¹⁰⁰ Implementing substantive obligations, however, is more difficult. The CBD COP-14 Secretariat assessments reported that a limited number of parties have fully implemented their NBSAPs into cross-sectoral policies. The results of the fifth national reports assessments indicated some progress, although at an insufficient rate: more than half of the parties are not on track to comply with any given Aichi Target.¹⁰¹ Many national reports contain no information to assess progress on several targets. For instance, Target 10 on minimizing anthropogenic pressures on ecosystems vulnerable to climate change had the least amount of information: approximately 32% of national reports had no information.¹⁰²

Our analysis of 21 national reports identified the following main obstacles faced in implementing the Aichi Targets (for detailed excerpts see [Supplementary Material](#), Table S1, available online only):

- *Poor ecological monitoring with insufficient biodiversity data*

Half of the national reports (11) – including those of Egypt, Mongolia, and the Seychelles – noted the poor documentation status on existing quality of habitats or species.¹⁰³ This is a major deficit because countries are not able to improve the

¹⁰⁰ UN Doc. UNEP/CBD/COP/14/5/Add.2, n. 12 above.

¹⁰¹ *Ibid.*, p. 14.

¹⁰² *Ibid.*, p. 8.

¹⁰³ Egypt, 'Fifth National Report to the CBD', July 2014, p. 84, available at: <https://www.cbd.int/doc/world/eg/eg-nr-05-en.pdf>; Mongolia, 'Fifth National Report to the CBD', 2014, p. 37, available at: <https://www.cbd.int/doc/world/mn/mn-nr-05-en.pdf>; Seychelles, 'Fifth National Report to the CBD', 2014, p. 83, available at: <https://www.cbd.int/doc/world/sc/sc-nr-05-en.pdf>.

conservation status or evaluate policy outcomes without a prior assessment of the situation.¹⁰⁴ Certain NBSAPs (for example, those of Brazil and Sri Lanka) have no defined biodiversity indicators for measuring progress.¹⁰⁵

- *Lack of institutional capacity*

More than half of the national reports assessed (14) – including those of Ethiopia, Fiji, Lao People’s Democratic Republic (PDR), and Montenegro – cited a lack of institutional capacity to implement environmental policies.¹⁰⁶ Limited human resources and financial support were identified as obstacles by countries across all income groups. Some key difficulties were coordination among government agencies and the distribution of responsibilities between national and subnational levels. In Malaysia, for example, implementation duties were not delegated to relevant agencies and had no timeline, resulting in a lack of accountability.¹⁰⁷ In South Sudan, biodiversity management (forest governance and land ownership) is a shared responsibility between national and state governments, which led to a lack of ownership.¹⁰⁸

- *Difficulty in integrating biodiversity policies into sectors*

Integrating environmental and biodiversity issues into sectoral policies is a challenge listed in several national reports (5). Both Sri Lanka and Norway reported that biodiversity concerns are not adequately integrated into priority areas of development sectors such as mining, housing, and infrastructure.¹⁰⁹ In Sweden, targeting environmental performance in agricultural and forestry sectors has been a struggle, requiring consistent analyses, as a result of a government imperative of maintaining flexibility to develop individual solutions without raising administrative burdens.¹¹⁰ In South Africa, the institutional changes needed to effectively mainstream biodiversity into

¹⁰⁴ Chandra & Idrisova, n. 14 above.

¹⁰⁵ Brazil, ‘Fifth National Report to the CBD’, Jan. 2015, p. 130, available at: <https://www.cbd.int/doc/world/br/br-nr-05-en.pdf>; Sri Lanka, ‘Fifth National Report to the CBD: 2014’, p. 106, available at: <https://www.cbd.int/doc/world/lk/lk-nr-05-en.pdf>.

¹⁰⁶ Republic of Ethiopia, ‘Fifth National Report to the CBD’, May 2014, p. 24, available at: <https://www.cbd.int/doc/world/et/et-nr-05-en.pdf>; Republic of the Fiji Islands, ‘Fifth National Report to the CBD’, 2014, p. 12, available at: <https://www.cbd.int/doc/world/fj/fj-nr-05-en.pdf>; Lao PDR, ‘Fifth National Report to the CBD’, 2016, p. 28, available at: <https://www.cbd.int/doc/world/la/la-nr-05-en.pdf>; Montenegro, ‘Fifth National Report to the CBD’, Mar. 2014, p. 6, available at: <https://www.cbd.int/doc/world/me/me-nr-05-en.pdf>.

¹⁰⁷ Malaysia, ‘Fifth National Report to the CBD’, 2014, p. 90, available at: <https://www.cbd.int/doc/world/my/my-nr-05-en.pdf>.

¹⁰⁸ Republic of South Sudan, ‘Fifth National Report to the CBD’, Dec. 2015, p. 27, available at: <https://www.cbd.int/doc/world/ss/ss-nr-05-en.pdf>.

¹⁰⁹ Sri Lanka, n. 105 above; Norway, ‘Fifth National Report to the CBD’, 2014, p. 50, available at: <https://www.cbd.int/doc/world/no/no-nr-05-en.pdf>.

¹¹⁰ Sweden, ‘Fifth National Report to the CBD’, 2013, p. 39, available at: <https://www.cbd.int/doc/world/se/se-nr-05-en.pdf>.

sectors have been estimated to take at least 7 to 10 years, which requires long-term vision and commitment beyond the average lifetime of projects.¹¹¹

Multi-stakeholder interviews at CBD COP-14 and opportunities to learn from review mechanisms

The guidelines and principles developed under the CBD aim to influence the conduct of its parties and non-state actors. On the basis of the multi-stakeholder interviews at CBD COP-14, we identified four main compliance challenges. We then suggested how existing biodiversity and human rights review mechanisms could be developed in response to each challenge, as follows.

• *Difficulties in establishing biodiversity metrics for monitoring and review*

Several respondents (6) highlighted that the lack of consensus on universal metrics for biodiversity complicates the quantification of outcomes. The breadth, depth, and locational elements of biodiversity make it challenging to establish metrics that can be consistently quantified across scales. As described by respondents:

There are no easy, clear metrics for companies to determine their impact on biodiversity. Even within the conservation community, we don't have a consensus yet on how to quantify impacts.¹¹²

Enhancing environmental mainstreaming has positive outcomes but it is difficult to assess if you haven't established indicators and a sound baseline in the first place.¹¹³

Thus, biodiversity baselines are important for adequate outcome evaluation. Monitoring ecological outcomes is a common difficulty in conservation initiatives; goals are often vaguely formulated without quantitative targets or an allocated time frame.¹¹⁴ Without clearly defined indicators in the policy design, further challenges will arise at the monitoring and compliance stages. One respondent stated: 'With biodiversity, there is a big risk that the baseline is not clear. We have already degraded situations being taken as the baseline, which should instead be a natural ecosystem'.¹¹⁵

All CBD parties face the same challenge of specifying indicators for measuring progress towards the Aichi Targets. The knowledge exchange facilitated through the VPR can help to address this. The VPR assesses whether the party's NBSAP has national targets, indicators, associated baseline data, and if national targets are mapped onto global biodiversity targets.¹¹⁶

¹¹¹ Republic of South Africa, 'Fifth National Report to the CBD', Mar. 2014, p. 80, available at: <https://www.cbd.int/doc/world/za/za-nr-05-en.pdf>.

¹¹² Interview 1, NGO representative.

¹¹³ Interview 5, government representative.

¹¹⁴ S.N. Panfil & C.A. Harvey, 'REDD+ and Biodiversity Conservation' (2016) 9(2) *Conservation Letters*, pp. 143–50.

¹¹⁵ Interview 2, environmental NGO representative.

¹¹⁶ UN Doc. UNEP/CBD/COP/13/INF/2, n. 95 above.

To help to address the insufficient monitoring of outcomes, civil society could be engaged in collecting ecological data. The UPR supports civil society involvement by inviting written submissions from the public based on general guidelines.¹¹⁷ Similar initiatives, such as citizen science, have also encouraged public participation in ecological monitoring, where data can be collected from local to global scales.¹¹⁸

- *Slow uptake of CBD guidelines in national legislation and policies*

Despite the substantive obligations imposed on parties to protect biodiversity, there has been a slow uptake in incorporating CBD guidelines and biodiversity targets into national policies. Few parties have used their NBSAPs to integrate biodiversity into broader policies and planning processes.¹¹⁹ Many respondents (8) expressed a need to clarify the guidelines, such as the CBD voluntary guidelines on safeguards, for a more consistent application:

It's important to see how CBD provisions are translated into national legislative and regulatory frameworks. There tend to be gaps between the CBD, the national legal framework, and what is legitimate for local communities whom are often not reflected in the law.¹²⁰

Safeguards are weakened by the fact that loan conditions are often temporal, so when that ends there are few ways to drive compliance. That's where the CBD can play an important role, assuming that governments take those recommendations and integrate them into their own policies.¹²¹

We need to clarify what safeguards mean and have a more universal standard. It's about the guidance and how that is interpreted.¹²²

Several respondents (7) also indicated a lack of appropriate negative incentives within the CBD. Although flexible approaches allow for innovation, some respondents were in favour of stricter consequences. One respondent stated: 'There is very little information being shared on how safeguards have been implemented or whether it [the CBD COP decision] is effective. There are limited consequences for not complying with CBD decisions'.¹²³

To address these shortcomings and encourage state accountability, compliance strategies similar to those featuring in human rights review mechanisms could be incorporated in the CBD. For example, one key feature of peer review systems is mutual learning. The UPR enables states to review each other's records and engage in a collective dialogue. This is bound to generate learning relevant within their own national context as parties may face similar challenges. Moreover, Special Procedures conduct

¹¹⁷ UN Human Rights Council, 'Universal Periodic Review: Information and Guidelines for Relevant Stakeholders' Written Submissions', available at: <https://www.ohchr.org/Documents/HRBodies/UPR/TechnicalGuideEN.pdf>.

¹¹⁸ M. Chandler et al., 'Contribution of Citizen Science Towards International Biodiversity Monitoring' (2017) 213(B) *Biological Conservation*, pp. 280–94.

¹¹⁹ CBD Secretariat, n. 13 above.

¹²⁰ Interview 18, CSO representative.

¹²¹ Interview 12, international organization representative.

¹²² Interview 2, environmental NGO representative.

¹²³ Interview 15, independent consultant.

thematic studies to evaluate the implementation of domestic laws and international standards. They can deliver comments to states on the adequacy of national legislation and policy development relating to human rights standards.¹²⁴ In addition, review mechanisms that engage civil society can help to advance national implementation as CSOs can provide specific, timely, and solution-oriented input to governments.¹²⁵

• *Inconsistent biodiversity policy integration*

Social and environmental safeguards are commonly associated with infrastructure development projects that either require environmental impact assessments or are funded by international organizations.¹²⁶ Some respondents (5) remarked on the inconsistent application of biodiversity policies across sectors and called for a wider application of safeguards:

We need a massive expansion of existing safeguards into any business transaction and across many sectors. Any company listed on the stock exchange should have safeguards in place and disclose their biodiversity impact.¹²⁷

Safeguards need to be embedded within the project design for all sectors: agricultural, road and infrastructure, housing, even tourism. Instead of one set of safeguards that cuts across industries, we need tailored social and environmental safeguards for each and every sector.¹²⁸

I'm not sure how much of what comes out of the CBD is actually then integrated into regulatory policies. It's fine that you have environment ministries coming here [CBD-COP14], but they aren't the ones that have real effective control over the major projects like mining, oil and gas, and infrastructure. Are the agreements made in the CBD being transferred over into relevant regulatory policies and sectors?¹²⁹

Integrating biodiversity policies across sectors, or mainstreaming, is a specific issue targeted by the CBD VPR. The desk study examined environmental policy integration, where the review team identified policies that integrate biodiversity into sectoral plans and suggested possible synergies with other conventions.¹³⁰ From the pilot VPRs, parties were provided with recommendations to improve mainstreaming efforts, such as synchronizing Ethiopia's NBSAP with the country's new national development

¹²⁴ For instance, several Special Rapporteurs sent a communication to the Brazilian government expressing concern about the closure of its National Council for Food Security and Nutrition as this 'could have a severe negative impact on the realization of the rights to food and water in the country'; see D. Boyd et al., 'Mandates of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment; the Special Rapporteur on the Right to Food; the Special Rapporteur on the Rights of Indigenous Peoples; and the Special Rapporteur on the Human Rights To Safe Drinking Water and Sanitation', 22 Feb. 2019, available at: <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=24339>.

¹²⁵ Ulloa, Karlsson-Vinkhuyzen & Jax, n. 96 above.

¹²⁶ Ituarte-Lima et al., n. 29 above.

¹²⁷ Interview 15, independent consultant.

¹²⁸ Interview 9, government representative.

¹²⁹ Interview 12, international organization representative.

¹³⁰ UN Doc. UNEP/CBD/COP/13/INF/2, n. 95 above.

strategy.¹³¹ In India, the VPR team recognized the country's decentralized governance system and recommended that each state should develop its own State Biodiversity Plan from the NBSAP.

Furthermore, the thematic studies produced by Special Procedures enable specific knowledge generation. A former UN Special Rapporteur on the right to development held regional multi-stakeholder consultations to identify good practices. One outcome from these consultations was the need for environmental and human rights impact assessments to be conducted in transboundary development projects. The Special Rapporteur has since called for states to set safeguards that hold financial institutions accountable to international legal standards.¹³²

• *Questionable opportunities for effective and meaningful public participation*

The challenge of ensuring effective and meaningful public participation, particularly with Indigenous and local communities, was highlighted by two-thirds of respondents (12). Several respondents (6) described a lack of consideration for power asymmetries underlying the participation process, which influences the ability of actors to express their views freely:

We should involve Indigenous and local communities early in the process so they can discuss if the proposed policy would benefit them or whether other types of engagements would be preferred.¹³³

It's not only about appointing one person from a community or NGO in the consultation process. It's about making sure that they actually represent the stakeholders.¹³⁴

Many communities have never had to deal with this [development project] before. There's no funding source to help them pay for technical and legal expertise to guide them, to know what to ask for during the resettlement process.¹³⁵

There is often a lack of attention for power imbalances, local communities are being invited to participate in a situation where they do not totally feel comfortable to respond. There is little analysis about incentives built into consultation processes that can create a big disincentive for people to freely express their views. Power, disincentives, and financial dependencies are often overlooked.¹³⁶

Some respondents (3) also stressed the importance of integrating gender perspectives. One respondent described:

We conducted a financial inclusion programme to improve the livelihoods of a community that was living within a protected area and dependent on tourism as their main source of income. We began by communicating with the community, by having meetings with women and tribe leaders. Based on the needs of the community, we decided to focus the

¹³¹ UNEP/CBD/SBI/1/INF/31, n. 97 above.

¹³² UN General Assembly, Human Rights Council, 'Report of the Special Rapporteur [S. Alfarargi] on the Right to Development', 26 July 2019, UN Doc. A/HRC/42/38.

¹³³ Interview 7, government representative.

¹³⁴ Interview 15, independent consultant.

¹³⁵ Interview 1, NGO representative.

¹³⁶ Interview 2, environmental NGO representative.

intervention on women, to help them lend money to each other to start businesses. The aim is to create a sustainable source of income generation and build social capital.¹³⁷

Issues such as the timing of engaging stakeholders, access to information, and gender considerations can affect the quality of public participation. Local people and communities often do not have the technical or legal expertise to navigate the decision-making process, especially when resettlement issues are involved.¹³⁸ States have the procedural obligation to facilitate effective and meaningful participation in environmental decision making, as well as to provide access to remedies for harm.¹³⁹

Connecting the domains of human rights and biodiversity creates additional tools to implement and enforce the CBD. One respondent described how their organization challenged a development project with serious environmental and social impacts by using human rights and biodiversity mechanisms to build a legal case, specifically, by leveraging the UPR:

There was a destructive dam being built in [Country X] financed by [Government Y] that would imply the extinction of an endemic bird species. To stop the project, we turned to the human rights argument. There are Indigenous peoples in the area, and their rights of free, prior, and informed consent were not respected, so we took it to the Human Rights Commission, since the UN was evaluating Y's human rights record that year in the Universal Periodic Review. We took that opportunity to express our concerns of not complying with the rights of Indigenous peoples there.¹⁴⁰

These combined efforts from the respondent's organization helped to raise international attention; the country's judiciary ordered a public hearing on the environmental impact assessment.¹⁴¹ The project has since been delayed, pending the judicial process. By utilizing international legal instruments from both domains, a stronger argument was built to highlight the negative impacts of the project on people and biodiversity.

Hence, facilitating the active participation of CSOs, Indigenous peoples, and local communities is a strategy for enhancing compliance. It is in the stakeholder's self-interest to safeguard social, and sometimes ecological, outcomes. This participation can be improved by including some of the following procedures. In the VPR under the CBD the peer review team assesses public participation and stakeholder engagement in the NBSAP and its implementation.¹⁴² On this basis, Montenegro's VPR recommended improving public awareness by targeting youth engagement through the Global Youth Biodiversity Network.¹⁴³

Both the UPR and Special Procedures aim to address power asymmetries by actively facilitating civil society participation and involving participants on their own terms. The UPR affords space for dissenting views through the shadow reports, which was

¹³⁷ Interview 6, government representative.

¹³⁸ Ituarte-Lima et al., n. 29 above.

¹³⁹ Knox Report 2017, n. 21 above.

¹⁴⁰ Interview 3, CSO representative.

¹⁴¹ Ibid.

¹⁴² UN Doc. UNEP/CBD/COP/13/INF/2, n. 95 above.

¹⁴³ UN Doc. UNEP/CBD/COP/14/INF/19, n. 97 above.

also highlighted in our interviews.¹⁴⁴ In Special Procedures, rapporteurs have freedom of movement to meet directly with civil society and pursue specific cases. Their physical presence provides victims with an enhanced opportunity for advocacy, as they obtain international attention and a direct contact with a bureaucratic UN system.¹⁴⁵

5. SUPPORTING COMPLIANCE WITH THE CBD

The section above analyzes the review mechanisms used in human rights and biodiversity domains, as well as the challenges reflected in both the CBD parties' national reports and multi-stakeholder interviews. This section discusses: (i) the compliance strategies of review mechanisms; (ii) shared themes in national reports and interviews; and (iii) the insufficient mainstreaming of biodiversity.

5.1. *Compliance Strategies of Review Mechanisms*

Peer review processes involve a third-party evaluating implementation, which complements the states' procedural obligations of national reporting. The UPR, Special Procedures, and VPR illustrate that review mechanisms for international law utilize various strategies for compliance, as identified in [Table 3](#) above.

The CBD utilizes a management approach to compliance by emphasizing dialogue, capacity building, rule interpretation, and transparency. Although the CBD VPR marks progress by evaluating a country's performance with its substantive obligations, there is still room for improvement. The VPR neither has a formal follow-up mechanism for recommendations offered by the review team, nor enables independent civil society engagement.

The UPR demonstrates that states are willing to engage with cooperative approaches to compliance through state-to-state diplomatic relations. Fostering direct interaction between states enables democratic states to act independently from their regional counterparts.¹⁴⁶ The UPR establishes the norm of member states constructively critiquing each other's performance without provoking claims of disloyalty, which fosters a shift towards global collaborative governance.¹⁴⁷ Peer review mechanisms strike a balance between universalism and cultural relativism; national sovereignty is addressed with each member state deciding the national means to meet universal human rights standards, while facilitating diplomatic exchange on its substantive obligations.¹⁴⁸ These review mechanisms provide a forum to address a wide range of human rights, including gender issues.¹⁴⁹

Introducing independent evaluators with flexible mandates, as occurs in the Special Procedures, enables a shaping of legal norms. This suggests an interactional approach to

¹⁴⁴ Interview 3, CSO representative.

¹⁴⁵ Piccone, n. 85 above.

¹⁴⁶ McMahan & Ascherio, n. 72 above.

¹⁴⁷ *Ibid.*, p. 246.

¹⁴⁸ E. Domínguez-Redondo & E. McMahan, 'More Honey than Vinegar: Peer Review as a Middle Ground between Universalism and National Sovereignty' (2014) 51 *Canadian Yearbook of International Law*, pp. 61–97.

¹⁴⁹ Domínguez-Redondo, n. 73 above.

lawmaking on issues that were left under-determined in the treaty negotiation process.¹⁵⁰ Review processes help with accountability as the roles and duties of actors are defined in the evaluation of the content of each national report.

Moreover, the zero draft text of the post-2020 global biodiversity framework specifically noted the need for developing an effective monitoring and review process.¹⁵¹ The existing interest in an enhanced review mechanism creates an opportunity for strengthening implementation through peer learning.¹⁵² Although some CBD parties may have been cautious in cross-referencing human rights instruments,¹⁵³ our findings on the compliance strategies used in international review mechanisms can offer learning for the CBD as its VPR process continues to develop.

5.2. Shared Themes in National Reports and Interviews

The national reports represent a country's self-assessment of their progress towards the Aichi Targets, while the interviews with a multi-stakeholder group provide a broader perspective of the challenges faced. As presented in [Figure 1](#), these findings enable insights into the challenges of implementing, complying with, and enforcing the CBD.

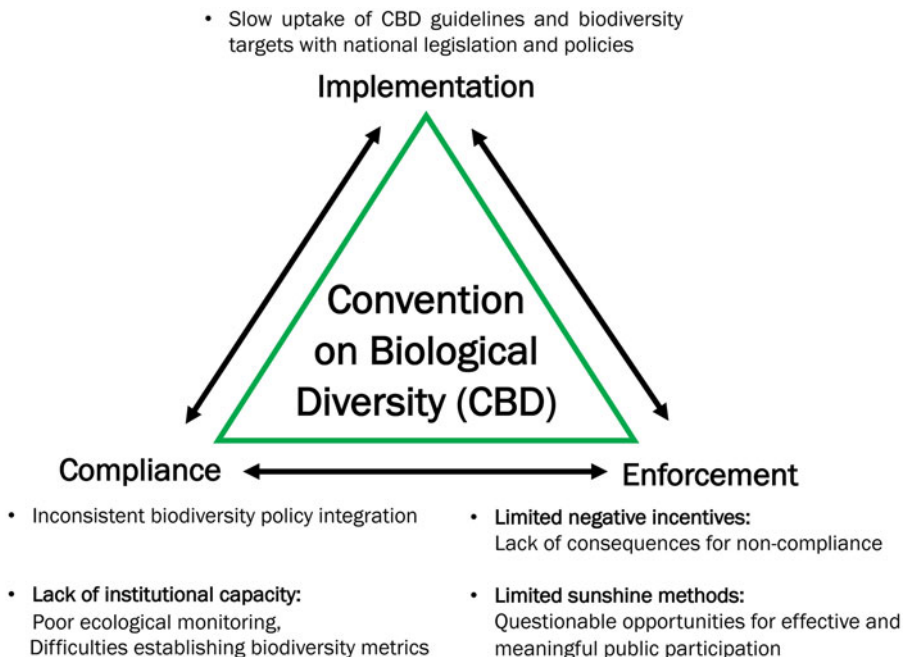


Figure 1 Challenges Faced in Implementing, Complying with, and Enforcing the CBD

¹⁵⁰ Abebe, n. 88 above.

¹⁵¹ UNEP, CBD, 'Post-2020 Global Biodiversity Framework: Discussion Paper', 25 Jan. 2019, UN Doc. UNEP/CBD/POST2020/PREP/1/1.

¹⁵² UN Doc. UNEP/CBD/WG2020/2/3, n. 11 above.

¹⁵³ Morgera & Tsioumani, n. 38 above, p. 22.

With regard to implementation, respondents highlighted a slow uptake of CBD guidelines and biodiversity targets into national legal and political systems. This may be exacerbated by a lack of institutional capacity, as indicated in the national reports. Meeting international environmental commitments requires significant state capacity, with various forms of incapacity existing in both the global north and south.¹⁵⁴

In terms of compliance, inconsistent biodiversity policy integration was noted in both the national reports and interviews. Biodiversity policies have yet to be integrated into sectors with a significant environmental impact. The national reports cited procedural reasons for this, including inadequate coordination among government agencies. For instance, the Ministry of Environment is often tasked with coordinating biodiversity policy integration across sectors, which competes with the sectoral ‘silos’ of other ministries such as the Ministry of Agriculture or Fisheries. Poor interagency coordination is compounded by an underlying business-as-usual approach to economic growth, as biodiversity conservation is often regarded as conflicting with other sector goals.¹⁵⁵ Responsibility for mainstreaming biodiversity does not diffuse sufficiently from the environmental administration to other policy sectors,¹⁵⁶ which was also alluded to in our interviews.¹⁵⁷

A lack of institutional capacity was also observed at national levels with poor ecological monitoring and difficulties in establishing biodiversity metrics that capture ecosystem complexity. The lack of capacity could partly be alleviated through positive incentives from the CBD, such as technical assistance. Although the CBD Secretariat coordinates a variety of training and capacity-building activities, strengthening institutional capacity requires ongoing effort over the long term. The VPR is one such example of capacity building, as its expert team provides recommendations to the state under review. As to the desirable but difficult challenge of determining universal biodiversity metrics, this is a recurring theme in the scientific literature.¹⁵⁸ A similar challenge was recognized by the Global Environment Facility, which in response recommended complementary qualitative and quantitative assessments.¹⁵⁹

Concerning enforcement, our findings confirm that various types of coercive measure are used in enforcing the CBD commitments. Firstly, there is a general lack of consequences for non-compliance and, hence, limited negative incentives. Although some respondents advocated stricter consequences of non-compliance,¹⁶⁰ this may be

¹⁵⁴ S.D. VanDeveer & G.D. Dabelko, ‘It’s Capacity, Stupid: International Assistance and National Implementation’ (2001) 1(2) *Global Environmental Politics*, pp. 18–29.

¹⁵⁵ IPBES, n. 1 above.

¹⁵⁶ S. Sarkki et al., ‘Are NBSAPs Appropriate for Building Responsibilities for Mainstreaming Biodiversity Across Policy Sectors?’ (2016) 59(8) *Journal of Environmental Planning and Management*, pp. 1377–96.

¹⁵⁷ Interview 12, international organization representative.

¹⁵⁸ G.M. Mace et al., ‘Approaches to Defining a Planetary Boundary for Biodiversity’ (2014) 28 *Global Environmental Change*, pp. 289–97.

¹⁵⁹ Global Environment Facility (GEF), ‘Evaluation of GEF’s Support to Mainstreaming Biodiversity’, GEF/ME/C.55/Inf.02, 26 Nov. 2018, available at: https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME.C.55.inf_02_Biodiversity_Mainstreaming_Evaluation_Synthesis_Report%20Nov_2018.pdf.

¹⁶⁰ Interview 13, international organization representative; Interview 15, independent consultant; Interview 16, independent consultant.

difficult to enforce in a forum such as the CBD, which has consensus-based decision making.¹⁶¹ Even in treaties where sanctions are an option, this option is rarely activated as sanctions can be a blunt instrument.¹⁶² Some respondents also noted the lack of negative incentives provided by governments to various sectors at the national level.¹⁶³

Secondly, few sunshine methods were found as respondents indicated that opportunities for public participation are limited. Sunshine methods allow flexibility and are more subtle than negative incentives in encouraging compliance. The benefits of the VPR and other peer review mechanisms are apparent here, as these mechanisms enable actors to exert public pressure on non-compliant actors. Interestingly, the lack of sunshine methods was not widely discussed in the national reports. One possible reason is that self-reporting processes may be prone to amplifying successes and minimizing shortcomings.¹⁶⁴ The multi-stakeholder interviews at CBD COP-14 also included CSOs and conservation groups, where each stakeholder has its own different set of priorities, which may contrast to those of national governments. A multi-stakeholder perspective therefore provides a more comprehensive picture of the challenges faced.

On a similar note, gender issues were stressed more often by the respondents than in the national reports, despite COP decisions on mainstreaming gender considerations.¹⁶⁵ Gender equality is a vital dimension in connecting human rights and biodiversity, and requires further research.¹⁶⁶ Although an overwhelming majority of CBD parties have already made commitments to gender equality under international law,¹⁶⁷ mainstreaming gender does not have the requisite emphasis in countries' NBSAPs.¹⁶⁸ These findings shed light on how substantive obligations concerning gender equality need to be coupled with procedural mechanisms, such as an enabling environment for women and girls to participate in biodiversity governance.

5.3. Addressing Insufficient Mainstreaming of Biodiversity

Mainstreaming biodiversity was identified as a key implementation challenge from both the national reports and interviews. This issue is related to worldviews and

¹⁶¹ Brunnée, n. 42 above.

¹⁶² Sanctions are referred to as a 'blunt instrument' because although these instruments can exert pressure on political leaders, their impacts are felt more by vulnerable groups of society who are not the primary target; see S.H. Allen & D.J. Lektzian, 'Economic Sanctions: A Blunt Instrument?' (2013) 50(1) *Journal of Peace Research*, pp. 121–35.

¹⁶³ Interview 2, environmental NGO representative; Interview 11, CSO representative.

¹⁶⁴ Gujadhur & Limon, n. 75 above.

¹⁶⁵ UNEP, CBD, 'Towards a Gender-Responsive Implementation of the CBD', 1 Nov. 2018, UN Doc. UNEP/CBD/COP/14/INF/21.

¹⁶⁶ Knox Report 2017, n. 21 above.

¹⁶⁷ For instance, almost all parties to the CBD are also parties to the 1979 Convention on the Elimination of All Forms of Discrimination Against Women (New York, NY (US), 18 Dec. 1979, in force 3 Sept. 1981, available at: <https://www.ohchr.org/en/professionalinterest/pages/cedaw.aspx>); see A. Sasvari et al., *Guidelines for Mainstreaming Gender into NBSAPs*, CBD Technical Series No. 49 (CBD Secretariat & IUCN, 2010), p. 21.

¹⁶⁸ Although 67% of fifth national reports contain at least one reference to 'gender', only a quarter of the parties have at least one activity that explicitly addresses gender equality in their latest NBSAP; see UN Women, 'Towards a Gender-Responsive Implementation of the Convention on Biological Diversity', Nov. 2018.

value systems that favour economic growth over sustainable development.¹⁶⁹ Ultimately, an underlying tension exists between the conservation and sustainable use of biodiversity with a long-term perspective and the use of natural resources for economic benefits in the short term. Sustainable use is hard to achieve. NBSAPs often do not specify concrete policy and legal measures needed for achieving mainstreaming goals and targets.¹⁷⁰ Policy inconsistencies tend to occur in national policies, such as a clash between nature conservation, healthy ecosystems, and mineral extraction.¹⁷¹

To strengthen the role of the CBD in supporting a good quality of life, lessons can be derived from human rights mechanisms. In particular, the CBD can gain insight on how review mechanisms clarify obligations and support the implementation of substantive human rights obligations, such as the right to life, the right to health, and rights to clean water and sanitation. For instance, a report by the UN Special Rapporteur on human rights and environment clarified substantive obligations and provided recommendations on mainstreaming biodiversity in various policy areas, informed by interpretations of state obligations under human rights law and Articles 5–14 CBD.¹⁷² These obligations are indivisible from procedural obligations, such as delivering an inclusive, equitable, and gender-based approach to public participation in the process of mainstreaming biodiversity.¹⁷³ Implementing procedural obligations in mainstreaming biodiversity is needed in specific sectors, such as mining, as well as cross-sectorally, such as in national development plans.¹⁷⁴

6. CONCLUSION

Humanity is at a crossroads in addressing biodiversity loss and the degradation of ecosystems, which is affecting people and nature in unprecedented ways. While several assessments have reported on the CBD parties' weak compliance with the Aichi Targets, our findings reveal significant differences in terms of the levels of compliance across CBD procedural and substantive obligations. There is a higher level of compliance with procedural obligations compared with substantive obligations. Through analyzing national reports and multi-stakeholder interviews, we identified key challenges in implementing the CBD. Challenges include the lack of institutional capacity; slow uptake of CBD guidelines into national policies; difficulties in ecological monitoring and establishing universal biodiversity metrics; inconsistent biodiversity policy

¹⁶⁹ IPBES, n. 1 above.

¹⁷⁰ C. Prip, 'The CBD as a Legal Framework for Safeguarding Ecosystem Services' (2018) 29 *Ecosystem Services*, pp. 199–204.

¹⁷¹ Koh, Hahn & Ituarte-Lima, n. 29 above.

¹⁷² UN General Assembly, 'Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment, David R. Boyd: Human Rights Depend on a Healthy Biosphere', 15 July 2020, UN Doc. A/75/161, para. 70; UN Committee on Economic, Social and Cultural Rights, 'General Comment No. 3: The Nature of States Parties' Obligations', 14 Dec. 1990, UN Doc. E/1991/23; CBD, Arts 5–14.

¹⁷³ Boyd, *ibid.*

¹⁷⁴ Ituarte-Lima, n. 38 above.

integration; and questionable opportunities for effective and meaningful public participation. These challenges hamper state compliance with CBD obligations.

Understanding the reasons behind the CBD compliance gap is important for then identifying ways in which CBD mechanisms can be improved. Lessons learnt from human rights review mechanisms are used in this article to uncover means to better implement and enforce the CBD commitments. Human rights review mechanisms use both monitoring compliance with international obligations and a problem-solving approach to capacity building and transparency. We find that framing the managerial and enforcement compliance approaches as complementary, rather than mutually exclusive, helps to strengthen the CBD VPR and envisions innovative ways to foster compliance and accountability. Insights from human rights review mechanisms can strengthen the CBD's procedural means for implementing its substantive objectives.

The post-2020 global biodiversity framework provides a window of opportunity to prioritize an enhanced review mechanism to strengthen the implementation of CBD obligations. There is an urgent need to take the compliance gap seriously and initiate the transformative changes required to achieve the 2050 CBD vision of living in harmony with nature.

Supplementary material

To view supplementary material for this article, please visit <https://doi.org/10.1017/S2047102521000169>