

Beyond 2030 Agendas: Toward Conditional Convergence in Global Sustainability Governance

A Review of Post-SDG, Sendai, CBD, UNCCD, Beyond GDP, Financing, and Global Goal on Adaptation Governance Processes

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Abstract

As the 2030 deadline for major multilateral sustainable-development frameworks approaches, a loosely coordinated set of “Beyond 2030” conversations is emerging across the United Nations system. This review synthesizes the current state of seven parallel institutional tracks — the 2030 Agenda and its Sustainable Development Goals (SDGs), the Sendai Framework, the Kunming-Montreal Global Biodiversity Framework (GBF), the UN Convention to Combat Desertification (UNCCD), the Paris Agreement's Global Goal on Adaptation (GGA), the “Beyond GDP” measurement agenda, and financing for development — as of August 2026. Evidence combines official UN, CBD, UNFCCC, and UNCCD primary sources with a systematic Web of Science literature screening (145 records; ~17% substantively relevant). I find that while the SDGs and Sendai face a hard 2030 expiry with no agreed successor, other frameworks are converging on a shared design logic: long-term visions to 2050 or beyond combined with recurring review cycles rather than a fixed end date. A cross-framework indicator review confirms this empirically: at least six indicators are identical or near-identical across the CBD/GBF, SDG, GGA, and UNCCD regimes, including the Red List Index, land degradation, protected-area coverage, and biodiversity finance. I rank 18 such indicators by relevance, data-gap severity, cross-framework connectivity, and tractability to identify priority entry points for the natural capital, ecosystem services, and biodiversity research community. I argue the likely trajectory is convergence rather than merger: a shared long-term vision and interoperable indicators, with specialized treaty bodies retaining their mandates.

31 **Keywords:** post-2030 agenda; Sustainable Development Goals; Sendai Framework; Global
32 Biodiversity Framework; UNCCD; Global Goal on Adaptation; Beyond GDP; financing for
33 development; global governance; policy coherence

34 **Highlights**

- 35 • No agreed post-SDG framework yet exists; the Pact for the Future formally invites the
36 September 2027 SDG Summit to open the question.
- 37 • Of 139 assessable SDG targets, 15% are on track and 21% show moderate progress (36%
38 combined); 15% have regressed below 2015 baselines.
- 39 • Sendai now has a concrete post-2030 vehicle: the Ninth Global Platform for Disaster
40 Risk Reduction (Doha, 2028).
- 41 • UNCCD is the clearest formal precedent for a negotiated post-2030 transition, via an
42 active Intergovernmental Working Group.
- 43 • “Beyond GDP” became a formal UN process in 2026, with a 31-indicator dashboard
44 roughly half derived from existing SDG indicators.
- 45 • The likely institutional trajectory is convergence — shared vision and interoperable
46 indicators — rather than a single merged framework.

47

48 **1. Introduction**

49 The international community is approaching 2030 with several global frameworks that share a
50 target year but have markedly different legal and institutional structures. The 2030 Agenda and
51 the Sendai Framework are explicitly organized around 2030. By contrast, the Paris Agreement
52 is an enduring treaty architecture; the Kunming-Montreal Global Biodiversity Framework
53 combines 2030 targets with a 2050 vision; and the UNCCD is already formally designing a
54 post-2030 strategic framework.

55 The result is not one single “Beyond 2030” negotiation. Instead, a set of parallel processes is
56 beginning to converge around a broader question: how should sustainable development,
57 climate resilience, biodiversity, land, disaster risk, wellbeing, and finance be organized after
58 2030 without creating another fragmented global reporting system?

59 This review addresses a question broader than “what replaces the SDGs?” The more precise
60 question is what replaces the 2030 Agenda as a whole — including its disaster-risk,
61 biodiversity, climate-adaptation, and financing counterparts. I ask whether the multilateral
62 system can build a common long-term development vision while allowing specialized treaties
63 and institutions to retain their mandates and adopt interoperable targets, indicators, stocktakes,
64 and financing arrangements. Section 2 describes my evidence base and screening method.
65 Section 3 reviews each of the seven tracks in turn, closing with a cross-framework indicator
66 analysis and a comparative synthesis of findings. Section 4 discusses cross-cutting institutional
67 themes and their implications. Section 5 concludes.

68 **2. Evidence Base and Methods**

69 **2.1 Primary official sources**

70 This review draws on two complementary evidence streams. The primary stream is official
71 documentation from the United Nations Secretariat, the Convention on Biological Diversity
72 Secretariat, the UN Framework Convention on Climate Change Secretariat, the UN Convention
73 to Combat Desertification Secretariat, and the UN Office for Disaster Risk Reduction,
74 including summit outcome documents, Conference of the Parties decisions, progress reports,

75 and press releases. All primary claims were verified against these official sources between 9
76 and 27 August 2026 and are footnoted accordingly (§6.1).

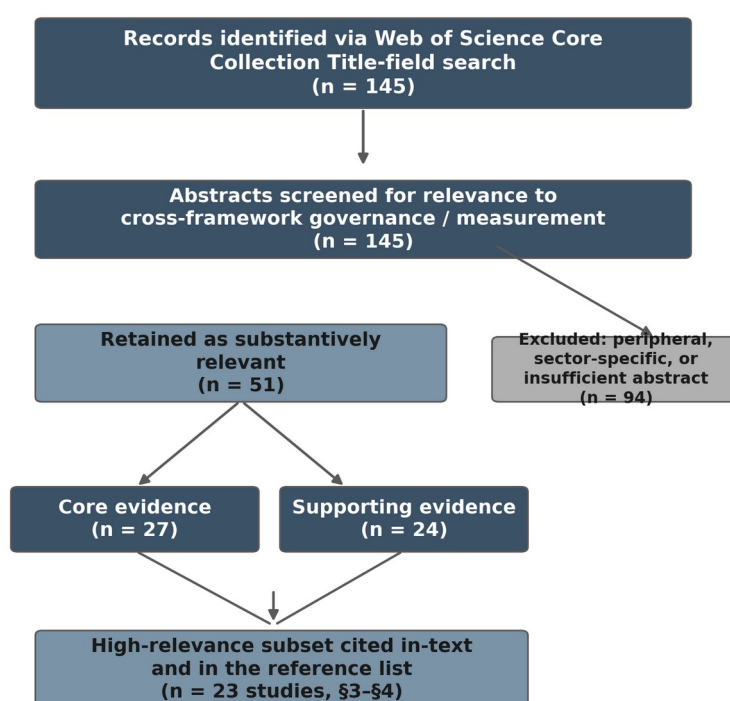
77 **2.2 Peer-reviewed literature: search strategy**

78 The secondary stream is a structured Web of Science Core Collection search (Title field, all
79 years through August 2026), conducted to test the review's policy mapping against the peer-
80 reviewed literature. The query combined four Title-field term clusters with Boolean AND
81 across clusters and OR within each cluster: (1) post-2030/SDG governance terms (e.g., “post-
82 2030,” “beyond 2030,” “SDG successor,” “2030 Agenda,” *governance*, *framework*,
83 *indicator*); (2) *sectoral framework terms* (*Sendai*, *disaster risk reduction*, *Global/Kunming-*
84 *Montreal Biodiversity Framework*, *desertification*, *Paris Agreement*, *Global Goal on*
85 *Adaptation*, *Belém Adaptation Indicator*, *global stocktake*, *resilience*); (3) measurement and
86 finance terms (*Beyond GDP*, *wellbeing economy*, *inclusive wealth*, *natural/environmental-*
87 *economic accounting*, *financing for development*, *international financial architecture*); and (4)
88 integration vocabulary (*interoperability*, *indicator alignment*, *integration*, *convergence*,
89 *coherence*, *harmonization*, *equity*). The full verbatim query is reproduced in the Supplementary
90 Materials for reproducibility. The search returned a 145-record export including bibliographic
91 metadata, abstracts, and cited-reference counts.

92 **2.3 Screening and evidence synthesis**

93 Every abstract in the 145-record export was read in full (Figure 4). Because the query combined
94 broad governance vocabulary across four clusters, it also captured sector-specific studies
95 unrelated to cross-framework governance — e.g., grid-resilience engineering or clinical ethics
96 — despite matching the search terms. Screening against a single inclusion criterion —
97 substantive relevance to cross-framework governance, coherence, or measurement of the seven
98 tracks (§3) — retained 51 records (35%) and excluded 94 (65%) as peripheral. Of the 51, 27
99 were classified as core evidence and 24 as supporting. All 27 core records underwent full-text
100 review, critical appraisal, and secondary claim-to-source verification rather than abstract-level
101 screening alone; 26 were reviewed from full-text PDFs, and one (Smucker, Oulu & Nijbroek,

2020) remained at the publisher-abstract level and is flagged as provisional. This full-text-verified subset of 27 studies is cited throughout Sections 3–4 and listed in the reference list (§6). Notably, zero records in the full 145-record set used the phrases “post-2030,” “beyond 2030,” “Belém Adaptation Indicators,” “Beyond GDP,” “Sevilla,” or “financing for development” in title or abstract, indicating this specific policy discourse is too recent to have an established indexed footprint at the phrase level; the retained literature instead addresses coherence, implementation, measurement, and governance of the underlying frameworks.



109

110 **Figure 4. Evidence screening flow for the Web of Science literature review.**

111 This is a targeted evidence scan for strengthening a policy-tracking review, not a PRISMA-
 112 style systematic review with pre-registered protocol and dual-reviewer screening; it should be
 113 treated as a narrative synthesis. I flag this limitation explicitly in Section 5.

114

3. Review by Institutional Track

3.1 The 2030 Agenda and the Sustainable Development Goals

Of the 139 SDG targets with sufficient trend data, 15% are on track and 21% show moderate progress (36% combined); nearly half are advancing only marginally or not at all; and 15% have slipped below their 2015 baselines [1] (Figure 1). An earlier, advance/unedited version of the Secretary-General's report cited 18% regression; the final published report and press release confirm 15% [2].

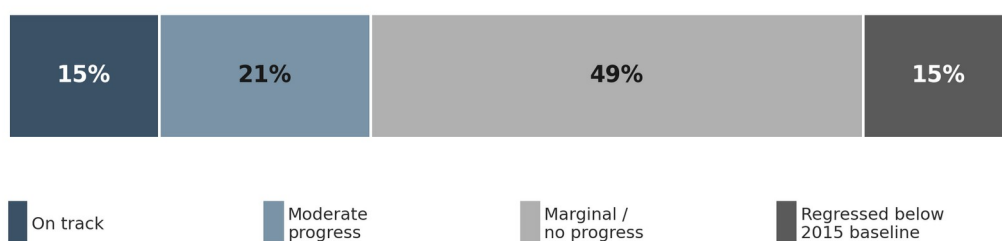


Figure 1. Progress on the 139 assessable SDG targets with sufficient trend data, as of the 2026 reporting cycle. Source: compiled from The Sustainable Development Goals Report 2026 [1].

A genuine institutional asset has been built alongside this shortfall: the international SDG indicator database expanded from roughly 115 indicators and 330,000 records in 2016 to 233 indicators and 3.2 million records in 2026 — evidence favoring reform-and-reuse over wholesale replacement [3]. Official development assistance fell by a record 23.1% in 2025, the largest annual decline on record, a headwind cited across nearly every 2026 progress report [1].

The formal process is anchored in the Pact for the Future, which invites the SDG Summit in September 2027 to consider “how I will advance sustainable development by 2030 and beyond,” informed by the final quadrennial Global Sustainable Development Report [4]. This mandate does not prejudge the outcome: it neither mandates new goals nor decides whether the framework will be extended, revised, or replaced. Stakeholder discussion has floated an extension model (retain the 17 SDGs, revise deadlines), a renewal model (retain structure, replace targets), a core-plus-flexibility model (small global core plus national add-ons), and a

137 long-term-vision model (organize around 2050, borrowing from climate and biodiversity
138 governance) [5], though none of these constitutes an agreed position.

139 Peer-reviewed evidence does not yet favor one successor model; instead, it emphasizes
140 mechanisms for coordinating existing regimes rather than architecture per se. Analyzing 164
141 nationally determined contributions (NDCs), [6] show that national policy cycles can be used to
142 identify overlaps, gaps, co-benefits, and trade-offs between Paris Agreement commitments and
143 SDG strategies. [7] similarly identify synchronized global review moments — the Global
144 Stocktake and the SDG midterm review — as practical, underused opportunities for
145 integration. This literature shifts attention from goal architecture alone toward recurring
146 alignment and review mechanisms as the primary lever for coherence.

147 **3.2 Sendai Framework for Disaster Risk Reduction (2015–2030)**

148 Sendai's term runs concurrently with the SDGs (2015–2030) and was the first major agreement
149 of the post-2015 development agenda, designed to operate alongside the SDGs, the Paris
150 Agreement, and the Addis Ababa Action Agenda [8]. Its 2023 midterm review, prepared for
151 UNDRR by the International Science Council, explicitly aimed to support “a post-2030
152 governance framework” integrating risk reduction as a determinant of sustainable development
153 [9].

154 A concrete post-2030 vehicle now exists: UNDRR announced that Qatar will host the Ninth
155 Global Platform for Disaster Risk Reduction (GP2028) in Doha. Convening two years before
156 Sendai's 2030 end date, GP2028 is explicitly billed to “begin shaping the next phase of
157 international cooperation on disaster risk reduction beyond 2030” [10] — a materially more
158 concrete post-2030 signal than currently exists for the SDGs. UNDRR's Strategic Framework
159 2026–2030 sets four catalytic areas (risk knowledge, locally-led DRR, financing, and recovery
160 readiness) to accelerate implementation in Sendai's closing years [11].

161 Peer-reviewed literature makes the post-Sendai implementation challenge considerably more
162 concrete. Studies spanning global monitoring, Sri Lanka, South Africa, Kenya, and
163 Eswatini/SADC identify a consistent pattern: fragmented plans, weak institutional

164 coordination, uneven subnational implementation, and insufficient monitoring. Alignment
 165 between DRR, climate adaptation, and SDG strategies has improved but remains partial, with
 166 national plans still needing better sub-national implementation [12, 13]. In Sri Lanka,
 167 coherence is limited by weak evidence-to-policy pipelines [14]; in South Africa, the three
 168 policy domains evolved in institutional isolation with misaligned objectives [15]; in Kenya,
 169 sub-national multi-level collaboration — not top-down goal alignment — is what actually
 170 produces convergence [16]. A 2026 theoretical review of Eswatini/SADC argues Policy
 171 Coherence for Development can enhance resilience through joint accountability and more
 172 efficient resource allocation [17], while South Asian evidence finds ecosystem-based DRR
 173 requires science-policy integration mechanisms most national frameworks currently lack [18].
 174 Separately, a lack of interoperability between data, models, communication, and governance —
 175 not a shortage of individual tools — is identified as the central barrier to integrated disaster risk
 176 management [19]. Common threads across this literature — shared metrics, joint M&E,
 177 multilevel institutions, aligned budgets, and place-based implementation — suggest a post-
 178 Sendai framework should invest as much in implementation architecture as in new targets.

179 **3.3 Convention on Biological Diversity / Kunming-Montreal Global Biodiversity** 180 **Framework**

181 Adopted at COP15 (December 2022), the GBF sets four long-term goals for 2050 and 23
 182 action-oriented targets for 2030 — meaning biodiversity governance already has an agreed
 183 beyond-2030 destination [20]. COP16 (Cali, October–November 2024) adopted the Cali Fund
 184 for digital sequence information benefit-sharing but was suspended for loss of quorum before
 185 resolving resource-mobilization decisions [21]; the Rome resumed session (February 2025)
 186 adopted the first-ever text on Planning, Monitoring, Reporting and Review mechanisms,
 187 including a schedule for a global review at COP17 [22].

188 By the 28 February 2026 deadline, 125 countries — nearly two-thirds of the 196 CBD Parties
 189 — submitted their 7th National Reports, the primary data source for COP17's first global
 190 review; several megadiverse countries (Brazil, the Democratic Republic of the Congo, South
 191 Africa, Papua New Guinea) were notable non-submitters as of that deadline [23]. COP17

192 (Yerevan, Armenia, 19–30 October 2026) conducts the first global review of collective GBF
193 progress [24].

194 The biodiversity literature adds an important caution: ambitious global targets do not
195 automatically translate into mainstreamed sectoral policy. The 2010 Biodiversity Target
196 strengthened international cooperation but did not create policy alignment or coherent national
197 implementation across Latin America and the Caribbean [25], and a systematic review of
198 Biodiversity Policy Integration across 43 empirical studies similarly finds overall integration
199 levels remain low — targets are overly abstract, biodiversity policies are often uncoded add-
200 ons, and resources are insufficient [26]. Comparing the United States and European Union,
201 national mainstreaming of GBF targets is hampered by weak linkages to binding policy
202 mechanisms, a pattern that predates the GBF and afflicted its Aichi Target predecessor [27].
203 Joint planning, coherent incentives, adaptive learning, stronger accountability, and institutional
204 change emerge across this literature as central conditions for closing the target-to-
205 implementation gap. Equity matters as much as mainstreaming: a “Rights for Life” scenario
206 shows centering Indigenous Peoples' and local communities' rights can outperform area-based
207 approaches like Half-Earth on social-equity grounds [28], while an earlier analysis of the post-
208 2015 development agenda shows biodiversity and ecosystem services can be structurally
209 integrated into a broader goal set when target areas and means of implementation are explicit
210 from the outset — a design lesson directly relevant to any post-2030 architecture [29]. On the
211 inter-treaty side, a 2025 analysis proposes concrete mechanisms for the Ramsar Convention
212 and CBD to build cooperation and indicator interoperability around GBF implementation [30].

213 **3.4 UNFCCC Global Goal on Adaptation and the Belém Adaptation Indicators**

214 The Paris Agreement itself does not expire in 2030; Article 7 establishes the Global Goal on
215 Adaptation (GGA) as a continuing objective. The UAE Framework for Global Climate
216 Resilience (COP28) set 11 targets — four on the iterative adaptation cycle, seven thematic —
217 several with 2030 milestones [31]. At CMA7/COP30 (Belém, 2025), Parties adopted 59 Belém
218 Adaptation Indicators feeding into the Global Stocktake, and launched the two-year Belém–
219 Addis Vision on Adaptation [32]. Indicator development explicitly borrowed design from other

220 frameworks: among proposed indicators compiled from party submissions, those drawn from
221 the SDGs, Sendai, and the GBF were the most commonly cited [33]. A technical paper on
222 indicator use and aggregation is due by 30 September 2026; a formal review of the indicators is
223 scheduled after the second Global Stocktake in 2029 [34].

224 Peer-reviewed adaptation literature adds two design requirements the official-source evidence
225 does not surface on its own: equity and scale. [35] address a gap in the GGA architecture
226 directly: while fair-share frameworks exist for mitigation-responsibility equity, no equivalent
227 previously existed for the GGA, so they propose a rubric-based Adaptation Equity Framework
228 spanning distributive, procedural, recognition, and intergenerational justice. Scale matters as
229 much as framing: aggregate, city-level adaptation indicators can conceal severe neighborhood-
230 level inequities [36], and practice-based monitoring and evaluation work shows that who
231 defines indicators and controls resulting data can either reproduce or reduce inequity [37]. This
232 literature implies the GGA's national-flexibility principle (§2.4) should be paired with, not
233 substituted for, explicit disaggregation, participation, and equity criteria. Separately, [7] argue
234 the global stocktake and SDG midterm review are complementary moments governments
235 should deliberately link — an academic case for the stocktake-convergence pattern identified in
236 Section 4.

237 **3.5 UNCCD: The Most Advanced Formal Post-2030 Design Process**

238 The UNCCD is structurally distinct: it is the only track among the “2030-bound” frameworks
239 with an already-launched, time-bound intergovernmental process explicitly mandated to design
240 a post-2030 successor. Following COP16, Parties established an Intergovernmental Working
241 Group on the Future Strategic Framework (three regional representatives plus five technical
242 experts) tasked with identifying key elements of a post-2030 strategic framework and re-
243 analyzing existing indicators for post-2030 relevance [38]. COP17 (Ulaanbaatar, Mongolia,
244 17–28 August 2026) — the first of three major environmental COPs in 2026 — has the
245 Working Group's final report before it; as of this review's preparation date the session remained
246 in progress [39, 40].

247 The chronic implementation challenge this process seeks to resolve is well documented: a 2011
248 study in Land Degradation & Development found the Convention's implementation record
249 “remains poor worldwide,” attributing this to weak environmental policy integration across
250 multi-level governance contexts — a diagnosis frequently still cited as relevant [41]. On
251 measurement, a 2022 paper proposes integrated environmental-economic accounting for land
252 degradation as a more complete alternative to the sparse indicators currently used for UNCCD
253 monitoring, directly relevant to both the Working Group's mandate and the wider Beyond
254 GDP/natural-capital agenda (§3.6) [42].

255 **3.6 Beyond GDP: A New Intergovernmental Measurement Agenda**

256 The Beyond GDP agenda moved from academic debate into a formal UN process in 2026. The
257 Secretary-General's independent High-Level Expert Group (HLEG) on Beyond GDP — 14
258 experts appointed in May 2025, co-chaired by Kaushik Basu and Nora Lustig — released
259 Counting What Counts: A Compass of Progress for People and Planet on 7 May 2026 [43]. The
260 report proposes a dashboard of 31 indicators organized around equitable, inclusive, and
261 sustainable wellbeing; approximately half are drawn directly from existing SDG indicators,
262 allowing immediate reporting from data countries already collect [44]. The HLEG was created
263 in direct response to a Member State request in the Pact for the Future; Spain and Guyana were
264 appointed co-facilitators of the follow-on intergovernmental process in April 2026.

265 The academic evidence supports plural measurement rather than a single GDP substitute.
266 Beyond GDP's core alternative concept, inclusive wealth, has an extensive prior research base:
267 a bibliometric analysis of 1,444 Web of Science papers by [45] traces sustained growth in
268 inclusive-wealth and natural-capital/biodiversity-accounting research well before the HLEG's
269 2026 proposal — evidence that the HLEG report consolidates an already-maturing research
270 agenda rather than originating one. Land-accounting approaches show a practical route for
271 connecting environmental condition to income and wealth effects rather than reporting them
272 separately [42]. The reviewed literature does not reveal a settled scholarly consensus on any
273 single headline post-GDP metric; Beyond GDP is therefore better treated as a complementary
274 measurement layer than as a GDP replacement (§4.3).

275 3.7 Financing for Development

276 The Fourth International Conference on Financing for Development (FfD4, Sevilla, 30 June–3
 277 July 2025) adopted the Compromiso de Sevilla, recognizing an estimated US\$4 trillion annual
 278 financing-for-development gap and launching a package of reforms [46]. It is the first
 279 intergovernmentally agreed financing-for-development framework since the 2015 Addis
 280 Ababa Action Agenda [47], and covers domestic public resources, private finance
 281 mobilization, debt sustainability, international financial architecture reform, and trade, with a
 282 companion “Sevilla Platform for Action” comprising over 130 implementation initiatives [48]
 283 (Figure 5). Notably, the United States withdrew from the negotiations and did not attend the
 284 Sevilla conference, underscoring a broader fault line in global consensus around sustainable-
 285 development financing [49]. This track is not a separate silo: virtually every “what is
 286 constraining progress” discussion in the SDG, Sendai, and GBF literature reviewed above
 287 points to the same shortfall — the 2025 ODA collapse landing squarely inside the gap Sevilla
 288 was designed to address.

(a) Official development assistance

(b) Financing-for-development gap



289

290 **Figure 5. (a) The 2025 decline in Official Development Assistance and (b) the estimated annual financing-**
 291 **for-development gap recognized at FfD4.**

292 Peer-reviewed adaptation-finance evidence adds a distributional caution the official-source
 293 record does not surface: green finance is not automatically equitable. Examining debt-financed
 294 urban sanitation adaptation, [50] find that green-labeled financing can shift costs onto users and
 295 future generations, and that a “green halo” label does not inherently make financing cheaper or
 296 distribute risk more fairly. A future means-of-implementation architecture should therefore

track not only aggregate finance volumes, but also concessionality, affordability, lifecycle liabilities, the incidence of costs and benefits, and intergenerational equity.

3.8 Cross-Framework Indicator Analysis

The convergence patterns identified across Sections 3.1–3.7 can be tested directly at the indicator level. I reviewed the full indicator sets of the four measurement regimes most relevant to natural capital, ecosystem services, and biodiversity: the CBD/GBF monitoring framework (53 headline and binary indicators spanning Goals A–D and Targets 1–23) [56]; the 94 environment-relevant indicators within the 267-indicator SDG global indicator framework, concentrated in Goals 2, 6, 11, 12, 13, 14, and 15 [57]; the 59 Belém Adaptation Indicators adopted under the GGA, in particular the six sub-indicators under Target 9(d) on ecosystems and biodiversity [34]; and the 38 Sendai Framework indicators, concentrated in Global Targets A–G [58]. Section 4.3 discusses the implications of these findings for the natural capital, ecosystem services, and biodiversity research community.

3.8.1 Indicator-Level Evidence: Where the Frameworks Already Overlap

This side-by-side review finds that indicator interoperability across these regimes is already partially realized, often without formal cross-referencing between secretariats. At least six indicator pairs are identical or near-identical: the Red List Index (CBD A.3 / SDG 15.5.1); land degradation (SDG 15.3.1, doubling as UNCCD's Land Degradation Neutrality metric and mapping to CBD Target 1); protected-area coverage (CBD 3.1 / SDG 14.5.1, 15.4.1); fish-stock sustainability (CBD 5.1 / SDG 14.4.1); coastal eutrophication (CBD 7.1 / SDG 14.1.1); and biodiversity finance (CBD D.1 / SDG 15.a.1, 15.b.1, sharing the same OECD DAC Rio-marker methodology) [59]. This is a substantive finding, not a coincidence of drafting: a single, well-resourced data effort in any of these six areas could satisfy reporting obligations under two or three regimes at once — exactly the “operational interoperability” the literature in Section 4.2 argues is still missing in practice.

The CBD D.1 indicator on international biodiversity finance illustrates both the opportunity and the difficulty precisely. Its own metadata documentation acknowledges that the underlying

OECD DAC Rio-marker methodology has no agreed coefficient for converting “significant” (as opposed to “principal”) biodiversity objective scores into comparable finance figures — by convention many countries apply 40%, but this is described in the metadata itself as common practice rather than an agreed standard — and that multilateral institutions report inconsistently, creating double-counting risk between bilateral and multilateral channels [59]. These are precisely the kinds of methodological standardization problems the natural capital and environmental-economic accounting research community is positioned to help resolve, given its existing engagement with the UN System of Environmental-Economic Accounting.

The newly adopted Belém Adaptation Indicators under GGA Target 9(d) are a second concrete entry point. Because they were only adopted in November 2025, all six sub-indicators — covering ecosystem service provision, ecosystem area under adaptation management, ecosystem resilience, threat status of ecosystems, threat status of species, and adaptive capacity from ecosystem-based adaptation and nature-based solutions — currently have no established baseline or reporting infrastructure [34]. This is a rare instance of a live international indicator being built from a genuinely blank slate, and the ecosystem-based adaptation and nature-based solutions research community has an unusually open window to shape its operationalization before national reporting practices harden.

By contrast, the Sendai Framework's 38 indicators are structured almost entirely around disaster loss and international cooperation (Global Targets A–G) rather than ecosystem condition; ecosystem-based disaster risk reduction and green infrastructure are acknowledged only as optional disaggregation categories within the metadata for critical-infrastructure loss indicators (C.5, D.4, D.8), not as standalone metrics [58]. This is itself a finding relevant to Section 4.2's mainstreaming argument: even where ecosystem-based approaches are explicitly recognized as legitimate DRR tools, as in the midterm review evidence reviewed in Section 3.2, they remain absent from the framework's own headline measurement architecture — a gap the natural capital and ecosystem-services community could help close ahead of any post-2030 Sendai successor process.

351 **3.8.2 Supplementary Table: Priority Indicators for Natural Capital, Ecosystem** 352 **Services, and Biodiversity Community Engagement**

353 I ranked 18 indicators drawn from the CBD/GBF, SDG, GGA, and Sendai monitoring
 354 frameworks by their relevance and tractability for contribution from the natural capital,
 355 ecosystem services, and biodiversity research community. Each indicator was scored on four
 356 criteria, 0–3 each (maximum total 12): Relevance (R) — how directly the indicator measures
 357 biodiversity, ecosystem condition, or natural capital stocks/flows; Gap severity (G) — how
 358 significant the current data, methodological, or reporting gap is; Cross-framework connectivity
 359 (X) — how many of the four frameworks reviewed share this indicator or a near-identical
 360 counterpart (0 = single framework; 3 = shared across three or more); and Tractability (T) —
 361 how actionable near-term engagement is given existing research infrastructure and methods.
 362 The full 18-indicator table, including individual scores and recommended community roles, is
 363 provided as Supplementary Table S1; the analysis below synthesizes its main patterns.

364 Three findings stand out. First, the six top-ranked indicators (score = 10 of 12) share a common
 365 profile: the ecosystem services headline indicator (CBD B.1), ecosystem/forest extent (CBD
 366 A.2 / SDG 15.1.1), the Red List Index (CBD A.3 / SDG 15.5.1), international biodiversity
 367 finance (CBD D.1 / SDG 15.a.1, 15.b.1), the newly adopted GGA ecosystem-based adaptation
 368 indicators (Target 9(d)), and land degradation (SDG 15.3.1 / UNCCD). None of these six is a
 369 niche or narrowly technical metric; each sits at the structural core of at least two international
 370 regimes simultaneously, which is precisely why a single, well-resourced measurement effort in
 371 any one of these six areas could satisfy reporting obligations under two or three regimes at once
 372 rather than only one.

373 Second, the recommended community roles are not evenly distributed across contribution
 374 types. Data gathering appears as a recommended role for roughly half of the 18 indicators, more
 375 than any other category, followed by modeling and reporting/synthesis; methods development
 376 appears only once (natural capital accounting tools, SDG 12.b.1). This distribution suggests
 377 that for most of the highest-priority indicators, the binding constraint is not a lack of conceptual
 378 or methodological frameworks — those largely already exist — but a lack of sustained data

379 infrastructure and field measurement capacity, particularly in the Global South, where much of
 380 the underlying ecological and socioeconomic data collection remains chronically underfunded
 381 relative to reporting obligations.

382 Third, cross-framework connectivity is not uniform across indicator types. State-of-nature
 383 indicators — land degradation, protected-area coverage, and the Red List Index — achieve the
 384 highest connectivity scores (shared across three or more regimes), consistent with the six
 385 confirmed cross-framework overlaps identified in Section 3.8.1. By contrast, finance- and
 386 disclosure-oriented indicators (CBD D.1 biodiversity finance, CBD 15.1 corporate disclosure)
 387 score highly on relevance and gap severity but somewhat lower on connectivity, indicating that
 388 financial-flow and corporate-reporting metrics remain comparatively siloed within their
 389 originating regime even where the underlying policy problem — inadequate and poorly tracked
 390 biodiversity finance — is shared across all four frameworks reviewed. The two lowest-ranked
 391 indicators in the table (CBD 21.1 on biodiversity monitoring information, and the Sendai
 392 Target F finance-cooperation indicators) are themselves meta-indicators about data and finance
 393 infrastructure; their comparatively low composite scores reflect lower direct
 394 biodiversity/ecosystem relevance and tractability under the scoring rubric, even though they
 395 may function as prerequisites for progress on several of the higher-ranked indicators above
 396 them.

397 3.9 Comparative Synthesis

398 Table 1 summarizes the beyond-2030 status of each track as of August 2026; Figures 2 and 3
 399 present complementary visual syntheses of institutional time horizons and milestone
 400 sequencing, respectively.

401 *Table 1. Comparative state of play across the seven tracks (August 2026).*

Framework	What “2030” means	Beyond-2030 status (Aug. 2026)	Status
2030 Agenda / SDGs	Current global target year	Pact mandates consideration in Sept. 2027; no successor agreed	Formal gateway
Sendai Framework	Framework formally ends 2030	GP2028 (Doha) explicitly billed to begin shaping	Active

Framework	What “2030” means	Beyond-2030 status (Aug. 2026)	Status
		post-2030 DRR cooperation	
CBD / KMGBF	23 targets reach 2030; 4 goals reach 2050	Long-term direction already agreed; first global review at COP17 (Oct. 2026)	Active
Paris Agreement / GGA	Treaty continues; several adaptation targets use 2030 milestones	59 Belém Adaptation Indicators adopted 2025; methodological work underway	Active
UNCCD	Current Strategic Framework ends 2030	Formal Working Group drafted post-2030 elements; COP17 decision pending	Formal process
Beyond GDP	No 2030 expiry	31-indicator dashboard proposal now in UN-led intergovernmental process	Active
Financing for Development	Supports implementation before/after 2030	Sevilla Commitment (2025) provides renewed financing framework and reform agenda	Formal

Figure 2 visualizes the same seven tracks along a continuous timeline, making explicit which frameworks face a hard 2030 boundary versus which already extend to 2050 or remain open-ended.

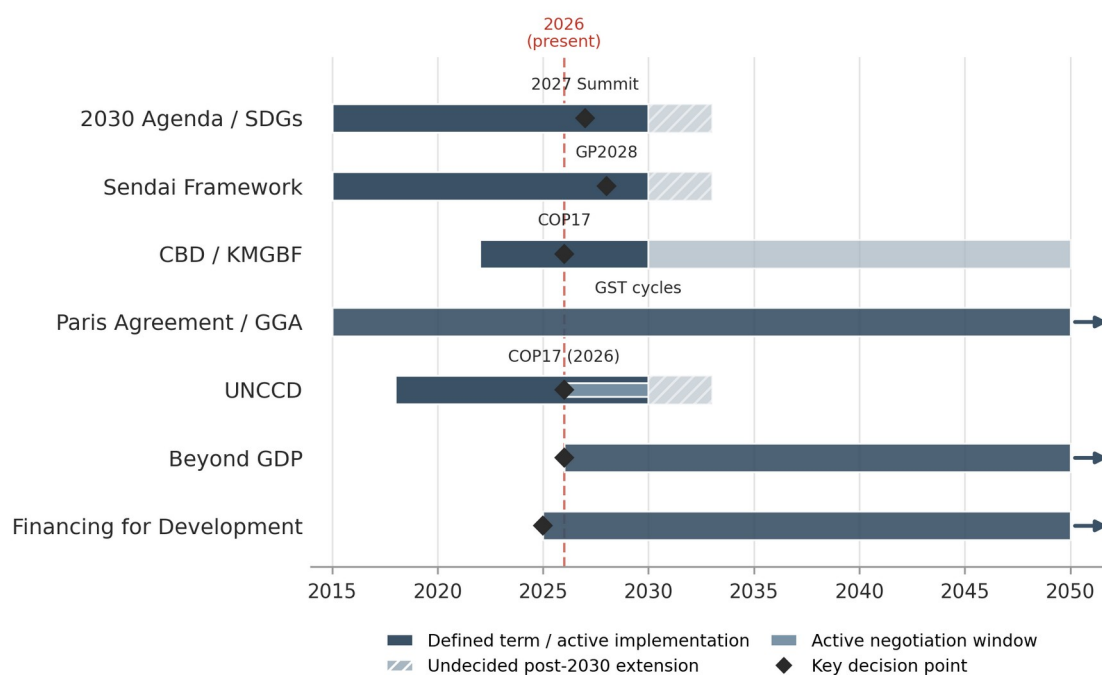
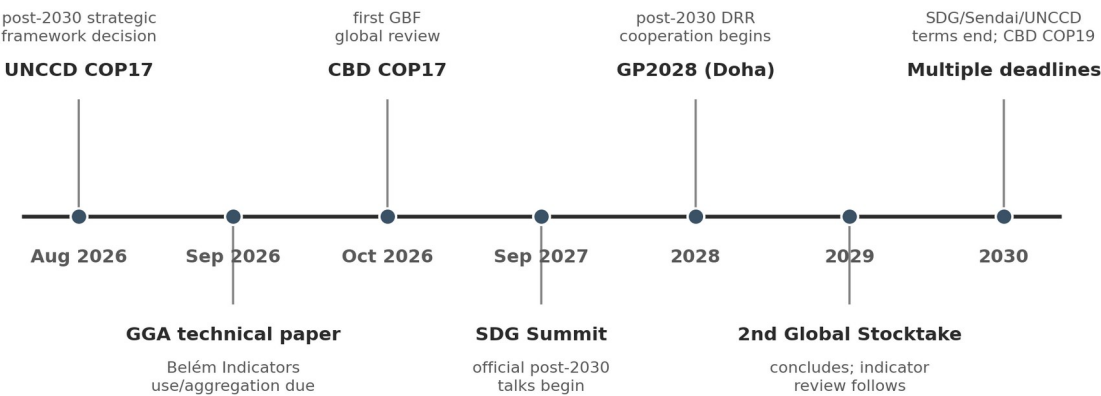


Figure 2. Institutional time horizons across the seven Beyond-2030 tracks, 2015–2050. Diamonds mark key decision points; hatched segments indicate an undecided post-2030 extension.

Table 2. Key dates to track, 2026–2030.

Date	Event	Track
17–28 Aug 2026	UNCCD COP17, Ulaanbaatar — post-2030 strategic framework decision expected	UNCCD
30 Sep 2026	UNFCCC technical paper on Belém Adaptation Indicators use/aggregation due	GGA
19–30 Oct 2026	CBD COP17, Yerevan, Armenia — first global review of GBF	CBD/GBF
Nov 2026	CMA8/COP31	GGA/UNFCCC
2027	Final quadrennial GSDR published	SDGs
Sep 2027	SDG Summit/HLPF — official post-2030 agenda talks begin	SDGs
2028	Ninth Global Platform for Disaster Risk Reduction, Doha, Qatar	Sendai/DRR
2029	Second global stocktake concludes; Belém Adaptation Indicator review follows	GGA
2030	SDG, Sendai, and UNCCD (2018–2030) terms end; CBD COP19 — second GBF review	All tracks

Figure 3 sequences these same milestones chronologically to highlight the density of decision points concentrated in the 2026–2027 window.



412
413 *Figure 3. Sequence of critical Beyond-2030 milestones, August 2026 to 2030.*

414

4. Discussion: Institutional Convergence and Cross-Cutting Themes

4.1 The Institutional Backdrop: Pact for the Future and UN80

The Pact for the Future (adopted 22 September 2024) is a 64-page outcome document with 56 commitments spanning sustainable development and financing, peace and security, science and technology cooperation, and global governance reform, designed to “turbocharge” SDG implementation [51, 52]. It is the legal and political trigger for the 2027 SDG Summit’s consideration of the post-2030 agenda and also directly mandated the Beyond GDP HLEG process (§3.6), making it the connective document across nearly every track reviewed here. The parallel UN80 Initiative, an efficiency and reform effort now in a “decisive phase,” recorded a 21% reduction in Secretariat staff positions in 2026 and adoption of new mandate-discipline rules [53].

4.2 Cross-Cutting Themes

Synthesizing the evidence in Sections 3.1–3.7, I organize the cross-cutting findings into a seven-layer “coherence stack” that clarifies what convergence actually requires, moving beyond the observation that global goals overlap: (i) a shared long-term vision toward wellbeing, resilience, and ecological integrity, ideally extending beyond 2030; (ii) synchronized policy and review cycles — deliberately linking national planning, NDC/NAP updates, voluntary national reviews, and global stocktakes rather than scheduling them independently; (iii) institutional and legal coherence — clear mandates and cross-ministerial, horizontal-vertical accountability; (iv) operational data interoperability — shared concepts, metadata, provenance, and workflows, not merely identically named indicators; (v) financial coherence — budgets and instruments aligned with stated objectives, with finance-quality metrics tracked alongside volumes; (vi) place-based implementation — translation into subnational plans and land-use decisions; and (vii) equity, rights, and learning safeguards — disaggregation, participation, and Indigenous/local rights built into monitoring design from the outset. The evidence below is strongest for layers (ii), (iv), and (vii), and thinnest for (iii).

- Financing is the central, recurring constraint. The 2025 ODA collapse, the US\$4 trillion Sevilla financing gap, and repeated references to unmet financing commitments across

SDG, Sendai, and GBF reporting make finance the dominant constraint identified across tracks [1, 46].

- Long-term vision combined with recurring review cycles is an emerging design template. The GBF's 2030-targets-within-2050-goals structure, the Paris Agreement's recurring Global Stocktake, and UNCCD's proposed post-2030 process all point toward combining a longer horizon with periodic review rather than a single fixed end date [5]. Peer-reviewed literature supports this pattern directly: [7] make an explicit academic case for linking the stocktake and SDG midterm review, and periodic-review mechanisms recur as a proposed solution across the DRR coherence literature (§3.2).
- Indicator interoperability is deliberate and explicit, but the literature shows it must be operational, not rhetorical. GGA indicator submissions drew most heavily on SDG, Sendai, and GBF indicators [33]; Beyond GDP's dashboard draws roughly half its indicators directly from the SDGs [44]; UNCCD's Working Group is re-analyzing existing indicators for post-2030 relevance [38]. Section 3.8 documents at least six indicators that are already identical or near-identical across two or more of these regimes. [19] identify the same structural barrier from the practitioner side, arguing interoperability requires common metadata, provenance, and workflows, not just shared labels; the Bari Manifesto's ten principles for essential biodiversity variables offer one concrete template for what this looks like in practice. Harmonized core metrics improve comparability, but [54] and [55] both show resilience indicators specifically must also become more dynamic, uncertainty-aware, and cross-scale to avoid missing interconnected shocks.
- Targets are not self-executing. Biodiversity and resilience studies consistently show that target-setting increases visibility and cooperation without automatically producing sectoral mainstreaming, implementation coherence, or adequate resourcing [25]. Post-2030 design therefore needs explicit institutional, budgetary, and accountability mechanisms alongside any new targets [26].

- Equity is part of measurement architecture, not an afterthought. Adaptation, resilience, and biodiversity research converge on the same conclusion: distributional, procedural, recognition, and intergenerational justice, spatial disaggregation, participatory M&E, and Indigenous/local rights need to be built into monitoring and financing systems from the start rather than added after indicators are already selected [35, 37, 28].
 - UNCCD functions as a pathfinder for negotiated transition. Its sequence — review, evaluate indicators, convene a time-bound working group, draft, and negotiate before expiry — is the most concrete transition template available as of August 2026.
 - Reform of process is proceeding alongside reform of substance. UN80 and Pact for the Future governance reforms are intended to support, not precede, the various post-2030 goal-setting conversations.
 - Political consensus is not universal. The United States' withdrawal from the FfD4/Sevilla negotiations [49], combined with broader reporting that a small number of countries have moved into active opposition to the sustainable-development paradigm, is a live fault line likely to shape the ambition of any post-2030 framework.
- Taken together, the peer-reviewed evidence strengthens this review's convergence thesis but adds an important qualification: convergence is not a self-executing consequence of overlapping goals. It has to be engineered through institutions, policy cycles, financing, data infrastructure, accountability, and equity safeguards — the same conditions the coherence, mainstreaming, and equity literature above identifies as necessary but frequently missing.

4.3 Implications for Natural Capital, Ecosystem Services, and Biodiversity Communities

The convergence pattern documented above has specific, and largely favorable, implications for researchers and practitioners working on natural capital accounting, ecosystem services, and biodiversity science — but the same evidence base also contains explicit warnings against complacency.

496 First, natural capital accounting is emerging as a plausible interoperability layer connecting
497 several tracks that would otherwise report separately. Beyond GDP's HLEG dashboard draws
498 roughly half its indicators directly from existing SDG data [44], and the underlying inclusive-
499 wealth research programme — which treats natural, produced, and human capital as jointly
500 measured stocks — substantially predates and now underpins that dashboard [45]. In parallel,
501 UNCCD land-degradation monitoring is moving toward integrated environmental-economic
502 accounting that expresses ecological change alongside income and wealth effects rather than in
503 a separate reporting silo [42]. Read together, these two developments suggest natural capital
504 accounting could become the connective tissue linking Beyond GDP, UNCCD, and CBD/GBF
505 monitoring — provided the three processes actively cross-reference rather than duplicate one
506 another's indicator work, a coordination step that is not yet institutionally guaranteed.

507 Second, the biodiversity-mainstreaming literature is a direct warning to this community against
508 assuming ambitious targets are self-executing. The GBF's four 2050 goals and 23 2030 targets
509 already give biodiversity governance an agreed beyond-2030 destination (§3.3) — but [25]
510 shows the 2010 Biodiversity Target strengthened cooperation without producing coherent
511 national implementation, and a 43-study systematic review [26] finds the same pattern still
512 holds for GBF-era mainstreaming: targets remain abstract, biodiversity policies are often
513 uncoded add-ons, and resources are insufficient. For the natural capital and ecosystem-services
514 community specifically, this implies that producing better accounts or better valuations is
515 necessary but not sufficient; those accounts need an explicit institutional and budgetary
516 pathway into sectoral decision-making (agriculture, energy, infrastructure, trade) to avoid
517 becoming another abstract reporting exercise alongside the target itself.

518 Third, equity is now treated in the literature as intrinsic to biodiversity and ecosystem-services
519 measurement, not a separate social safeguard bolted on afterward. The “Rights for Life”
520 scenario [28] shows that centering Indigenous Peoples' and local communities' rights can
521 outperform conventional area-based conservation scenarios on social-equity grounds, and [37]
522 show that who defines an indicator and who controls the resulting data materially shapes
523 whether monitoring reduces or reproduces inequity. For ecosystem-services valuation and

524 natural capital accounting work feeding into GBF, UNCCD, or Beyond GDP reporting, this
525 means participatory design and data governance are measurement-quality issues, not only
526 ethical ones.

527 Fourth, the financing evidence has a direct corollary for biodiversity finance specifically. The
528 finding that green-labeled adaptation finance does not automatically distribute costs and
529 benefits fairly [50] applies with equal force to biodiversity and nature-based finance
530 instruments (biodiversity credits, debt-for-nature swaps, GBF Fund disbursements): volume of
531 finance mobilized is an incomplete success metric without also tracking concessionality, who
532 bears lifecycle costs, and whether Indigenous and local communities share in benefits rather
533 than only bearing implementation burdens.

534 For the natural capital, ecosystem services, and biodiversity research communities, the
535 practical implication is threefold: (i) invest in making natural capital accounts interoperable
536 with SDG, UNCCD, and Beyond GDP indicator systems now, while those systems are still
537 being designed, rather than after they are fixed; (ii) treat mainstreaming into sectoral budgets
538 and decisions as part of the research and advocacy agenda, not a downstream implementation
539 detail for governments alone; and (iii) build equity and participatory data governance into
540 ecosystem-service and natural-capital indicator design from the outset, following the same
541 logic the adaptation-equity literature has already established for the GGA. Section 3.8 presents
542 the indicator-level evidence and priority-ranking analysis underlying these implications.

543

544 5. Conclusion

545 As of August 2026, no negotiated “Beyond 2030 agenda” exists. What exists instead is a
546 rapidly developing landscape of formal mandates, treaty-specific transition processes, indicator
547 reforms, and stakeholder proposals across seven institutional tracks. Three conclusions follow.
548 First, tracks differ structurally in their exposure to a 2030 cliff-edge: the SDGs and Sendai face
549 a hard expiry with no agreed successor, while the GBF and Paris Agreement already have long-
550 term horizons and are mid-cycle rather than at a term boundary; UNCCD occupies an
551 intermediate position with an active transition process underway. Second, the full-text evidence
552 refines rather than overturns the central claim: the likely trajectory is conditional convergence
553 rather than merger. The major regimes share broad objectives and increasingly reuse indicators,
554 but overlap does not reliably produce coherent implementation on its own (§4.2) —
555 convergence must be engineered through the seven-layer coherence stack (synchronized
556 review cycles, institutional and legal mandates, operational data interoperability, financial
557 coherence, place-based implementation, and equity and rights safeguards, oriented around a
558 shared long-term vision). Third, financing — crystallized in the 2025 ODA collapse and the
559 US\$4 trillion Sevilla gap — is the constraint most consistently limiting ambition across every
560 track, and finance quality and distribution matter as much as volume (§3.7).

561 A plausible post-2030 architecture, consistent with the evidence reviewed, would combine a
562 durable long-term vision with a compact common indicator core, treaty-specific modules,
563 nationally and locally contextualized measures, periodic methodological review, and explicit
564 equity and rights safeguards. This is a synthesis inference from the literature rather than a
565 negotiated institutional blueprint; it preserves the autonomy of specialized agreements while
566 identifying conditions under which national systems could reduce duplication and turn global
567 commitments into more coordinated action.

568 This review has three principal limitations. First, it is a narrative synthesis of a fast-moving
569 policy landscape rather than a systematic review of a mature literature; the UNCCD and CBD
570 COP17 outcomes discussed were still pending at the time of writing and should be
571 independently verified. Second, the accompanying literature screening (§2) returned a low

precision rate ($\approx 35\%$) from a broad Boolean query, reflecting how new this policy discourse is in the indexed literature; a narrower, abstract-field search would likely improve future iterations. Third, the literature is considerably stronger on coherence and implementation of existing frameworks than on explicit post-2030 design, and remains geographically uneven; the Belém Adaptation Indicators were adopted too recently to evaluate, so the GGA conclusions (§3.4) should be read as design implications rather than empirical findings. I recommend this review be revisited after the September 2027 SDG Summit, once the UNCCD and CBD COP17 outcomes are finalized.

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Author Contributions: N.K.D. conceived the review, conducted the primary-source and literature review, and wrote the manuscript.

6. References

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765 S. Supplementary Materials

766 S.1 Full Web of Science Search Query

767 Cluster 1 (post-2030/SDG governance): “post-2030” OR “post 2030” OR “beyond 2030” OR
 768 “2030 and beyond” OR post-SDG(wildcard) OR “future sustainable development agenda” OR
 769 “SDG successor(wildcard)” OR “future of the SDG(wildcard)” OR “sustainable development”
 770 OR SDG(wildcard) OR “2030 Agenda” OR governance OR framework(wildcard) OR
 771 target(wildcard) OR indicator(wildcard) OR monitoring OR implementation OR finance OR
 772 “global governance”. Cluster 2 (sectoral frameworks): “Sendai Framework” OR “disaster risk
 773 reduction” OR “post-Sendai” OR “Global Biodiversity Framework” OR “Kunming-Montreal
 774 Global Biodiversity Framework” OR biodiversity OR desertification OR “land degradation”
 775 OR “Paris Agreement” OR “Global Goal on Adaptation” OR GGA OR “Belém Adaptation
 776 Indicator(wildcard)” OR “climate adaptation” OR “global stocktake” OR resilience. Cluster 3
 777 (measurement and finance): “Beyond GDP” OR “wellbeing economy” OR “inclusive wealth”
 778 OR “natural capital accounting” OR “environmental economic accounting” OR “financing for
 779 development” OR “SDG financing” OR “international financial architecture” OR “means of
 780 implementation”. Cluster 4 (integration vocabulary): interoperability OR “indicator
 781 interoperability” OR “indicator alignment” OR integration OR convergence OR coherence OR
 782 harmonization OR harmonisation OR equity. Clusters were combined with Boolean AND;
 783 terms within each cluster were combined with OR. “(wildcard)” denotes the asterisk wildcard-
 784 truncation operator in the original query (e.g., framework(wildcard) matches framework,
 785 frameworks, and frameworked). Searched against the Web of Science Core Collection, Title
 786 field, all years through August 2026.

787

788 **Table S1. Priority indicators for natural capital, ecosystem services, and biodiversity community**
 789 **contribution, ranked by composite score (R+G+X+T, max 12). Full scoring detail underlying the synthesis in**
 790 **Section 3.8.2.**

Indicator	Frameworks	R	G	X	T	Total	Role
CBD B.1 (Ecosystem services)	CBD-GBF Goal B; GGA 9(d)(a)	3	3	2	2	10	Modeling, synthesis
CBD A.2 / SDG	CBD-GBF	3	2	2	3	10	Data gathering,

Indicator	Frameworks	R	G	X	T	Total	Role
15.1.1 (Ecosystem/forest extent)	A/T1; SDG 15.1.1						modeling
CBD A.3 / SDG 15.5.1 (Red List Index)	CBD-GBF A/T4; SDG 15.5.1 (identical)	3	2	3	2	10	Data gathering
CBD D.1 / SDG 15.a.1, 15.b.1 (Biodiversity finance)	CBD-GBF D/T19; SDG 15.a.1, 15.b.1	2	3	3	2	10	Reporting, synthesis
GGA Target 9(d)(a–f) (Ecosystem-based adaptation)	GGA/ UNFCCC; CBD Goal A/B	3	3	2	2	10	Modeling, data gathering
SDG 15.3.1 (Land degradation)	SDG; UNCCD (LDN); CBD T1	3	2	3	2	10	Data gathering, modeling
CBD A.1 (Red List of Ecosystems)	CBD-GBF A/T1	3	3	1	2	9	Data gathering, modeling
SDG 12.b.1 (Natural capital accounting tools)	SDG; CBD Goal D; Beyond GDP	3	3	1	2	9	Methods development
CBD 3.1 / SDG 14.5.1, 15.4.1 (Protected area coverage)	CBD-GBF T3; SDG 14.5.1, 15.4.1	2	1	3	3	9	Data gathering
CBD 15.1 (Corporate biodiversity disclosure)	CBD-GBF T15; TNFD-adjacent	2	3	1	2	8	Reporting, synthesis
SDG 6.6.1 (Water-related ecosystem extent)	SDG; CBD T1	3	2	1	2	8	Data gathering
SDG 14.1.1 / CBD 7.1 (Coastal eutrophication)	SDG 14.1.1; CBD-GBF T7	2	2	2	2	8	Modeling, data gathering
SDG 14.4.1 / CBD 5.1 (Fish stocks)	SDG 14.4.1; CBD-GBF T5	2	2	2	2	8	Modeling
SDG 2.4.1 / CBD 10.1 (Sustainable agriculture area)	SDG 2.4.1; CBD-GBF T10	2	2	2	2	8	Data gathering, country support

Indicator	Frameworks	R	G	X	T	Total	Role
SDG 11.7.1 / CBD 12.1 (Urban green/blue space)	SDG 11.7.1; CBD-GBF T12	2	1	2	2	7	Data gathering, country support
CBD 18.2 (Harmful subsidies value)	CBD-GBF T18	2	3	1	1	7	Modeling
Sendai Target F (F1–F8, DRR finance)	Sendai; parallels CBD D.1–D.3	1	2	2	1	6	Reporting, synthesis
CBD 21.1 (Biodiversity monitoring information)	CBD-GBF T21 (data infra.)	1	3	1	1	6	Reporting, synthesis