



## ACHIEVING HIGH-INTEGRITY VOLUNTARY CLIMATE ACTION

### D1.3- STANDARDIZED FRAMEWORKS FOR ASSESSING THE INTEGRITY OF VCIs AND CARBON CREDITS

WP1 – Mapping and defining voluntary  
climate action, high-integrity  
principles and methods



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## Summary Requirements

### 1. Changes with respect to the Description of Action (DoA)

No changes with respect to the work described in the DoA.

### 2. Dissemination and uptake

This deliverable is useful for all work packages and practitioners outside the project.

### 3. Short summary of results

This report develops and applies the ACHIEVE integrity framework to guide and assess the integrity of voluntary climate action (VCA). The framework is built around four principles: integrated accountability, justice and equity, environmental protection, and low-carbon and resilient transformation, and was developed through a combination of literature review, stakeholder engagement, and iterative refinement within the ACHIEVE consortium. It offers a structured and flexible approach that can be adapted to different VCA contexts, helping bridge the gap between broad integrity concepts and practical assessment needs.

The framework is applied to five major assessment methodologies used by ACHIEVE partners: the Net Zero Tracker, the Corporate Climate Responsibility Monitor, the Carbon Credit Integrity Assessment Framework, the Integrity of Climate Action in Cities Assessment Method, and the CoAct Framework for transnational cooperative initiatives. The analysis shows that all methodologies reflect principles of integrity, but with uneven coverage across principles. Integrated accountability is strongly embedded across all methodologies, particularly through target setting, transparency, reporting, and verification. Justice and equity are the least developed due to conceptual complexity and data limitations. Environmental protection appears only partially, often indirectly or context-dependently. Low-carbon and resilient transformation is present in methodologies that assess transition planning or sector-wide change, but less so in others.

The findings highlight common challenges, including limited data availability, varying capacities across actors, and the difficulty of operationalizing holistic integrity concepts in practice. The report concludes that the ACHIEVE integrity framework provides a useful foundation for strengthening, aligning, and scaling high-integrity VCA, and outlines next steps to refine, contextualize, and operationalize the framework across different VCA domains.

### 4. Evidence of accomplishment

This report.

### 5. Disclosure statement on the use of generative artificial intelligence (AI)

ChatGPT was used to generate ideas for presenting the survey responses in a table to illustrate alignment with the integrity framework, as well as to proofread selected sections of the paper. The authors critically reviewed all outputs from the tool, assessing their relevance and validity before integrating them into the





manuscript alongside their own work.





## Preface

In recent years an unprecedented number of voluntary climate commitments have been made by a wide array of non-state and subnational actors. These voluntary climate actions aim to reduce greenhouse gas emissions and build climate resilience and are crucial for lowering risks of exceeding warming limits. However, the full potential of voluntary climate action can only be realized when integrity-related concerns are overcome. ACHIEVE aims to identify opportunities to strengthen and scale up high-integrity voluntary climate action towards achieving net-zero emissions by mid-century. The project will generate transformative and timely scientific insights on the role, effectiveness and integrity of voluntary climate action including carbon credits; assess the integrity and impacts of such action; analyze how policies and regulations, and high-integrity voluntary climate action can strengthen each other; and use scientific findings to support the scaling up of high-integrity voluntary action. This will be achieved through a highly inter- and transdisciplinary consortium that, from the start, actively engages policymakers and other societal stakeholders in co-creating outcomes that respond to end users' needs. ACHIEVE is aligned with the Work Programme of Cluster 5, Destination 1 "Climate sciences and responses for the transformation towards climate neutrality" as the project directly contributes to advancing knowledge and providing solutions for climate change specifically on high integrity voluntary climate action. ACHIEVE will develop transition pathways to climate neutrality that integrate voluntary climate action by cities, regions and companies; it will develop novel social science insights for climate action; contribute to better understanding sustainability co-benefits and trade-offs; and increase transparency and trust in voluntary climate action by strengthening integrity and making scientific results easily accessible for different stakeholder groups.

|                                                                                         |    |                                                                                       |
|-----------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|
| <b>RU</b> – Stichting Radboud Universiteit                                              | NL |  |
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## Executive Summary

This deliverable describes the development of the ACHIEVE integrity framework and examines how existing assessment methodologies for voluntary climate action (VCA) align with the four principles of the integrity framework: integrated accountability, justice and equity, environmental protection, and low-carbon and resilient transformation. The report analyses five frameworks used by ACHIEVE partners, i.e. the Net Zero Tracker, Corporate Climate Responsibility Monitor, Carbon Credit Integrity Assessment Framework, Integrity of Climate Action in Cities Assessment Method, and the CoAct Framework, to identify how each reflects or operationalizes the integrity principles and underlying dimensions. This analysis represents the first systematic exercise to apply the ACHIEVE integrity framework across methods that address different types of VCA, establishing a shared reference point for diverse assessment practices and ultimately understanding integrity of VCA.

The findings demonstrate that all five methodologies incorporate elements of integrity, though with varying emphasis and depth across principles. Integrated accountability is most consistently operationalized, particularly in frameworks that focus on transparency, target coherence, and verification. However, the principles of justice and equity, environmental protection, and low-carbon and resilient transformation remain less explicitly embedded, often due to conceptual challenges, data limitations and limited resources and capacity. The findings suggest that, although each framework functions effectively within its respective domain, there remains a need for stronger inclusion of the integrity considerations to encompass the concept's multiplicity of interconnected dimensions. Achieving this will also require overcoming the methodological and practical challenges of implementing integrity in diverse voluntary climate action settings.

In conclusion, the ACHIEVE integrity framework provides a valuable heuristic for guiding methodologies that assess VCAs in relation to integrity principles, thereby contribute to understanding, guiding, and improving VCA integrity. Its structured yet adaptable design attempts to provides a conceptual bridge between theory and practice, allowing different actors and assessment tools to align with integrity principles. The next phase of ACHIEVE will focus on further operationalizing the framework by adapting it to diverse contexts and making it accessible to guide practitioners, policymakers, and standard setters in fostering transparent, fair, environmentally sound, and transformative VCA.





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# 1 Introduction

In recent years, voluntary climate actions (VCA) from non-state and subnational actors such as companies, civil society organizations, cities, regions, and networks, have grown rapidly. However, such VCAs need to be credible, transparent, and aligned with the transformations towards a low-carbon, just and resilient future. If not, VCAs risk losing credibility, may lead to ineffective contributions to climate mitigation and adaptation, and in some cases might even cause harm in terms of climate, other environmental or social and socio-economic conditions. Robust methodologies are needed to assess whether VCAs are credible, comparable and transparent, and contribute desirable environmental and societal impacts. This report first presents a comprehensive integrity framework, which provides an overarching structure to guide the diversity of VCA integrity considerations. This integrity framework is organized around four key integrity principles (integrated accountability, justice and equity, environmental protection, and low-carbon and resilient transformation) and allows for addressing and aligning integrity for specific VCA assessment methodologies. Secondly, we apply this integrity framework to examine how five major VCA assessment methodologies align with integrity principles across different domains: net zero target committers, corporate action, carbon markets, subnational and city programs, and cooperative initiatives.

When we evaluate existing assessment methodologies against the integrity framework, important gaps and tensions emerge between theory and practice, between comprehensive design and practical usability, and in how integrity itself is interpreted. These findings highlight the difficulty of developing an integrity framework that is both holistic and practical, while also pointing to opportunities for improving existing assessment methodologies to better reflect diverse integrity considerations.

In the following, we describe the development and structure of the integrity framework and summarize the underlying literature base for the four principles (Section 2). Next, we provide key insights on the alignment of the assessment methodologies with the integrity framework (Section 3). We draw conclusions and provide recommendations for assessing integrity in VCA Section 4.

## 2 An Integrity Framework for Guiding Voluntary Climate Action

This section introduces the integrity framework, outlining its context and rationale, the process through which it was developed, its key dimensions, and a brief discussion of its applicability.

### 2.1 Integrity as social and context-dependent construct: from global to VCA-specific

Integrity broadly conveys *wholeness*, *consistency*, and *moral soundness*, the coherence between beliefs, intentions, and actions that guides ethical behavior (Williams, 1985; Calhoun, 1995). It also relates to the reliability of knowledge and governance through transparency and reflexivity (Code, 1991; Audi & Murphy, 2006). While the term derives from the Latin *integrare* (“to make whole”), its meaning has evolved across cultures and disciplines. Relational and ecological worldviews situate integrity in interdependence and balance. For instance, *Ubuntu* in Africa (“I am because we are”) emphasizes shared responsibility (Battle, 2009); *Buen Vivir* in Latin America (Espinosa, 2009) and *Swaraj* in South Asia (Kothari et al., 2019; Demaria & Kothari, 2017) link integrity to harmony and ethical self-determination; *Kyōsei* in Japan (McRae, 2017) and Taoist philosophy in China highlight coexistence with nature. These perspectives resonate with eco-centric philosophies such as deep ecology (Naess, 1989) and *Designs for the Pluriverse* (Escobar, 2017a; Escobar, 2017b), which view integrity as relational and systemic rather than purely individual.

Across disciplines, integrity has also manifested as a highly context-dependent concept, e.g. referring both to (personal) virtue and institutional principles, encompassing values like honesty, coherence, transparency, and fairness (Zaharia et al., 2021). Similarly, within climate action, integrity encompasses a multiplicity of interconnected moral, ethical, ecological, and governance dimensions that guide both behaviors at the individual level, e.g. integrity as a personal virtue (Beck 2023) or a moral duty (Hedberg 2018), or at the systemic level, e.g., ensuring transparency, institutional integrity, human rights and equity and reducing corruption in global carbon governance (Cadman et al. 2017).

The following sections examine recent UN initiatives, including the Integrity Matters report of the High-Level Expert Group (UNHLEG, 2022) and the UNFCCC’s Recognition and Accountability Framework (2023), to map current understanding of and requirements for (high) integrity of VCA along with academic understanding of VCA integrity. Building on the current understanding of integrity, we then elaborate on the process towards defining the high integrity principles and subsequently describe the respective principles.

### 2.2 Integrity in the context of Voluntary Climate Action

Recent UN initiatives have made important steps towards operationalizing integrity in climate action

through complementary governance and accountability mechanisms. The UN High-Level Expert Group's *Integrity Matters* report (UNHLEG, 2022) advances five guiding principles for credible climate action: ambition, integrity, transparency, credibility, and justice, and ten recommendations that call for science-based targets, verifiable transition plans, and just, nature-positive implementation. Accompanying implementation checklists for businesses, financial institutions, and subnational governments translate these principles into measurable actions, such as eliminating deforestation by 2025, ensuring independent verification, aligning lobbying and investments with climate goals, and embedding just transition measures. These tools align with the integrity aspects such as accountability, justice and equity, and address environmental aspects, e.g., through nature-based measures, though more narrowly focused on deforestation. Building on these developments, the UNFCCC Recognition and Accountability Framework (RAF, UNFCCC 2023) extend integrity in VCA to include procedural mechanisms for recognition, data management, and transparency of non-Party stakeholder action under the Global Climate Action Portal. Its principles, i.e. holistic engagement, inclusiveness, collaboration, assurance, and open data, seek to reinforce accountability and strengthen governance integrity.

However, both the HLEG and the RAF approach integrity in largely linear and quantitative terms, focusing on whether actions are ambitious enough, and effectively implementing towards closing measurable gaps, e.g. achieving net-zero emissions. While this focus is understandable, given that these approaches focus on initiatives that are explicitly designed around net-zero commitments, it still narrows integrity to the credibility of contributions towards emission trajectories in the first place, rather than the broader societal transformations required for climate justice and broader sustainability. In this framing, integrity is primarily assessed through compliance, transparency, and consistency with decarbonization pathways, but less through questions of whether voluntary climate actions address root causes, shift power relations, consider environmental protection as an equally important goal, or challenge economic structures that drive vulnerability and inequality.

## 2.3 Background and Rationale of an ACHIEVE Integrity Framework

The ACHIEVE project seeks to address this gap by developing an integrity framework that can guide and assess VCAs. The integrity framework aims to offer a coherent and comprehensive yet broadly applicable conceptualization of integrity, aiming to steer VCAs towards higher integrity. Before presenting the integrity framework, we describe the process used to conceptualize integrity in the context of VCA. The process combines a literature review with co-creation through stakeholder engagement, using a mixed-methods approach.

### 2.3.1 Literature foundation

We conducted a critical review of academic and grey literature on climate governance, accountability, justice, corporate responsibility, and environmental sustainability. Following Grant and Booth's (2009) critical-review method and Alvesson and Sandberg's (2011) problematization approach, we examined key integrity-related frameworks—including the UN High-Level Expert Group on Net-Zero Commitments (2022), the ISO Net Zero Guidelines (2022), the Race to Zero campaign, and scholarly

work on VCA (see tables in 2.5). Using problematization, we identified and grouped the implicit assumptions, metaphors, and conceptual gaps that shape how integrity is understood in the VCA literature. Grant and Booth's approach then guided a systematic synthesis of findings across diverse sources. Together, these methods enabled us to uncover recurring explicit and implicit integrity attributes, integrate broader perspectives, and derive the principles and dimensions that structure the integrity framework.

The review revealed four recurring clusters of integrity concerns:

- Integrated accountability – credibility of commitments, progress tracking, and verification.
- Justice and equity – distribution of benefits, responsibilities, and participation.
- Environmental protection – avoiding ecological harm and maximizing co-benefits.
- Low carbon and resilient transformation – aligning actions with systemic decarbonization and resilience goals.

These clusters became the foundational principles of the integrity framework and were subsequently structured into dimensions and criteria (see Section 2.5 for details 2.4).

#### 2.3.2 Stakeholder engagement and co-creation

To ensure practical relevance, the initial conceptual framework was iteratively refined through three multi-stakeholder workshops and an accompanying survey. Two workshops were held within the ACHIEVE consortium on July 3, 2024, and May 21, 2025, involving 27 and 23 participants from universities, think tanks, and NGOs. These workshops focused on reviewing and refining the integrity framework's principles and dimensions. A third workshop was held on Jan 23, 2025, with the *Alianza para la Acción Climática de México* (ACA México), bringing together practitioners from civil society, academia, and consulting. This workshop took part in between two ACHIEVE workshops and provided additional feedback on the interpretability and completeness of the integrity framework, highlighting context-specific needs such as, the centrality of social inclusion and local capacity in Latin-American contexts. Together, these workshops underscored the need for an integrity framework that is relational, systemic, value based and allows for context-specificity.

Two empirical test cases examined the integrity framework's applicability: one on carbon credit integrity, and the other on ACA México participants' (n=15) perceptions of integrity dimensions. Feedback led to refinements, such as replacing the principle "Growth within Limits" with "Low Carbon and Resilient Transformation", to move beyond a framing centered on managing growth or efficiency improvements; and reconceptualizing "Environmental Robustness" to "Environmental Protection" to reflect a broader focus beyond mere technical or system-level resilience towards ecological integrity that encompasses safeguarding ecosystems, biodiversity, and natural resources. The test cases also highlighted the integrity framework's need to maintain flexibility and adaptability to suit diverse social and economic contexts in which VCAs operate and are assessed.

A complementary survey of stakeholders in English and Spanish (n = 60, November 2024 – March 2025) gathered perceptions of the integrity principle's relevance, trade-offs, and feasibility. Survey

questions are provided in appendix A1. Together, the workshops and survey grounded the integrity framework in both scientific evidence and practical experience, reinforcing its legitimacy as a hybrid academic-policy product.

## 2.4 Structure and Levels of the Integrity Framework

The integrity framework is structured as a multi-level, flexible architecture for conceptual clarity and practical guidance for assessments. Table 1 presents the integrity framework's interconnected levels of principles, dimensions, criteria, and indicators, which together translate broad normative foundations into actionable elements for guiding VCA and their assessments.

Table 1 *Levels and Components of the Integrity Framework* - This table outlines the hierarchical structure of the integrity framework, illustrating how principles, dimensions, criteria, and indicators build upon one another to translate broad normative foundations to assessable indicators.

| Level      | Purpose                                                                               | Illustration                                                                     |
|------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Principles | Core normative foundations that capture the essence of high-integrity climate action. | e.g., Justice & Equity                                                           |
| Dimensions | Analytical components of each principle specifying focus areas.                       | e.g., Geographic Equity or Procedural Justice                                    |
| Criteria   | Operational statements describing what should be achieved or observed.                | e.g., "Balanced representation of Global South actors in governance structures." |
| Indicators | Measurable variables or qualitative descriptors enabling empirical evaluation.        | e.g., "Percentage of board members from low-income countries."                   |

The four principles capture the core values of high-integrity climate action, based on literature review and iterative stakeholder engagements. As the integrity framework's highest level, they define the fundamental requirements of integrity and provide a shared conceptual foundation across different types of VCAs.

Dimensions break down each principle into key analytical components, highlighting where attention is needed—for example, how justice is reflected in procedures or across regions. They are not meant to be exhaustive or universal; different VCAs may emphasize other aspects depending on their mandate, sector, location, or organizational setup.

At the next level, criteria specify what should be observed or achieved within each dimension. These are context dependent, as VCAs differ in their aims, operational models, and constituencies. Criteria may need to be adapted, expanded, or revised to fit specific organizational realities. The integrity framework therefore provides illustrative rather than prescriptive criteria.

Finally, indicators translate criteria into measurable or qualitatively assessable variables. By design, indicators exhibit the greatest variation across assessment contexts. Different types of VCAs, such as corporate alliances, place-based initiatives, transnational networks, or community-led efforts, require distinct forms of evidence and different modes of evaluation. Indicators must therefore be flexible enough to reflect variations in scale, governance structures, data availability, and local

priorities. For ACHIEVE, we compiled example indicators to illustrate how the criteria could be measured and to encourage project partners to consider how their integrity assessments might be expanded or revised.

The integrity framework is intended as a practical tool to support structured assessment of VCAs. It does not prescribe a single definition of integrity or assume that the same elements apply in every case. Instead, it provides an organized way to ask questions, examine assessments, and identify strengths and gaps across different types of VCAs. Several features support practical use: it is modular, allowing principles and dimensions to be applied in full or in part depending on the actor, sector, or purpose; scalable, so criteria and indicators can assess individual initiatives, sectors, or networks; and flexible, so lower levels of the framework can be adapted to geographic, economic, and institutional contexts. The framework is also open to evolution as expectations of integrity change over time.

In this multi-level, adaptable and modular integrity framework, principles provide a stable normative foundation, while dimensions, criteria, and indicators add flexibility to accommodate VCA diversity. Rather than prescribing a single model of integrity, the integrity framework provides a structured approach that can be tailored to different contexts while maintaining coherence with the core integrity principles.

## 2.5 Overview of the Principles and Dimensions

The four interlinked principles of integrity constitute the integrity framework (Fig. 1): integrated accountability, justice and equity, environmental protection, and low-carbon and resilient transformation. These four principles capture integrity as both moral and systemic coherence, linking ethical commitment, ecological responsibility, and institutional accountability, and provide a foundation for assessing the credibility and transformative potential of voluntary climate initiatives.

These following sections provide a brief overview of the integrity principles and dimensions. Since first presenting the draft integrity framework in D1.2 (Jan 27, 2025), the framework has been further revised and refined based on the stakeholder engagement and co-creation activities as described section 2.3.2. We present here the current version of the principles in more detail and explain their key dimensions.

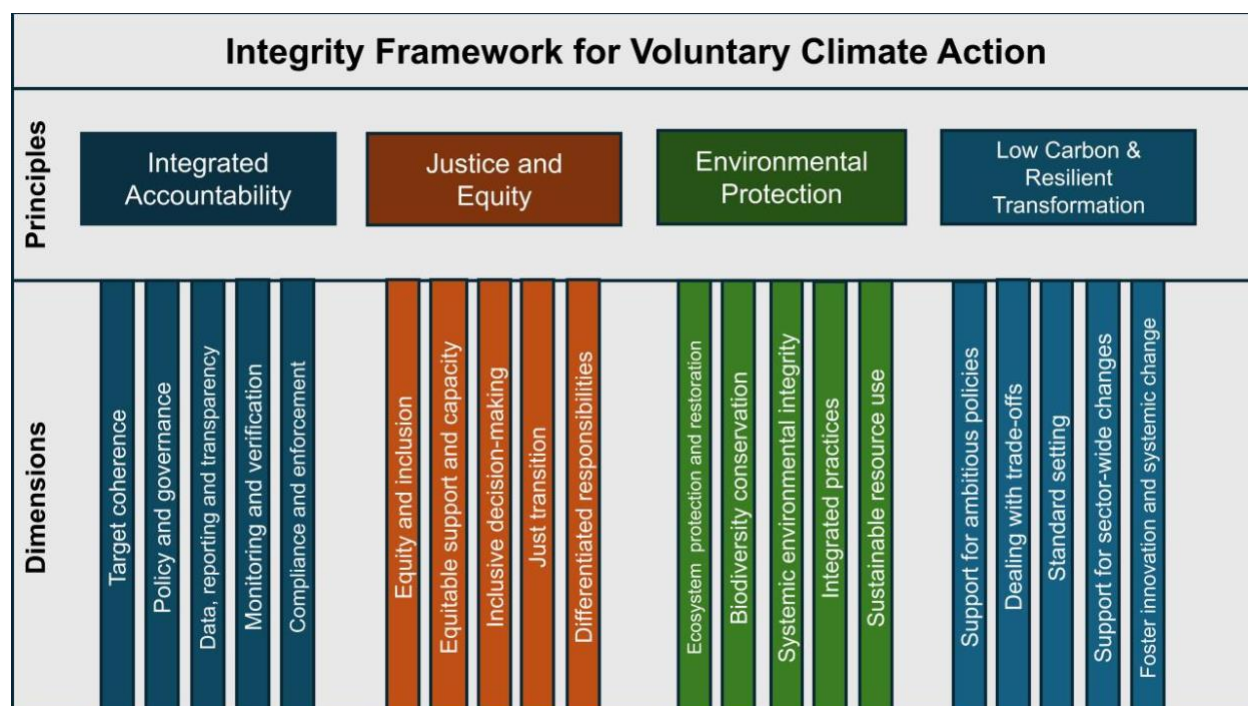


Figure 1. Integrity principles framework composed of four key principles and underlying dimensions

### 2.5.1 Integrated Accountability

We use the term Integrated Accountability to signal a broader and more systemic understanding of accountability than conventional approaches. Traditional accountability on climate action often focuses on a single relationship or outcome, for instance, an organization reporting emissions to its stakeholders or disclosing progress once a year. In contrast, Integrated Accountability refers to multi-level, reciprocal, and value-based accountability that links commitments, actions, and outcomes across actors, governance levels, and dimensions of integrity. It ensures that VCAs are credible not only in what they deliver, but also in how they align with science, policy frameworks, and broader societal goals. Integrated accountability therefore rests on a set of mutually reinforcing dimensions.

Target coherence is foundational: VCAs need clear, time-bound, actionable, and science-based commitments that transform intent into direction (Hale, 2016; Chan et al., 2016; Hsu et al., 2023). Without such clarity, pledges risk remaining aspirational and lack a pathway for implementation (Kuramochi et al., 2024). Credibility further depends on policy and governance alignment, ensuring that VCA commitments sit coherently within local, national, and global policy frameworks and are supported by inclusive governance arrangements that reflect diverse actor involvement, including non-state and marginalized stakeholders (Bäckstrand et al., 2017; Hale, 2016; Kuramochi et al., 2020, 2024). Integrity also requires robust data, reporting, and transparency. Transparent, consistent, and comparable data systems enable external scrutiny, reveal unintended effects, and link VCA activities to broader sustainable development outcomes (Chan et al., 2015; Hsu et al., 2023). This is closely

connected to monitoring and verification, where systematic and independently verified progress tracking prevents voluntary action from becoming ineffective or, worse, a vehicle for greenwashing (Hale, 2016; Kuramochi et al., 2020; Kaiser, 2022; Patterson, 2022). A final component is compliance and corrective action, which ensures that shortcomings are addressed through internal mechanisms and external pressures, including public scrutiny, reputational incentives, and alignment with wider governance expectations.

Together, these dimensions show how accountability in VCAs cuts across planning, implementation, governance, and learning. Integrated accountability aligns commitments with scientific evidence, multi-level governance systems, and wider societal aims, thereby strengthening the credibility, legitimacy, and transformative potential of voluntary climate action.

Table 2 *Dimensions and criteria of the integrated accountability principle, with description and reference to the literature.*

| DIMENSION                        | CRITERIA & DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                 | REF.                        |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Target Coherence                 | <ul style="list-style-type: none"> <li>• Clear, measurable, time-bound targets: Targets must be specific, actionable, and time-sensitive to ensure progress and trust.</li> <li>• From goals to action: Commitments must lead to measurable outcomes, not remain aspirational.</li> <li>• Avoid duplication: New commitments should add value, not replicate existing ones.</li> </ul> | 1, 2, 3, 4, 5, 7, 9, 10, 11 |
| Policy & Governance alignment    | <ul style="list-style-type: none"> <li>• Policy alignment: VCAs should integrate with national and global policy frameworks.</li> <li>• Institutional robustness: Strong institutions enhance effectiveness and accountability.</li> <li>• Legitimacy and participation: Inclusive decision-making fosters credibility.</li> </ul>                                                     | 3, 4, 5, 7, 9, 10           |
| Data, Reporting & Transparency   | <ul style="list-style-type: none"> <li>• Reporting standards: Use robust and consistent data protocols.</li> <li>• Transparency: Open communication of data builds public trust.</li> <li>• Impact measurement: Assess outputs, outcomes, and co-benefits beyond emissions.</li> </ul>                                                                                                 | 1, 3, 5, 6, 7, 10, 11       |
| Monitoring and verification      | <ul style="list-style-type: none"> <li>• Implementation quality: Deliver beyond promises with credible action plans.</li> <li>• Non-state actor roles: Evaluate the effectiveness and accountability of non-state actors.</li> <li>• Multi-level collaboration: Support cross-scale governance and partnerships.</li> </ul>                                                            | 2, 3, 5, 7, 10, 11          |
| Compliance and corrective action | <ul style="list-style-type: none"> <li>• Public awareness: Engage the public through transparent, inclusive practices.</li> <li>• Greenwashing risk: Identify and mitigate misleading or superficial actions.</li> </ul>                                                                                                                                                               | 6, 7                        |

Note - The literature cited here either explicitly or implicitly refers to these dimensions and criteria: 1- Chan et

al. (2015); 2- Chan et al. (2016); 3 - Chan et al. (2019); 4- Hale (2016); 5- Bäckstrand et al. (2017); 6 - Kaiser (2022); 7 Hsu et al. (2023); 8 - IPCC (2023); 9 - Kuramochi et al. (2020); 10 - Kuramochi et al. (2024), 11 – UN HLEG (2022), 12 - Patterson (2022)

## 2.5.2 Justice and Equity

The principle of Justice and Equity reflects the understanding that VCAs must not only reduce emissions or enhance resilience, but also do so in ways that are fair, inclusive, and responsive to historical and structural inequalities. Whereas conventional approaches often treat equity as an add-on, or, something to be considered after commitments are set, this principle positions justice and equity as foundational: they shape who participates, who benefits, who bears risks and costs, and whose knowledge and priorities are recognized. Justice in this sense is multidimensional, encompassing distributive, procedural, social, and epistemic dimensions (Kaiser, 2022; Bäckstrand et al., 2017).

To reflect this breadth, Justice and Equity in VCAs rests on several interrelated dimensions. First, Equity and Inclusion require balanced representation across regions, generations, genders, and social groups. Persistent underrepresentation of Global South actors, for example, highlights the need for mechanisms that ensure geographic equity and amplify locally grounded solutions (Chan et al., 2015; Hale, 2016; Hsu et al., 2023). Equity also extends across time, ensuring that decisions do not privilege present actors at the expense of future generations (Hsu et al., 2023; Kuramochi et al., 2024). A second dimension, Equitable Support and Capacity, concerns fair access to the resources, knowledge, finance, and technical capabilities needed for meaningful participation. This includes aligning financial flows to support vulnerable regions and communities that bear high transition costs despite contributing least to the climate crisis (Kuramochi et al., 2024; Chan et al., 2016). Historical underdelivery of climate finance by high-income countries underscores the need for more accountable and just support structures (UN HLEG, 2022). A third dimension, Inclusive Decision-Making, centers on procedural justice. Transparent and participatory governance processes are essential for safeguarding rights, elevating marginalized voices, and ensuring legitimacy (Kaiser, 2022; Bäckstrand et al., 2017; Chan et al., 2016). Meaningful inclusion also requires recognizing diverse knowledge systems, including Indigenous and local knowledge, and ensuring that deliberation is not symbolic but genuinely influences outcomes. A fourth dimension is Just Transition, which links climate action to broader socioeconomic transformation. This entails safeguarding the rights and livelihoods of workers and communities affected by climate and energy transitions, addressing energy and transport poverty risks (Chan et al., 2015; UN HLEG, 2022), and designing policies that mitigate rather than exacerbate social vulnerability. Finally, Differentiated Responsibilities acknowledges both historical emissions and present capacities. Fair climate action requires recognizing that actors differ in responsibility, capability, and context. VCAs must therefore avoid approaches that inadvertently reproduce inequities by assuming uniform obligations across actors with highly unequal resources, histories, and needs.

Together, these dimensions show why justice and equity are not peripheral considerations but essential conditions for credible and transformative voluntary climate action. They ensure that VCAs respond to historical responsibility, tackle structural inequalities within and across societies, and

address the needs of both present and future generations. The following section introduces criteria associated with these dimensions, illustrating how Justice and Equity can be operationalized and assessed across varied VCA contexts.

*Table 3 Dimension and criteria of justice and equity principles, with description and reference to the literature.*

| DIMENSION                       | CRITERIA & DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | REF.                  |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Equity and Inclusion            | <ul style="list-style-type: none"> <li>• Geographic equity: Ensure balanced representation across and within regions and countries, especially the Global South.</li> <li>• Locally inclusive action: Align climate actions with local needs, capacities and empower communities.</li> <li>• Inter/intragenerational equity: Safeguard current and future generations.</li> <li>• Social inclusion: Involve diverse social groups (i.e. based on gender, income etc. – intersectionality) for inclusive outcomes.</li> </ul>                                                | 1–8, 2, 3, 7, 10      |
| Equitable support & Capacity    | <ul style="list-style-type: none"> <li>• Address disparities: Recognize funding and capacity gaps across and within regions.</li> <li>• Financial commitments: Hold multinationals accountable in their value chain for living wages.</li> <li>• Equitable financial flows: Prioritize support to vulnerable groups.</li> <li>• Polluter accountability: Ensure major emitters contribute to solutions.</li> <li>• Transition costs: Account for burdens on developing countries.</li> <li>• Financial equity: Match finance to capacity and historical profits.</li> </ul> | 9–11                  |
| Inclusive decision-making       | <ul style="list-style-type: none"> <li>• Human rights-based approach: Uphold rights in climate efforts.</li> <li>• Deliberative processes: Encourage democratic, inclusive decisions.</li> <li>• Broad participation: Involve actors from low-income countries.</li> </ul>                                                                                                                                                                                                                                                                                                  | 2, 3, 5, 6            |
| Just Transition                 | <ul style="list-style-type: none"> <li>• Equitable transition: Center disadvantaged groups in planning.</li> <li>• Historic responsibility: Acknowledge past emissions in action.</li> <li>• Diverse actions: Equitable support for adaptation, resilience, loss and damage, risk reduction and beyond.</li> </ul>                                                                                                                                                                                                                                                          | 1, 2, 4, 6, 7, 11     |
| Differentiated responsibilities | <ul style="list-style-type: none"> <li>• Procedural justice: Ensure fair, accessible grievance mechanisms.</li> <li>• Participation-focused transparency: create openness and build trust.</li> <li>• Prevent inequity: Avoid reinforcing existing disparities.</li> </ul>                                                                                                                                                                                                                                                                                                  | 1, 2, 3, 5, 7, 10, 11 |

Note - The VCA literature referenced here either explicitly or implicitly refers to these references: 1- Chan et al. (2015); 2- Chan et al. (2016); 3 - Chan et al. (2019); 4- Hale (2016); 5- Bäckstrand et al. (2017); 6 - Kaiser (2022); 7 Hsu et al. (2023); 8 - IPCC (2023); 9 - Kuramochi et al. (2020); 10 - Kuramochi et al. (2024), 11 – UN HLEG (2022)

### 2.5.3 Environmental Protection

The principle of Environmental Protection recognizes that voluntary climate actions (VCAs) must not only reduce greenhouse gas emissions or enhance resilience, but also actively safeguard the ecological systems on which long-term climate stability depends. Conventional climate initiatives often treat environmental protection as a secondary benefit or co-benefit. In contrast, this principle positions ecological integrity as foundational, ensuring that climate action strengthens rather than

harms ecosystems, biodiversity, and natural resources. It responds to a growing body of evidence showing that climate mitigation and adaptation efforts are most effective and just when they are ecologically grounded (Hsu et al., 2023; UN HLEG, 2022; IPCC, 2023).

To reflect this broader perspective, Environmental Protection in VCAs rests on several interrelated dimensions. A first dimension, Ecosystem Protection & Restoration, requires halting environmental degradation and actively restoring damaged ecosystems. Actions such as reforestation, wetland restoration, and ecosystem-based adaptation serve dual purposes: they mitigate climate impacts while rebuilding ecological functions and resilience (IPCC, 2023; UN HLEG, 2022). Ensuring healthy ecosystems is vital for maintaining essential services, including carbon sequestration, water regulation, and landscape stability. Complementing this, Biodiversity Conservation focuses on maintaining and enhancing species diversity, genetic resources, and ecological interactions across landscapes. Climate initiatives that overlook biodiversity risk undermining the very systems that support adaptation and mitigation capacities (Hsu et al., 2023). Conservation thus becomes a core integrity requirement, not an optional add-on. A third dimension, Systemic Environmental Integrity, emphasizes that VCAs must avoid unintended ecological harm and prevent “false solutions” that reduce emissions at the cost of broader environmental damage (IPCC, 2023). This includes ensuring that mitigation efforts do not degrade soils, water systems, or habitats, and that adaptation measures do not introduce new vulnerabilities or ecological trade-offs. Systemic integrity requires an understanding of ecosystems as interdependent and dynamic. A fourth dimension, Integrated Practices, highlights the need for climate actions that combine mitigation, adaptation, and environmental protection in ways that recognize ecological interdependencies. Integrated practices draw on nature-based solutions, landscape-level planning, and cross-sectoral approaches that align climate actions with ecological processes rather than treating them as separate domains (IPCC, 2023). This integration helps ensure that climate interventions reinforce—rather than conflict with—ecological objectives. Finally, Sustainable Resource Use concerns the responsible management of natural resources, including water, land, and materials. Circular economy principles, efficient material use, and pollution reduction help minimize environmental pressures while enhancing long-term resilience (IPCC, 2023). Effective resource stewardship also supports communities facing water scarcity, land degradation, and environmental health risks.

Together, these dimensions show why ecological integrity is essential to high-integrity voluntary climate action. Embedding environmental protection throughout the design, implementation, and monitoring of VCAs ensures that initiatives restore and sustain ecosystems, avoid ecological trade-offs, and contribute to long-term planetary resilience.

Table 4 *Dimensions and criteria of the environmental protection principle, with description and reference to the literature.*

| DIMENSION                          | CRITERIA & DESCRIPTION                                                                                                                                                                                                                    | REF.    |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Ecosystem Protection & Restoration | <ul style="list-style-type: none"> <li>Nature-based solutions use: for example, implement reforestation, wetlands, and green infrastructure.</li> <li>Restoration efforts: Reverse ecological damage and promote biodiversity.</li> </ul> | 1, 2, 3 |

|                                  |                                                                                                                                                                                                                                        |   |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|                                  | • Ecosystem-based adaptation: Use ecosystems to adapt to climate impacts and build ecosystem resilience                                                                                                                                |   |
| Biodiversity conservation        | • Healthy ecosystems: Preserve and restore habitats critical for biodiversity and carbon capture.<br>• Ecosystem services: agroforestry, mangrove and wetland restoration etc.                                                         | 3 |
| Systemic Environmental Integrity | • Ecological safeguards: Prevent ecological degradation from climate actions.<br>• Socio-ecological safeguards: Enhance resilience to extreme climate events.                                                                          | 3 |
| Integrated practices             | • Combined strategies: Integrate mitigation, adaptation, and environmental protection.<br>• Cross sector coordination: Based on ecological interdependencies align actions across sectors to reinforce climate and ecosystem outcomes. | 3 |
| Sustainable Resource Use         | • Circular economy: Minimize waste and maximize efficient resource use.<br>• Water quality: Limit pollution and manage water sustainably.                                                                                              | 4 |

Note - The literature cited here either explicitly or implicitly refers to these dimensions and criteria: 1. Hsu et al. (2023); 2 - UN HLEG (2022); 3 - IPCC (2023); 4 - Wang et al., 2022

## 2.5.4 Low Carbon and Resilient Transformation

The principle of Low-Carbon and Resilient Transformation highlights that voluntary climate actions (VCAs) need to contribute to broader societal shifts, not just improvements within individual organizations. In this integrity framework, transition refers to gradual adjustments within existing systems, while transformation involves more fundamental changes to those systems—altering norms, institutions, infrastructures, and behaviors so that low-carbon and climate-resilient pathways become the prevailing direction of development.

VCAs therefore require more than credible internal action: they also need to help create the wider conditions that make systemic change possible. This includes supporting ambitious public policies, strengthening standards and norms, contributing to sector-wide change, addressing trade-offs that constrain long-term sustainability, and encouraging innovation in technologies, practices, and governance arrangements.

A first dimension, Supporting Ambitious Policy, concerns how VCAs relate to public regulation and governance. High-integrity VCAs use their influence to support policy environments that facilitate decarbonization and resilience, for example by endorsing stringent environmental standards, long-term planning, and regulatory reforms aligned with the goals of the Paris Agreement (Chan et al., 2015; Kuramochi et al., 2020, 2024). A second dimension, dealing with trade-offs, recognizes that climate action often involves tensions between short-term interests and long-term transformation. VCAs are expected to acknowledge these trade-offs openly and avoid measures that deliver narrow climate benefits while undermining resilience, equity, or ecological integrity. A third dimension, Standard Setting, relates to the role VCAs can play in shaping norms and expectations within their

respective fields. By adopting and advancing high-ambition standards—such as science-based targets, nature-positive approaches, or robust adaptation metrics—VCAs help raise the baseline for what is considered credible action. The fourth dimension, Support for Sector-Wide Change, emphasizes contributions that go beyond organizational boundaries. This includes changes in supply chains, coordination across industries, and investments in resilient infrastructures that support wider decarbonization and adaptation goals (Chan et al., 2015; Kuramochi et al., 2020). Finally, Fostering Innovation and Systemic Change covers innovation not only in technology but also in business models, governance arrangements, and social practices. Innovation in this sense is about enabling alternative development pathways that reduce carbon lock-in and increase society’s capacity to adapt and respond effectively (Kuramochi et al., 2024).

Taken together, these dimensions underline that VCAs should contribute to conditions that enable long-term, systemic shifts toward low-carbon and climate-resilient futures. Internal organizational action remains important, but on its own is insufficient. VCAs that seek to uphold integrity therefore need to engage with the broader structures—policy, markets, norms, and collective capacities—that shape the direction and pace of societal transformation.

Table 5 *Dimensions and criteria of the low carbon and resilient transformation principle, with description and reference to the literature.*

| DIMENSION                             | CRITERIA & DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                    | REF.             |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Supporting Ambitious Policy           | <ul style="list-style-type: none"> <li>• GHG neutrality: Align with net-zero and emissions reduction.</li> <li>• Renewable energy: Replace fossil fuels with clean energy.</li> <li>• Energy efficiency: Reduce consumption via innovations and savings.</li> <li>• Clean air: Target actions to improve air quality.</li> <li>• Sustainable transport: Promote low-emission mobility options.</li> </ul> | 1,2,3, 4, 5,     |
| Dealing with trade-offs               | <ul style="list-style-type: none"> <li>• Growth vs equity: Examine whether economic growth undermines justice in climate action.</li> </ul>                                                                                                                                                                                                                                                               | 3, 6, 7          |
| Standard Setting                      | <ul style="list-style-type: none"> <li>• Science-based targets: Adopt targets grounded in the latest climate science to ensure credible VCA contributions.</li> </ul>                                                                                                                                                                                                                                     | 3, 4, 5, 6, 7, 8 |
| Support for sector wide changes       | <ul style="list-style-type: none"> <li>• Capital availability: Identify available resources for action and capacity-building.</li> <li>• R&amp;D investment: Track innovation in sustainable technologies, support sharing of clean innovation.</li> <li>• Technology transfer: Support equitable tech sharing, especially with developing regions.</li> </ul>                                            | 9                |
| Foster innovation and systemic change | <ul style="list-style-type: none"> <li>• Green jobs: Measure climate action’s impact on sustainable employment.</li> </ul>                                                                                                                                                                                                                                                                                | 8                |

Note - The literature cited here either explicitly or implicitly refers to these dimensions and criteria: 1 - Chan et al. (2015); 2 - Bäckstrand et al. (2017); 3 - Hale (2016); 4 - Kuramochi et al. (2020); 5 - Kuramochi et al. (2024); 6 - UN HLEG (2022); 7 - Chan et al. (2019); 8 - IPCC (2023); : 9- Hsu et al. (2023)

### 3 Examining alignment of assessment methodologies with integrity framework

The second aim of this deliverable is to evaluate how effectively the five assessment methodologies integrate the principles and dimensions of the integrity framework. Developed by ACHIEVE partners, these methodologies assess different VCA domains, including net-zero target committers, corporate actions, carbon markets, and subnational and city-level programs and cooperative initiatives. A brief overview of the five methodologies is provided in Table 6, with a detailed discussion in the following section. A comprehensive evaluation of how other leading VCA assessment methodologies relate to the integrity framework is beyond the scope of this deliverable and represents an important area for future research.

Table 6 Overview of the five frameworks assessing integrity in VCA and actors.

| Assessment Methodologies                        | Lead organizations / origin                    | Actors/type of VCA covered                                                       | Method type & core metric                                                                             |
|-------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Net Zero Tracker (NZE)                          | Oxford Net Zero, ECIU, DDEL, NewClimate        | Countries, regions, cities, companies (4,000+ entities)                          | Indicator-based, UN HLEG / Race to Zero-aligned criteria                                              |
| CCRM (Corporate Climate Responsibility Monitor) | NewClimate Institute                           | Large multinational corporations, sectoral focus (agrifood, fashion, auto, tech) | Sectoral scoring; 4 pillars (disclosure, targets, sectoral transitions, responsibility for residuals) |
| Carbon Credit Integrity Framework               | ACHIEVE & Max-Planck Institute                 | Carbon crediting programs, projects; corporate buyers; host countries            | Dual supply/demand benchmark framework - benchmark requirements per aspect                            |
| ICACAM (Cities)                                 | OEKO, adapted from WP1.3's integrity framework | Municipal governments / city climate action                                      | Contextual, indicator operationalization; case-study comparative matrix                               |
| CoAct (formerly N/C-CID)                        | Radboud U., IDOS, CATIE (ACHIEVE / BioCAM4)    | Transnational cooperative initiatives (businesses, NGOs, cities, investors)      | Structured coding (70+ vars) + Function-Output-Fit (FOF) performance metric                           |

The assessment of how existing VCA methodologies align with the integrity principles was conducted through a structured survey designed to capture partners' reflections across the consortium (see survey questionnaire in Annex A2). Following the introduction of the integrity framework, a questionnaire was circulated to all ACHIEVE partners to document how their respective assessment methodologies engage with the principles and dimensions in practice. Respondents were first asked to describe the purpose, scope, and analytical features of their methodologies, and to i) indicate alignment with the integrity framework's principles; ii) specify the integrity threshold (i.e. the minimum in a category for a VCA to have integrity), iii) outline recent methodology updates; and iv) identify operational challenges including data limitations and contextual constraints. To support comparison across methodologies, partners also assessed the extent of alignment for each principle, which was then synthesized into qualitative categories of strong, moderate, weak, or none.

Responses were collected in written form to allow context-sensitive input and were analyzed to identify patterns and divergence across VCA domains. This process provided the empirical basis for the findings presented in this report. The survey text can be found in Annex 2.

The results of this alignment exercise will inform other work packages, including WP2 Assessing integrity and impacts of existing VCA, WP3 Strengthening key design features and governance frameworks, WP4 Scaling up, transition and exploitation, and WP5 Communication and dissemination. The following sections first summarize findings on the alignment of each assessment methodology individually (Sections 3.1 to 3.5) and then provide some cross-cutting insights (Section 3.6).

### 3.1 Net Zero Tracker (NZE)

#### 3.1.1 Purpose and Scope

The [Net Zero Tracker \(NZE\)](#) is a global monitoring framework developed by Oxford Net Zero, the Energy and Climate Intelligence Unit (ECIU), the Data-Driven EnviroLab (DDL), and NewClimate Institute. It assesses the status and integrity of net-zero targets and related mitigation pledges from both state and non-state actors, including countries, subnational regions, cities, and companies. The NZE's primary purpose is to show the climate action landscape by tracking climate commitments against robust set of indicators to evaluate whether net-zero commitments are credible, comprehensive, and aligned with the goals of the Paris Agreement. It uses integrity criteria in line with the UNFCCC Race to Zero campaign and the UN High-Level Expert Group (HLEG) on Net Zero Commitments.

The assessment methodology applies universally across sectors and regions, with findings published in the annual Net Zero Stocktake report, which compares progress against eight integrity criteria.

#### 3.1.2 Alignment with Integrity Principles

##### Integrated Accountability

**Strong alignment:** Integrated accountability is central to the NZE's mission to evaluate whether entities' net-zero pledges are transparent, measurable, and aligned with global standards. Some examples include key emission target percentages, target emissions scope coverage, coverage of different greenhouse gases, reporting and disclosure mechanisms (e.g., public progress reports), and accountability of leadership and governance structures.

**Integrity Threshold:** Integrated accountability principle is assessed against the eight UN HLEG and Race to Zero criteria, which include transparency, scope, progress reporting, inclusion of offsets, and plan comprehensiveness.

**Recent Updates:** While the indicator has not changed significantly since 2020, Stocktake reports have been updated annually to align with evolving UNFCCC and Race to Zero integrity frameworks. These are reported in the annual [Net Zero Stocktake](#) report.

**Challenges:** Expanding indicators requires significant funding and technical resources, as the NZT tracks over 4,000 entities worldwide. Each new indicator adds a major data-collection and maintenance effort.

#### Justice and Equity

**Weak alignment:** Justice and equity are recognized as important, but they are not deeply operationalized due to their contextual variation across actor types, such as countries, cities, and corporations. Conducting a robust assessment of these principles has at times polarized the community, particularly when expertise or resources are limited. One key indicator currently used is whether the entity's transition plan explicitly references equity or fairness, scored simply as yes or no.

**Integrity Threshold:** The NZT does not currently assess the depth or quality of equity considerations; instead, it records only whether an entity's transition plan makes any reference to equity, using a simple yes/no indicator.

**Recent Updates:** No significant methodological evolution. Integrating this principle remains challenging due to conceptual differences in applying justice frameworks across diverse entities.

**Challenges:** Limited data availability as NZT focuses solely on publicly available data and the need for specialized expertise continue to hinder the systematic inclusion of equity considerations. Fairness and equity have been politically contested since the early days of the UNFCCC. Achieving agreement on a balanced set of indicators across different actor groups that can apply meaningfully across diverse actor groups, from national governments to cities, companies, and community-based initiatives, constitutes a major challenge.

#### Environmental Protection

**No Alignment - Outside NZT's scope:** The framework's focus is strictly on GHG mitigation and net-zero integrity, excluding broader environmental considerations such as biodiversity, circular economy, or ecological restoration. No explicit indicators on environmental protection are included in the current assessment.

**Integrity Threshold:** No integrity thresholds are defined for this principle; the assessment of environmental protection currently falls outside of the scope of NZT.

**Recent updates:** Recent updates do not encompass Environmental Protection as an integrity consideration.

**Challenges:** While NZT acknowledges the importance of environmental protection, it intentionally limits its focus to maintain analytical clarity and manageability given resource constraints.

#### Low-Carbon and Resilient Transformation

**Strong alignment:** The NZT framework directly evaluates whether entities are taking steps toward structural transformation, rather than incremental emissions reductions. It assesses whether

organizations have developed robust transition plans, and whether those plans demonstrate clear intent and capacity to shift toward low-carbon, climate-resilient systems. Key indicators include: the existence and completeness of a transition plan; the quality and credibility of its core elements (such as short-term milestones, governance and oversight arrangements, and implementation pathways); and the treatment of offsets, including whether offset use is transparently justified, time-bound, and aligned with recognized integrity criteria. The NZT's emphasis on transition planning aligns strongly with this integrity principle because it evaluates not only outputs but the systems by which entities intend to recalibrate their operations, investments, and long-term strategies.

**Integrity Threshold:** Assessments are benchmarked against the UN HLEG recommendations and Race to Zero criteria, which define core features of credible transition planning: near-term emission cuts, phase-out of high-emitting assets, avoidance of misleading offsetting practices, and integration of just transition considerations. By grounding its evaluations in these external integrity benchmarks, the NZT ensures that its assessment of transformative ambition remains consistent with global norms and minimum standards.

**Recent Updates:** The set of indicators included in the NZT database has remained largely stable since 2020. However, the integrity criteria applied in the annual Stocktake reports have evolved substantially. These updates reflect revisions to the UNFCCC Race to Zero criteria and incorporate the recommendations of the UN High-Level Expert Group on Net-Zero Commitments (UN HLEG). As a result, while the underlying indicators have not changed, their interpretation, expected ambition level, and assessment benchmarks have been refined to align with emerging international guidance. This approach enables the NZT to maintain methodological continuity in its dataset while ensuring that the evaluation of transition plans keeps pace with evolving expectations for credible, Paris-aligned transformation.

**Challenges:** Adding further indicators or breaking down transition-plan elements into more granular components would require substantial funding and reliable access to self-reported data from thousands of entities. Given these constraints, there is a practical limit to how far the NZT can expand into non-climate considerations or increase methodological complexity while maintaining analytical clarity and manageable reporting processes.

## 3.2 Corporate Climate Responsibility Monitor (CCRM) Methodology

### 3.2.1 Purpose and Scope

The [Corporate Climate Responsibility Monitor \(CCRM\)](#), developed by NewClimate Institute in collaboration with Carbon Market Watch, assesses the transparency, ambition, integrity, and implementation of corporate climate strategies such as net-zero targets and emission reduction plans. Using detailed indicators on target-setting, disclosure, short-term delivery, and sectoral transition alignment, it distinguishes credible, integrity-focused climate action from greenwashing among large multinational corporations. The methodology has been applied for 4 editions of the

CCRM across multiple sectors, including agrifood, fashion, automotive, and technology, and evaluates companies operating internationally. The CCRM evaluates four main areas of corporate climate responsibility: tracking and disclosing emissions, setting emission reduction targets, implementing emissions reductions measures including key sectoral transitions, and taking responsibility for ongoing emissions and scaling durable removals. Both transparency (availability, extent, consistency and clarity of emissions, targets and transition plan disclosure) and integrity (quality, credibility, and comprehensiveness) are measured, with integrity ratings ranging from very poor to high based on alignment with 1.5°C-compatible decarbonization pathways and best available guidance on corporate climate action, including whether information reflects a timely implementation of the transition in line with sector-specific decarbonization pathways. Methodological updates are conducted regularly ensuring consistency with evolving scientific literature and climate standards.

### 3.2.2 Alignment with Integrity Principles

#### Integrated Accountability

**Strong alignment:** The methodology embeds accountability across multiple dimensions and strongly aligns with the integrity framework on target coherence (requires short-, medium-, and long-term targets consistent with 1.5°C sectoral pathways), transparency (evaluates transparency and integrity of emission disclosures, comprehensiveness and clarity of targets and emissions reduction measures) and historical reporting, monitoring and verification (assesses whether information disclosed is verifiable and sufficient for public understanding). Examples of indicators include level of GHG disclosure (e.g. frequency, breakdown by scope/source), targeted emission reductions at maximum 5-year intervals and their alignment with 1.5°C targets across the value chain (excluding offsetting or neutralization plans), and credibility of measures taken to address ongoing emissions by funding beyond value chain climate action, also known as climate contributions.

**Integrity Threshold:** Integrity performance requires company's disclosure, target-setting practices and climate measures to align with 1.5°C decarbonization trajectories, the latest scientific knowledge and guidance, and evidence of implementation across all core areas, measured on a scale of poor to high integrity. Targets should also be set with maximum 5-year intervals using terminology, scope and metrics that are directly comparable to other targets while measures should reflect a timely implementation of the transition and cover the entire company's activities.

**Recent Updates:** CCRM is updated annually to reflect the latest scientific literature and evolving recommendations on the topic. The methodology has evolved to include more of a focus on evaluating progress on actions needed to reduce emission than focusing exclusively on emission reduction targets. Regarding the evaluation of emission reduction target-setting practices, more emphasis is placed on short-term emission reduction targets, rather than longer-term headline 'net-zero' and other similar pledges. As literature on residual emissions and support for durable carbon dioxide removals has evolved, the methodology has shifted to reflect this. Companies are required to disclose information on how they will support durable carbon dioxide removals (CDR) to neutralize their residual emissions. Companies are now also evaluated on their progress towards reaching their

emission reduction and transition alignment targets.

**Challenges:** Assessing progress is difficult given the current GHG accounting system. Data gaps, inconsistent applications of guidance and flaws inherent to the most widely used GHG accounting approaches make assessing progress towards emission reduction targets extremely complicated. Assessing progress on transition alignment targets faces barriers due to lack of disclosure on key actions taken to progress on different sectoral transitions. Depending on the sector, benchmarks and clear guidance on short- and long-term action are missing, and so evaluating the integrity of targets (whether emission reduction targets or sectoral transition alignment targets) is complicated.

## Justice and Equity

**Weak alignment:** The CCRM does not directly assess justice or equity. It indirectly acknowledges differentiated responsibilities, emphasizing that large multinationals hold greater responsibility to decarbonize their value chains (especially upstream and downstream Scope 3 emissions) and support broader climate contributions. No explicit indicators or integrity thresholds are defined for this principle.

## Environmental Protection

**Moderate alignment:** Sustainable resource use is specifically addressed, while other dimensions of environmental protection are indirectly integrated within sectoral transition targets. For example, in the agrifood sector, targets for food waste and food loss reduction and deforestation phase-out are included, with the latter also relating to biodiversity conservation targets. For the automotive sector, an emissions intensity per kWh battery capacity indicator was introduced, which links directly to efficiency requirements. For the fashion sector, companies are rated on their implementation of circularity measures and commitments to reducing volumes of clothing production, and use of bioenergy in the supply chain is not considered to be an ambitious decarbonization measure due to its environmental impacts. Finally, for the tech sector companies are expected to set targets on the lifespan of their hardware and on the share of recycled materials used in hardware.

**Threshold for Integrity:** For a high integrity rating on each of these sectoral transitions, companies are expected to set targets which are in line with 1.5C compatible trajectories or benchmarks for the sector, according to available literature. The targets should cover the entire company's activities and reflect a timely implementation of the transition in line with sector-specific decarbonization pathways, including short- and long-term action.

**Recent Updates:** The latest version of the methodology introduced the evaluation of key sectoral transitions, while v4 of the methodology first introduced sectoral transition frameworks against which companies' climate transition plans were already assessed. The recent methodology introduced the specific circularity and efficiency alignment targets highlighted above along with the requirement to set targets on each transition indicator.

**Challenges:** For certain sectors, there is still more research needed to understand how to align circularity (especially reductions in raw material use) with decarbonization measures. There is also a

lack of benchmarks and disclosure from companies on targets related to efficiency and circularity.

### Low-Carbon and Resilient Transformation

**Strong conceptual alignment:** The CCRM explicitly assesses companies' roles in sector-wide transitions, innovation, and systemic change through transition alignment targets. Some key indicators focus on timely integration of decarbonization into business models and supply chains and assessing whether actions move beyond incremental measures toward systemic transformation.

**Integrity Threshold:** For a high integrity rating, companies are expected to set transition targets aligned with 1.5°C pathways or the latest science-based benchmark of the sector, encompassing all operations and demonstrating timely decarbonization in line with sector-specific pathways.

**Recent Updates:** The latest version of CCRM introduced the evaluation of key sectoral transitions and included an assessment of circularity and efficiency alignment targets.

**Challenges:** Limited sectoral benchmarks and company transparency restrict a more nuanced assessment of the companies' efforts towards transition or even transformation.

## 3.3 Carbon Credit Integrity Assessment Methodologies

### 3.3.1 Purpose and Scope

The Carbon Credit Integrity Assessment Framework, developed by Oeko-Institute under the ACHIEVE project and in collaboration with the Max-Planck Institute for Innovation and Competition, is a comprehensive methodology designed to evaluate the environmental integrity of carbon credit standards by defining benchmark requirements for both carbon credit supply and demand against which the standards' requirements measured. On the supply side, the framework analyses requirements regarding the environmental integrity of carbon credits and the governance of credit programs are assessed. On the demand side, the framework assesses requirements regarding the carbon credit use of companies in relation to their own emissions targets and climate strategies.

The framework is structured around criteria, aspects, and benchmark requirements, derived from analyses of leading initiatives and literature [e.g., Integrity Council for the Voluntary Carbon Market, Article 6 of the Paris Agreement, and European Carbon Removals and Carbon Farming Certification Framework (CRCF) Regulation], building on work presented in deliverable D1.1. Its purpose is to evaluate the stringency and credibility of emerging standards and carbon crediting mechanisms, and to define general quality benchmarks applicable across such standards and mechanisms globally.

### 3.3.2 Alignment with Integrity Principles

#### Integrated Accountability

**Strong alignment:** Integrated Accountability is centrally embedded in both supply and demand-side criteria, ensuring that carbon crediting practices are transparent, measurable, and consistent with Paris Agreement objectives. Some of the key indicators include that requirements contain the

existence of science-aligned near-term reduction targets (Scopes 1–3), transparent GHG accounting and emissions data by source and gas, use of robust, documented data for calculating reductions and removals, independent validation and third-party verification prior to credit issuance and governance and auditing standards for carbon crediting programs.

**Integrity Threshold:** Integrity is measured by alignment with benchmark requirements like Paris-aligned targets, third-party verification, or meeting minimum data transparency standards.

**Recent Changes:** The framework is still under development; refinements will continue through publication.

**Challenges:** No specific obstacles were identified; expanding the criteria set remains feasible given the modular structure of the framework.

### Justice and Equity

**Moderate alignment** – This assessment methodology shows moderate alignment with justice and equity, which are explicitly acknowledged but not the primary focus. This principle is incorporated through assessing the requirements regarding social and environmental safeguards, stakeholder engagement, and benefit-sharing mechanisms. Key indicators include the presence of requirements regarding beyond value-chain mitigation strategies that address ongoing emissions impacts, safeguard requirements covering labor rights (fair treatment, workplace safety, prohibition of forced or child labor), gender equality (equal pay, non-discrimination, prevention of violence), resettlement and inclusion of local stakeholders, public consultations for program revisions, and benefit-sharing with affected or local communities.

**Integrity Threshold:** Integrity equals full compliance with safeguards and benchmarks.

**Recent Changes:** Framework is still in the development and refinement phase.

**Challenges:** Lack of robust research and consistent reporting on benefit-sharing and equity impacts in carbon projects limits indicator development.

### Environmental Protection

**Moderate alignment:** Environmental protection is addressed through a dedicated safeguard criterion covering pollution, biodiversity, and resource impacts. Key indicators include energy use (projects must not negatively affect energy supply or contribute to air, soil, or water degradation) and ecological and natural resources (preventing habitat conversion, introduction of invasive species, biodiversity loss, and protecting high-conservation-value areas).

**Integrity Threshold:** Integrity is judged by adherence to these safeguards; violation of any (e.g., pollution, ecosystem harm, or land-use conversion) constitutes a failure.

**Recent Changes:** Framework is still in the development and refinement phase.

**Challenges:** Expanding beyond current criteria would exceed the framework's emission reduction and removal scope.

## Low-Carbon and Resilient Transformation

**Moderate alignment:** The methodology supports assessment of this principle in two supply-side criteria that relate to i) the relation of carbon credit projects with the organization's transition towards net zero and ii) host-country ambition in the context of carbon credit trading under Article 6 of the Paris Agreement. Key indicators include the presence of requirements regarding host-country ambition, the allocation of generated reductions or removals between sales and contributions to the host's NDC, whether host countries are on track to meet domestic mitigation goals, and exclusion of projects that use credits linked to fossil fuel expansion or increase fossil fuel extraction.

**Integrity Threshold:** The measure of integrity is the alignment with the benchmark requirements of the framework. For example, if standards allow the issuance of credits for fossil-based or non-transformative projects signals weaker integrity.

**Recent Changes:** Framework is still in the development and refinement phase.

**Challenges:** Carbon credits are inherently project-based, limiting their capacity to drive sector-wide policy shifts.

## 3.4 Integrity of Climate Action in Cities Assessment Method (ICACAM)

### 3.4.1 Purpose and Scope

The Integrity of Climate Action in Cities Assessment Method (ICACAM) is a conceptual and operational framework for assessing the integrity of climate action at the city level. This methodology adapts the ACHIEVE integrity framework to an urban governance context (see D3.3 and forthcoming D3.4), taking into account the cities' unique dynamics, such as complex governance structures, diverse stakeholders, socio-economic disparities, and resource limitations as well as data-availability and report obligations. ICACAM develops and co-adapts integrity criteria, converts them into measurable indicators, applies them across six city case studies, and evaluates and compares results to generate actionable insights for strengthening urban climate policies and implementation.

### 3.4.2 Alignment with Integrity Principles

#### Integrated Accountability

**Strong Alignment:** ICACAM operationalizes the principle of Integrated Accountability in the urban governance context, using indicators that mirror the integrity principles developed in this report. Target coherence is assessed through indicators such as the existence of clear, measurable, and time-bound emission-reduction targets; sector-specific targets; interim milestones; and supporting sub-targets (e.g., renewable heat share or electric-vehicle uptake). Policy and governance alignment is captured through the presence of official climate action plans consistent with the city's stated goals. Data reporting and transparency are evaluated through the publication of ongoing emission inventories and updates on action-plan implementation. Implementation and collaboration are

assessed through the involvement of non-state actors in decision-making processes, while public engagement and trust are gauged through municipal support for citizen-led climate and energy initiatives. Together, these indicators provide a coherent and representative basis for assessing Integrated Accountability in line with the integrity framework.

**Integrity Threshold:** The framework is not defined in quantitative terms; instead, it uses a qualitative, exploratory approach rather than fixed thresholds or pass/fail criteria. This reflects the current state of the field: although several publications touch on aspects of high-integrity climate action in cities, there could no studies be found that propose or document methodological shifts toward quantitative integrity assessment. As such, the developed framework remains qualitative, enabling assessment even where data or methodological precedents are limited.

**Recent Updates:** No changes have been documented yet, as ICACAM is still under development and being validated through the six case studies.

**Challenges:** Municipalities face significant capacity and data constraints, and limited resources hinder frequent reporting, monitoring, and verification, creating barriers to fully integrating accountability.

## Justice and Equity

**Moderate-to-strong Alignment:** Justice and equity are assessed through criteria derived from the overarching integrity framework and adapted to the specific social and governance realities of cities. These criteria—refined collaboratively within the research team and project consortium—are operationalized into indicators that capture two core dimensions. Equity & Inclusion examines whether diverse social groups (e.g., by gender, income, age, origin, or social status) are meaningfully represented in participatory processes. Just Transition & Vulnerability assesses whether climate action plans include concrete measures for vulnerable groups and avoid reinforcing existing inequalities. These indicators are applied across the urban case studies using available data, contextual interpretation, and—where feasible—stakeholder validation. This approach enables city-level assessments and cross-case comparisons, highlighting common challenges and context-specific opportunities to strengthen justice and equity in urban climate governance.

**Integrity Threshold:** No fixed metrics or thresholds have been defined. Equity is assessed contextually, reflecting the socio-economic diversity of cities and recognizing the limits of what our methodology can meaningfully evaluate.

**Challenges:** Assessing justice and equity is constrained by limited availability of disaggregated data on vulnerable groups, inconsistent reporting practices across cities, and varying institutional capacities. Many cities lack the tools or mandate to collect equity-relevant information, making it difficult to evaluate distributional impacts or the extent to which climate actions address vulnerabilities.

## Environmental Protection

**Weak alignment:** Environmental protection is acknowledged as relevant but remains largely peripheral within most city climate action plans, which often address ecological issues through separate environmental or resource-management frameworks. As a result, the absence of explicit environmental criteria in a climate plan does not necessarily indicate weak environmental performance. Because climate and environmental measures are frequently governed through different policy instruments, a systematic integrity assessment of environmental protection would require a dedicated methodological approach beyond the current scope. Within the existing framework, only limited elements can be considered—for example, whether climate action plans incorporate sustainable resource-use practices, such as circular economy measures (e.g., an indicator assessing whether measures take account of circular practices, e.g. the use of recycled building materials), or whether the climate action plan includes climate change adaptation measures or whether the city has adopted a separate adaptation plan.

**Integrity Threshold:** No explicit threshold is defined for this dimension. Environmental protection is not assessed independently in the current methodology because climate and environmental measures are often governed through separate policies, and their inclusion in a climate action plan is not a reliable indicator of practice. Evaluating environmental integrity would therefore require a broader methodological scope than the one applied here.

**Challenges:** Integrating biodiversity, ecosystems, and broader environmental dimensions into municipal climate plans remains difficult due to governance silos and limited urban data. However, not all of the fields of action mentioned here need to be addressed in a climate action plan, but there should be an exchange and coordination between the various actors at municipal level and climate protection measures should be evaluated in terms of their impact on environmental protection.

## Low-Carbon and Resilient Transformation

**Moderate alignment:** The methodology partly addresses low-carbon and resilient transformation, though it remains a secondary focus at the local level. It incorporates this principle through indicators of innovation, systemic change, and fossil fuel phase-out, while recognizing that transformative shifts are typically driven at national or regional levels. Key indicators include participation in research projects or pilots implementing innovative low-carbon technologies, as well as the existence of strategies or measures for phasing out natural gas or reducing fossil fuel use more broadly.

**Integrity Threshold:** Undefined but considered to have a “medium bar” for evaluation compared to other dimensions.

**Challenges:** Cities often lack the authority or resources to drive systemic decarbonization independently; reliance on national frameworks limits transformational potential.

## 3.5 CoAct Framework

### 3.5.1 Purpose and Scope

The [CoAct](#) Database is a tracking methodology developed by Radboud University, IDOS, and CATIE through the ACHIEVE and BioCAM4 projects. It assesses transnational cooperative climate initiatives (CCIs) that involve non-state and subnational actors, including businesses, cities, NGOs, and investors, working jointly to advance mitigation, adaptation, and nature protection.

CoAct supports VCA with integrity by tracking over 900 initiatives across sectors and regions. Among other measurements, CoAct, employs the Function–Output–Fit (FOF) indicator, which evaluates the alignment between an initiative’s stated purpose (function) and its observed outcomes (outputs), as a proxy for initiative effectiveness over time. The framework is further grounded in a 70+ indicator coding structure, covering actor composition, governance design, target-setting, SDG linkages, and annual performance. CoAct data supports academic research, policy advice, and transparency efforts (e.g., through the UNFCCC Global Climate Action portal) and a limited beta version is currently accessible through the Global Data Lab, an online platform. Data from CoACT and its predecessors have frequently applied to scientific analysis, including the assessment of the international orchestration of climate action (Chan et al. 2022) and climate adaptation action (Chan and Amling 2019); and geographic and performance patterns of non-state climate actions (Chan et al. 2018)

### 3.5.2 Alignment with Integrity Principles

#### Integrated Accountability

**Strong Alignment:** Integrated Accountability is central to CoAct, as it systematically captures whether voluntary climate initiatives set targets (e.g., existence, scope, and specificity of targets, locations of implementation); align with climate, as well as broader sustainability, goals; and have transparent governance arrangements (e.g., funding sources, secretariats, advisory boards, periodic monitoring and reporting mechanisms). CoAct also collects data on governance features (e.g., leadership and advisory roles, and member responsibilities, whether members are required to make individual commitments). Moreover, the earlier mentioned Function-Output-Fit (FOF) performance indicator offers a proxy for performance.

**Integrity threshold:** While integrated accountability related indicators feature large in CoAct, pass/fail threshold is not applied; rather, integrity is considered as a gradient. In some assessments, however, initiatives with a FOF score below 0.5, are flagged as ‘low performance’ (e.g. Chan et al. 2018; 2022).

**Recent updates:** CoAct has recently been updated to further embed integrated accountability into its methodology. These updates include additional indicators on net-zero target setting, carbon credit use, and expanded data on membership commitments.

**Challenges:** Notwithstanding its prominence, the further embedding of integrated accountability is somewhat constrained by limited disclosure and non-standardized reporting by cooperative

initiatives, as CoAct depends on the public availability of such data.

## Justice and Equity

**Moderate Alignment:** Justice and equity considerations are partly addressed in CoAct: the principle is clearly acknowledged, but current data capture remains limited and does not yet provide a comprehensive picture. Existing indicators capture aspects of diversity and inclusion primarily through information on actor types and representation (e.g., share of Global South actors, participation of Indigenous Peoples, proportion of civil society initiatives). They also reflect implementation geography (e.g., activities located in low-income or climate-vulnerable countries), and participation patterns (e.g., balance of actors across countries or sectors). In addition, linkages to relevant SDGs offer further, though still partial, insight into justice and equity dimensions (e.g., connections to gender equality, poverty reduction, or community resilience).

**Integrity threshold:** While justice and equity related indicators increasingly feature in CoAct, no threshold for integrity is defined. However, CoAct data allows for various analyses to, for instance, distinguish between more or less inclusive initiatives (e.g. initiatives that include the type of targeted actors among their leading partners; or, that include specific types of actors, e.g. Indigenous Peoples and local communities). Conversely, initiatives dominated by actors from the Global North or lacking equitable participation might signal equity and justice gaps.

**Recent Updates:** Recent updates have strengthened CoAct's attention to justice and equity through including coding for Indigenous Peoples and Local Communities, providing clearer insight into their roles and representation. In addition, improvements in representation mapping and governance-related data offer a more nuanced understanding of how different actors participate and how decision-making structures are organized.

**Challenges:** Constraints remain significant, particularly due to limited data on internal governance practices, equity safeguards, and benefit-sharing mechanisms. Much of the information needed to assess these dimensions is qualitative in nature and would require targeted interviews or surveys, which are not (yet) systematically integrated into CoAct's data collection.

## Environmental Protection

**Moderate alignment:** Environmental protection shows moderate to strong alignment in CoAct, as it is explicitly addressed through a subset of nature-based climate actions. Key indicators capture whether initiatives prioritize biodiversity, restoration, or nature protection (e.g., explicit references to conserving species or restoring degraded ecosystems), and whether they link to the Global Biodiversity Framework or relevant SDGs (e.g., SDG 14 or SDG 15). Additional dimensions include thematic areas such as land use, oceans, and water-related activities (e.g., coastal resilience projects or sustainable land-management initiatives), as well as environmental safeguards that point to ecosystem integrity or carbon-credit quality standards (e.g., requirements for high-quality, permanence-verified nature-based offsets).

**Integrity threshold:** While environmental protection is explicitly featured in CoAct, no formal

threshold for environmental integrity is defined. However, CoAct data enables analyses that distinguish between initiatives with stronger or weaker environmental integration. For example, initiatives that explicitly target biodiversity outcomes or reference the Global Biodiversity Framework may be understood as demonstrating higher environmental integrity, whereas initiatives lacking environmental consideration, or relying on ecologically harmful or poorly governed offsetting, may signal potential integrity gaps.

**Recent Updates:** Recent updates have strengthened CoAct's treatment of environmental protection through the launch of a dedicated subset on nature-based climate cooperative action, offering clearer insight into initiatives with explicit biodiversity or restoration components. The addition of more detailed spatial data for this subset enhances the ability to assess environmental impacts and the implication of nature-positive climate actions.

**Challenges:** Constraints remain substantial due to the limited availability of ecosystem impact data, as few initiatives disclose detailed environmental outcomes. Assessing spatially disaggregated impacts or tracking the application of environmental safeguards is also resource intensive, requiring data and methodologies that are not yet systematically integrated into CoAct's current framework.

### Low-Carbon and Resilient Transformation

**Weak Alignment:** Low-Carbon and Resilience Transformation is only partially addressed in the current framework: while it captures elements of transformative intent, systemic dimensions are still under development, and the depth of structural change is not yet assessed. Key indicators provide insight into the orientation and potential influence of initiatives, including their policy focus (e.g., whether they target mitigation, adaptation, or integrated climate-nature strategies) and the functions they perform (e.g., standard-setting, knowledge-sharing, capacity-building, or policy advocacy). Additional indicators consider the types of outputs produced (e.g., development of new standards, deployment of innovative technologies, or creation of cross-sector partnerships), the breadth of sectoral coverage (e.g., initiatives operating across energy, transport, land use, or industry), and whether carbon-credit-related activities align with transformative decarbonization pathways (e.g., credits that support long-term structural emission reductions rather than incremental or short-lived gains).

**Integrity threshold:** While transformative intent is captured in CoAct, no explicit threshold for transformative integrity is defined. However, CoAct data allows analyses that differentiate between initiatives with stronger or weaker transformative potential. For example, initiatives that emphasize long-term, systemic mitigation with clearly measurable outputs (e.g., sector-wide standards or technology deployment roadmaps) and limited reliance on offsetting may be interpreted as demonstrating higher transformative integrity. Conversely, initiatives with short-term objectives, weak output signals, or strong dependence on carbon offsets may indicate potential gaps in transformative ambition.

**Recent Updates:** Recent updates have strengthened CoAct's capacity to assess transformative ambition through the addition of variables capturing net-zero targets and indicators of carbon-credit quality, offering clearer insight into the credibility of decarbonization pathways. In addition,

refinements to the classification of initiatives driving sector-wide transformation provide a more nuanced understanding of how certain actions contribute to broader structural change.

**Challenges:** Challenges remain substantial due to limited data on the depth of implementation, supply-chain impacts, and the actual level of transformational ambition. Much of the information required to meaningfully evaluate these systemic dimensions is qualitative and would necessitate detailed reporting or targeted inquiries, which are not yet systematically incorporated into CoAct's data collection processes.

### 3.6 Alignment with integrity framework

This section evaluates the extent to which the five assessment methodologies—Net Zero Tracker (NZE), Corporate Climate Responsibility Monitor (CCRM), Carbon Credit Integrity Framework, Integrity of Climate Action in Cities Assessment Method (ICACAM), and CoAct—align with the ACHIEVE integrity framework. Table 7 summarizes the comparative strengths, limitations, and distinctive features of each methodology.

#### Integrated Accountability

All five frameworks demonstrate strong alignment with integrated accountability, though the operationalization varies by methodology. NZE and CCRM assesses integrated accountability by applying standardized criteria, structured reporting requirements, and performance-tracking measures aligned with 1.5°C pathways. The Carbon Credit Integrity Framework measures integrated accountability by assessing the level of rigor of monitoring, reporting and verification (MRV), use of third-party validation, and governance benchmarks across both supply and demand sides. ICACAM assesses integrated accountability in urban contexts, emphasizing target coherence, policy alignment, and participatory governance. CoAct tracks governance structures, targets, and performance outcomes of CCIs using the Function-Output-Fit metric and other indicators covering dimensions of integrated assessment. Across methodologies, integrated accountability is consistently operationalized as transparency, measurable targets, and verifiable implementation, although thresholds are better defined in global and corporate frameworks than in city- or cooperative-level assessments.

#### Justice and Equity

Alignment of assessment methodologies with the justice and equity principle is generally moderate to weak. NZE and CCRM have minimal operationalization, often limited to a binary indicator or implicit acknowledgment of differentiated responsibilities. CoAct and ICACAM demonstrate respectively moderate and moderate-to-high alignment by incorporating inclusion, vulnerability, and actor representation metrics. For instance, CoAct uses coding categories to account for Indigenous Peoples and local communities. The Carbon Credit Integrity Framework includes social safeguards, stakeholder engagement, and benefit-sharing mechanisms, representing the most systematic operationalization among the five methodologies. Challenges across frameworks for better aligning methodologies with this principle include limited data availability, context-specific definitions, and

the qualitative nature of equity indicators.

#### Environmental Protection

Environmental protection shows moderate alignment in some methodologies and weak alignment in others. CCRM integrates sectoral circularity and efficiency targets, while CoAct emphasizes biodiversity and nature-based climate actions. The Carbon Credit Integrity Framework incorporates environmental safeguards addressing biodiversity, pollution, and land-use impacts. ICACAM recognizes environmental considerations, primarily through circularity and resource-use indicators, but broader ecosystem protection remains peripheral. NZT explicitly excludes environmental protection from its scope. Methodological challenges include governance silos, limited data, and the need for specialized assessment tools to evaluate broader ecological impacts.

#### Low-Carbon and Resilient Transformation

The five assessment methodologies vary in addressing the low-carbon and resilient transformation principle. NZT and CCRM show strong alignment by evaluating transition plans, sectoral decarbonization, and systemic transformation pathways. The Carbon Credit Integrity Framework assesses the level of transformation through criteria that assess the relation of carbon credit projects with the organization's transition towards net zero and that evaluate host-country ambitions in the context of Article 6 of the Paris Agreement. ICACAM partially addresses transformation at the local level, emphasizing the evaluation of innovation and fossil-fuel phase-out while recognizing limited municipal leverage. CoAct provides only partial coverage, capturing transformative intent via functions, outputs, and carbon-credit alignment. Challenges include limited data on structural change, dependency on national frameworks for cities, and the qualitative nature of systemic indicators.

**Table 7** Framework and their alignment with various integrity principles

| Framework                                                               | Integrated Accountability                                             | Justice & Equity                                                        | Environmental Protection                                           | Low-Carbon & Resilient Transformation                          | Distinctive Strengths                                                       | Key Limitations                                                                                      |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Net Zero Tracker (NZT)</b>                                           | Strong – standardized integrity criteria, annual Stocktake            | Weak – single yes/no equity indicator                                   | None – out of scope                                                | Strong – transition plans, offsets treatment                   | Global scale, comparability, UN-aligned                                     | Resource-intensive; limited coverage of equity & environmental issues                                |
| <b>Corporate Climate Responsibility Monitor (CCRM)</b>                  | Strong – detailed disclosure, short- and long-term target alignment   | Weak – limited beyond differentiated responsibility                     | Moderate – sectoral circularity/efficiency targets                 | Strong – transition alignment targets, sectoral frameworks     | Sectoral depth, 1.5°C alignment, strong focus on implementation             | Limited justice focus: corporate disclosures can be inconsistent                                     |
| <b>Carbon Credit Integrity Framework</b>                                | Strong – MRV, third-party validation, governance benchmarks           | Moderate – social safeguards, stakeholder consultation, benefit-sharing | Moderate – biodiversity, pollution, land use safeguards            | Moderate – prevents fossil lock-in, supports host NDC ambition | Technical rigor; dual supply-demand perspective                             | Narrower credit-focused scope; many indicators still under refinement                                |
| <b>Integrity of Climate Action in Cities Assessment Method (ICACAM)</b> | Strong – targets, governance, reporting, public engagement            | Moderate-to-strong – inclusion & vulnerable groups indicators           | Weak – circularity included, environmental protection often siloed | Moderate – local innovation & phase-out indicators             | Local contextualization, stakeholder validation, cross-case learning        | Small-N case studies; thresholds not yet defined; municipal data/capacity constraints                |
| <b>CoAct (formerly N/C-CID)</b>                                         | Strong – governance, targets, monitoring, FOF maps delivery vs intent | Moderate – actor composition, geography, IPLC coding                    | Moderate – nature-based subset, SDG/GBF linkages                   | Weak – systemic depth proxy via outputs                        | Breadth & longitudinal performance alignment; explicit climate-nature links | Relies on public documents; limited qualitative depth on equity & safeguards without extra fieldwork |



## 4 Conclusion

Voluntary climate action can only reach its full potential when it is grounded in integrity. However, integrity is not a single rule or a fixed checklist. It is a coherent set of values that help shape credible, fair, and transformative climate action for the people and the planet. The integrity framework developed in ACHIEVE responds to the need of better understanding and strengthening the integrity of VCA. It brings together four key principles, i.e. integrated accountability, justice and equity, environmental protection, and low-carbon and resilient transformation, and translates them into practical dimensions that can guide both the design of VCA and their assessment.

In this report, we presented an integrity framework, which was developed in an iterative process that combined scientific evidence, stakeholder knowledge, and contextual reflection. Through literature reviews, consortium workshops, partner and stakeholder feedback, and test applications, the framework became clearer, more adaptable, and more relevant to real-world challenges. The result is a structure that is rigorous yet flexible. It allows users to look beyond emissions alone and pay attention to broader social and ecological implications, while also acknowledging that different VCAs operate under different contexts, constraints and expectations. In this way, the framework offers a shared foundation that VCA stakeholders can use to align their efforts and speak a common language of integrity.

Applying the integrity framework to the five VCA assessment methodologies used by ACHIEVE partners shows that many tools already align well with some principles. While none of them align fully with all four principles, this is also not the goal, given that the methodologies focus on different types of VCA and principles or elements of integrity. Most methodologies strongly integrate accountability, especially those focused on target setting, transparency, monitoring, and reporting. This is the most developed and operationalized principle of integrity across the four integrity principles. At the same time, justice and equity remain the least developed, which is due to limited data, conceptual differences, and the difficulty of applying equity concepts consistently across countries, sectors, and organizations. Environmental protection is addressed only partially, and usually only where it connects directly to a methodology's main purpose. Low-carbon and resilient transformation is also incorporated unevenly, with broader systemic change assessed only in methodologies designed to analyze sector-wide shifts or policy alignment.

Across all methodologies, several common challenges emerge. These include a lack of consistent data, limited capacity of actors to report indicators beyond emissions, the difficulty of assessing complex ideas such as equity or ecological integrity, and the mismatch between the holistic nature of integrity and the practical need for focused, feasible indicators. These tensions show a deeper challenge: while integrity seeks to embrace the full ethical, ecological, and social dimensions of VCA, assessing it inevitably requires simplifying and separating these interconnected aspects into measurable indicators, which can never fully capture their richness. Some of these challenges can be reduced by improving data systems, creating shared definitions, developing sector-specific guidance on integrity, and building capacity among practitioners. The





integrity framework can support this by offering a structured reference point that helps identify where gaps exist and how they can be addressed.

Looking ahead, the ACHIEVE project will take several steps to continue strengthening the assessment of VCA integrity and its achievement in practice. First, the integrity framework can be refined further so it is even better adapted to different contexts, including cities, companies, carbon markets, and community-based actions. ACHIEVE aims to work with stakeholders to refine the framework, explore practical applications, and identify what kinds of guidance or capacity-building may be most useful across different regions and sectors. The project will also present the framework in an accessible format that helps users navigate principles, dimensions, and example indicators, while making the trade-offs between scientific rigor, comprehensiveness, and usability more transparent. In addition, the framework may be applied or discussed alongside other assessment methodologies to understand how integrity is evaluated in different contexts and to explore opportunities for greater alignment across the VCA landscape. This includes engagement with actors in the Global South, where integrity concerns frequently intersect with questions of justice, vulnerability, and local knowledge, as well as dialogue with policymakers in the EU on how integrity assessments can inform climate policies, and actions. By continuing this work, ACHIEVE can help ensure that VCA becomes more credible, fair, environmentally sound, and transformative, that is, strengthening its integrity.

## Acknowledgements

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# ANNEX

## Annex 1

survey on VCA integrity, based on older version of integrity principles.

### Introduction

This research focuses on the integrity of voluntary climate actions taken by non-state actors (e.g., businesses, financial institutions, civil society, cities). As voluntary commitments grow, so does the need to ensure they genuinely contribute to climate goals. We aim to explore key dimensions of integrity: environmental impacts, fairness and equity, economic optimization, (science-based) urgency of climate action, inclusiveness, and accountability.

This survey will take about 10-15 minutes. Your responses are invaluable, and data will be kept confidential in compliance with GDPR. If you have any questions, feel free to contact Kaustubh Thapa (kaustubh.thapa@ru.nl) at Radboud University or visit our project site: <https://www.achieveproject.eu/>.

### 1. Background Information

#### 1.1 Alliance Membership

Please select the Alliance for Climate Action (ACA) you belong to:

- |                                                                            |                                                                      |
|----------------------------------------------------------------------------|----------------------------------------------------------------------|
| <input type="checkbox"/> Alianza para la Acción Climática Argentina (ACAA) | <input type="checkbox"/> ACA Mexico                                  |
| <input type="checkbox"/> Better Futures Australia                          | <input type="checkbox"/> ACA South Africa                            |
| <input type="checkbox"/> ACA Brazil                                        | <input type="checkbox"/> America is All In (AIAI)                    |
| <input type="checkbox"/> ACA Chile                                         | <input type="checkbox"/> Vietnam Coalition for Climate Action (VCCA) |
| <input type="checkbox"/> Japan Climate Initiative (JCA)                    | <input type="checkbox"/> Other: [Open Text]                          |

#### 1.2 Organizational Type

Please select the sector you work for (select all that apply):

- |                                                         |                                                     |
|---------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Business – National            | <input type="checkbox"/> NGO/Citizen Movement       |
| <input type="checkbox"/> Business – Multinational       | <input type="checkbox"/> Subnational Government     |
| <input type="checkbox"/> Financial Organization         | <input type="checkbox"/> International Organization |
| <input type="checkbox"/> Academic/Research Organization | <input type="checkbox"/> Other: [Open Text]         |

#### 1.3 Organization Size

How many employees are in your organization?

- |                                |                                 |
|--------------------------------|---------------------------------|
| <input type="checkbox"/> 1-10  | <input type="checkbox"/> 50-249 |
| <input type="checkbox"/> 11-49 | <input type="checkbox"/> 250+   |

#### 1.4 What is your role in climate action

What is your role in your organization's climate action. Scale of 0-5, where 0 = Strongly disagree and 5 = Strongly agree.

- I have influence over designing climate action activities in my organization.  
[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- I have influence over decision-making for climate action in my organization.  
[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
- I have influence over implementing climate action in my organization.  
[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5





- I have influence over setting or changing policy priorities for climate action in my organization.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- I have little or no influence over climate action in my organization.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

## 2. Integrity Dimensions in Climate Action

Below are definitions of the integrity dimensions to help guide your responses:

- **Environmental Integrity:** Conserving, restoring, and protecting biodiversity, natural resources and ecosystems; Preventing and/or mitigating environmental pollution.
- **Fairness and Equity:** Equitable distribution of responsibilities and benefits among all stakeholders.
- **Economic optimization:** Aligning economic activities within environmental limits to foster climate resilience.
- **Science-based urgency of climate action:** Setting science-based targets and deadlines for climate action in line with the Paris Agreement goals to limit global warming.
- **Inclusiveness:** Ensuring fair and comprehensive stakeholder engagement in climate action decisions.
- **Accountability and Transparency:** Clear goal setting, tracking, and reporting to ensure accountability.

### 2.1 Pairwise Prioritization of Integrity Dimensions

For each pair below, select the dimension you consider more critical to prioritize, especially considering the urgency of climate challenges.

#### 2.1.1 Environmental Integrity vs. Fairness and Equity

- Prioritize conserving, restoring, and protecting biodiversity and natural resources, even if responsibilities and benefits aren't evenly distributed among stakeholders.
- Ensure that responsibilities and benefits are fairly distributed among all stakeholders, even if it slightly delays conservation and environmental protection efforts.

#### 2.1.2 Environmental Integrity vs. Economic Optimization

- Maximize conservation and protection of ecosystems immediately, even if it requires significant investment.
- Optimize resource use within environmental limits to foster climate resilience, even if some negative environmental impacts ensue.

#### 2.1.3 Environmental Integrity vs. Science-Based Urgency

- Focus on long-term conservation and ecosystem protection, even if immediate climate targets based on science are not timely met.
- Set ambitious, science-based climate targets to align with urgent global climate goals, even if achieving these targets compromises some conservation and ecosystem protection activities.

#### 2.1.4 Environmental Integrity vs. Inclusiveness

- Prioritize conserving and protecting biodiversity and natural resources, even if inclusiveness in decision-making is limited.
- Ensure that all stakeholders are involved in decision-making, even if it slows conservation and environmental protection efforts.

#### 2.1.5 Environmental Integrity vs. Accountability and Transparency

- Prioritize immediate environmental conservation and protection, even if reporting and transparency standards are less rigorous.





- Maintain robust accountability and clear reporting, even if it slightly slows down environmental protection efforts.

#### 2.1.6 Fairness and Equity vs. Economic Optimization

- Ensure fair distribution of benefits and responsibilities among stakeholders, even if it requires more resources and time.
- Optimize resources to align economic activities within environmental limits, even if benefits are not evenly distributed.

#### 2.1.7 Fairness and Equity vs. Science-Based Urgency

- Prioritize fair distribution of climate responsibilities and benefits, even if it means slightly delaying science-based targets.
- Set science-based, urgent climate targets, even if it limits the ability to achieve fair distribution of benefits and responsibilities.

#### 2.1.8 Fairness and Equity vs. Inclusiveness

- Ensure fair distribution of responsibilities and benefits among all stakeholders, even if some voices are less involved in decision-making.
- Focus on inclusive decision-making to ensure all stakeholders have a voice, even if it impacts how responsibilities and benefits are distributed.

#### 2.1.9 Fairness and Equity vs. Accountability and Transparency

- Ensure fair distribution of responsibilities and benefits among stakeholders, even if reporting is less detailed to speed up progress.
- Prioritize clear and transparent reporting, even if it impacts equitable distribution and slightly slows down implementation.

#### 2.1.10 Economic Optimization vs. Science-Based Urgency

- Optimize resource use and economic efficiency, even if science-based targets are achieved more gradually.
- Set and achieve ambitious, science-based climate targets urgently, even if it increases resource use and costs.

#### 2.1.11 Economic Optimization vs. Inclusiveness

- Prioritize efficient resource use to ensure economic feasibility and sustainability, even if some stakeholder engagement is limited.
- Involve all stakeholders equally in decision-making, even if it requires greater resources and slows the initiative.

#### 2.1.12 Economic Optimization vs. Accountability and Transparency

- Focus on resource-efficient action that aligns with urgent climate goals, even if reporting and transparency are minimized.
- Prioritize clear accountability and transparency, even if it increases costs and slows action.

#### 2.1.13 Science-Based Urgency vs. Inclusiveness

- Set urgent, science-based targets for climate action, even if it limits full stakeholder engagement in decision-making.
- Ensure inclusive decision-making, engaging all voices, even if it slightly delays achieving science-based targets.

#### 2.1.14 Science-Based Urgency vs. Accountability and Transparency

- Prioritize ambitious, science-based targets aligned with climate urgency, even if





transparency and reporting are less detailed.

- Maintain full accountability and transparency in climate action, even if it requires a more gradual approach to science-based targets.

#### 2.1.15 Inclusiveness vs. Accountability and Transparency

- Ensure inclusive decision-making, engaging all voices, even if it slightly reduces transparency due to urgent timeframes.
- Prioritize clear and transparent reporting, even if not all stakeholders are deeply involved due to time constraints.

#### 2.2 Additional/other integrity dimensions [Open Question]

Are there additional integrity dimensions you believe are important?

[Open Text]

### 3. Perception of Integrity in voluntary climate action

Please rate how well you think voluntary climate action upholds the integrity dimensions. Scale of 0-5, where 0 = Strongly disagree and 5 = Strongly agree.

#### 3.1 Voluntary climate action

- sufficiently prioritize emission reductions and environmental conservation, even when economic trade-offs are required.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently ensure fair distribution of responsibilities and benefits.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently promote efficient use of resources.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently set science-based, measurable targets with clear deadlines.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently engage diverse voices.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently maintain clear reporting and responsiveness to stakeholders.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

#### 3.2 Voluntary climate action led by Non-Governmental Organizations (NGOs)

- sufficiently prioritize emission reductions and environmental conservation, even when economic trade-offs are required.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently ensure fair distribution of responsibilities and benefits.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently promote efficient use of resources.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently set science-based, measurable targets with clear deadlines.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently engage diverse voices.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently maintain clear reporting and responsiveness to stakeholders.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

#### 3.3 Voluntary climate action led by International Organizations





- sufficiently prioritize emission reductions and environmental conservation, even when economic trade-offs are required.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently ensure fair distribution of responsibilities and benefits.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently promote efficient use of resources.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently set science-based, measurable targets with clear deadlines.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently engage diverse voices.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently maintain clear reporting and responsiveness to stakeholders.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

### 3.4 Voluntary climate action led by Local Governments and Communities

- sufficiently prioritize emission reductions and environmental conservation, even when economic trade-offs are required.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently ensure fair distribution of responsibilities and benefits.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently promote efficient use of resources.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently set science-based, measurable targets with clear deadlines.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently engage diverse voices.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- sufficiently maintain clear reporting and responsiveness to stakeholders.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

## 4. Prioritization and Tracking in Your Organization

### 4.1 How much does your organization prioritize each integrity dimension in climate action?

Scale of 0-5, where 0 = Strongly disagree and 5 = Strongly agree.

- My organization sufficiently prioritizes environmental integrity of climate action.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- My organization sufficiently prioritizes fairness and equity in climate action.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- My organization sufficiently prioritizes economic optimization of climate action.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- My organization sufficiently prioritizes goal-oriented of climate action.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- My organization sufficiently prioritizes inclusiveness in climate action

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

- My organization sufficiently prioritizes accountability and transparency of climate action.

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

### 4.2 Tracking Indicators for Integrity Dimensions





Please provide examples of qualitative or quantitative indicators your organization uses to track each dimension. [Open Text]

- Indicators for environmental integrity:
- Indicators for fairness and equity:
- Indicators for economic optimization:
- Indicators for science-based urgency of climate action:
- Indicators for inclusiveness:
- Indicators for accountability and transparency:
- Indicators for other dimensions of integrity:

## 5. Organizational Climate Actions and Challenges

### 5.1 Types of Climate Actions

What types of climate actions is your organization currently engaged in? (Select all that apply)

- Emission Reduction
- Renewable Energy Transition
- Biodiversity Conservation
- Climate Adaptation
- Community Engagement and Awareness
- Sustainable Supply Chain Management
- Other: [Open Text]

### 5.2 Challenges in Implementing Integrity Dimensions

What challenges does your organization face in ensuring integrity in climate action? Select all that apply:

#### 5.2.1 Accountability and Transparency

- Lack of clear accountability and transparency in setting goals, tracking, and reporting progress
- Difficulty maintaining consistent transparency with stakeholders and the public
- Insufficient mechanisms/capacity for monitoring and verifying climate action impact

#### 5.2.2 Economic Optimization

- Conflicts between economic optimization and environmental protection priorities
- Balancing cost-effectiveness with sustainability and climate resilience
- Limited financial resources to implement climate initiatives at scale

#### 5.2.3 Inclusiveness

- Limited inclusiveness and engagement of all relevant stakeholders
- Challenges in securing participation from marginalized or underrepresented groups
- Difficulty balancing efficient decision-making with broad stakeholder involvement

#### 5.2.4 Science-Based Urgency

- Difficulty aligning climate actions with science-based urgency and setting measurable targets
- Challenges in meeting Paris Agreement-aligned targets within the organization's capacity
- Limited access to data and resources needed to set and achieve science-based goals

#### 5.2.5 Fairness and Equity

- Challenges in ensuring fair distribution of responsibilities and benefits among





stakeholders

- Difficulty incorporating fairness considerations without delaying climate action
- Balancing equity in climate actions with competing organizational priorities

#### 5.2.6 Environmental Integrity

- Resource constraints in balancing environmental integrity with other organizational goals
- Difficulty integrating biodiversity conservation with other climate action targets
- Balancing immediate environmental impact with long-term ecosystem restoration goals

#### 5.2.7 Other

[Open Text]

## 6. Closing

Thank you for your valuable input. If you would like to stay involved in this research through future surveys, workshops, or other updates, please provide your contact information below. Your responses will remain confidential.

- Name: [Open Text]
- Organization: [Open Text]
- Email Address: [Open Text]

## Annex 2

### Survey questionnaire examining how assessment methodologies align with integrity principles

The following survey was sent to ACHIEVE partners to self-assess how their integrity assessment methodologies align with the ACHIEVE integrity framework.

#### Part 1 - Explanation the methodology

1a Description of the methodology: please explain your assessment methodology; (i) what is the name of methodology; (ii) what organization(s) is/are involved in developing the methodology; (iii) what is the purpose of the methodology; (iv) what (non-state/subnational) actors are being assessed; (v) what sectors and/or regions has your methodology been applied to; (vi) briefly describe the methodology.

1b Links to methodology -please add (a) link(s) to more a detailed methodology description

1c Links to key studies/applications- please add (a) link(s) to key studies/applications for more information

#### Part 2 - Alignment with High Integrity Principles

We developed a basic integrity principles framework for voluntary climate action (see Figure).

In this framework, principles are the overarching values that define what high-integrity voluntary climate action should strive for. They express the big ideas that guide how integrity is understood: Integrated Accountability, Justice and Equity, Environmental Protection, and Low Carbon & Resilient Transformation.

Dimensions, shown underneath each principle, are more concrete areas of focus that illustrate how a principle can be interpreted or assessed in practice. For example, Target Coherence and Public





Engagement illustrate aspects of Integrated Accountability.

Importantly, the principles and dimensions are not necessarily exclusive or exhaustive. There is room for interpretation and overlap between them. In particular, the dimensions are not meant to be comprehensive checklists; rather, they are examples to help you think through what each principle might encompass in different contexts.

In the following section, we provide further explanations of each principle and include questions that relate to them.

### ***Part 2.1 Integrated accountability***

The principle of Integrated Accountability ensures that VCAs are not only well-intentioned but also credible, measurable, and aligned with broader climate goals. This principle can be illustrated through dimensions such as Target Coherence, ensuring clear, time-bound, and actionable commitments; Policy & Governance, promoting alignment with broader policy frameworks and clear institutional responsibilities; and Data, Reporting & Transparency, requiring rigorous standards for reporting and impact assessment. It also includes aspects like Monitoring & Verification to track progress through systematic oversight and independent checks, and Compliance & Enforcement to ensure commitments are met and shortcomings are addressed. Together, these dimensions provide examples of how accountability can be embedded to translate climate pledges into real-world outcomes.

2.1.a To which extent does your methodology reflect this principle? Please briefly describe how (and to what extent) your current methodology incorporates or aligns with the idea of Integrated Accountability. You can reflect on whether the principle is already central to your approach or only partly addressed, and where it might be less relevant.

2.1.b Which indicators do you use that help you assess integrated accountability? You can give example indicators that you use in the methodology. Please aim to give a comprehensive or representative overview, though no further detail is necessary.

2.1.c What is your threshold for integrity? Regarding your featured indicators, do they have a 'threshold' for (more or less) integrity? If so, what is the threshold that you apply? Under which circumstance would your assessment indicate failure of meeting integrity?

2.1.d What changes have been implemented in recent (2-3) years that entail more comprehensively addressing integrity regarding this principle? Please describe any updates, improvements, or refinements in your methodology over the past 2–3 years that have strengthened how Integrated Accountability is addressed.

2.1.e What does it take to include more/more comprehensive/better indicators on this principle? Please reflect on what would help or hinder integrating indicators on Integrated Accountability in your methodology. For example, are there resource barriers, data gaps, organizational constraints, or opportunities you see for improvement?

### ***Part 2.2 Justice and Equity***

The principle of Justice and Equity ensures that VCAs are designed and implemented in ways that are fair, inclusive, and attentive to historical and structural inequalities. This principle can be illustrated through dimensions such as Equity and Inclusion, promoting balanced representation across regions, generations, and social groups; Equitable Support and Capacity, ensuring fair access to resources, knowledge, and





capabilities—including equitable financing and technical support—to enable meaningful participation; and Inclusive Decision-Making, emphasizing participatory processes that respect rights and amplify marginalized voices. It also includes aspects like Just Transition, recognizing differentiated responsibilities and safeguarding the needs of vulnerable groups, and Differentiated Responsibilities, acknowledging both past contributions to climate change and present capacities and roles, to avoid perpetuating inequity.

2.2.a To which extent does your methodology reflect this principle? Please briefly describe how (and to what extent) your current methodology incorporates or aligns with the idea of Justice and Equity. You can reflect on whether the principle is already central to your approach or only partly addressed, and where it might be less relevant.

2.2.b Which indicators do you use that help you assess Justice and Equity? You can give example indicators that you use in the methodology. Please aim to give a comprehensive or representative overview, though no further detail is necessary.

2.2.c What is your threshold for integrity? Regarding your featured indicators, do they have a ‘threshold’ for (more or less) integrity? If so, what is the threshold that you apply? Under which circumstance would your assessment indicate failure of meeting integrity?

2.2.d What changes have been implemented in recent (2-3) years that entail more comprehensively addressing integrity regarding this principle? 2-3 years that have strengthened how Justice and Equity is addressed.

2.2.e What does it take to include more/more comprehensive/better indicators on this principle? Please reflect on what would help or hinder integrating indicators on Justice and Equity in your methodology. For example, are there resource barriers, data gaps, organizational constraints, or opportunities you see for improvement?

### **Part 2.4 Environmental protection**

The Environmental Protection principle ensures that VCAs go beyond reducing greenhouse gas emissions to actively safeguard and enhance ecosystems, biodiversity, and natural resources.

This principle can be illustrated through dimensions such as Ecosystem Protection & Restoration, emphasizing actions that halt habitat degradation, restore ecological functions, and rebuild resilient landscapes; Biodiversity Conservation, focusing on maintaining and enhancing the diversity of species and genetic resources within and across ecosystems; Systemic Environmental Integrity, ensuring initiatives avoid unintended environmental harm and strengthen resilience to climate extremes; Integrated Practices, combining mitigation and adaptation measures with approaches that protect and enhance the environment; and Sustainable Resource Use, encouraging circular practices and efficient management of materials and natural resources.

2.3.a To which extent does your methodology reflect this principle? Please briefly describe how (and to what extent) your current methodology incorporates or aligns with the idea of Environmental Protection. You can reflect on whether the principle is already central to your approach or only partly addressed, and where it might be less relevant.

2.3.b Which indicators do you use that help you assess Environmental Protection? You can give example indicators that you use in the methodology. Please aim to give a comprehensive or representative





overview, though no further detail is necessary.

2.3.c What is your threshold for integrity? Regarding your featured indicators, do they have a 'threshold' for (more or less) integrity? If so, what is the threshold that you apply? Under which circumstance would your assessment indicate failure of meeting integrity?

2.3.d What changes have been implemented in recent (2-3) years that entail more comprehensively addressing integrity regarding this principle? Please describe any updates, improvements, or refinements in your methodology over the past 2–3 years that have strengthened how Environmental Protection is addressed.

2.3.e What does it take to include more/more comprehensive/better indicators on this principle? Please reflect on what would help or hinder integrating indicators on Environmental Protection in your methodology. For example, are there resource barriers, data gaps, organizational constraints, or opportunities you see for improvement?

### **Part 2.4 Low-carbon and resilient transformation**

The principle of Low Carbon and Resilient Transformation calls for transformative change rather than business-as-usual incremental adjustments, emphasizing systemic, structural, and enduring shifts in political, economic, and social systems. These shifts aim to realign society toward equitable, ecologically regenerative, and climate-resilient futures. This principle can be illustrated through dimensions such as Supporting ambitious policies and regulatory change, e.g. through lobbying for higher environmental standards; Dealing with trade-offs, navigating tensions between short-term needs and long-term sustainability transformations; Setting Standards and Norms that are consistent with higher ambition; Support Sector-wide Transitions, catalyzing change within and across industries and supply chains; and Foster Innovation and Systemic Change, enabling new technologies, business models, and institutional arrangements that embed resilience and decarbonization at scale.

2.4.a To which extent does your methodology reflect this principle? Please briefly describe how (and to what extent) your current methodology incorporates or aligns with the idea of Low-Carbon and Resilient Transformation. You can reflect on whether the principle is already central to your approach or only partly addressed, and where it might be less relevant.

2.4.b Which indicators do you use that help you assess Low-Carbon and Resilient Transformation? You can give example indicators that you use in the methodology. Please aim to give a comprehensive or representative overview, though no further detail is necessary.

2.4.c What is your threshold for integrity? Regarding your featured indicators, do they have a 'threshold' for (more or less) integrity? If so, what is the threshold that you apply? Under which circumstance would your assessment indicate failure of meeting integrity?

2.4.d What changes have been implemented in recent (2-3) years that entail more comprehensively addressing integrity regarding this principle? Please describe any updates, improvements, or refinements in your methodology over the past 2–3 years that have strengthened how Low-Carbon and Resilient Transformation is addressed.

2.4.e What does it take to include more/more comprehensive/better indicators on this principle? Please reflect on what would help or hinder integrating indicators on Low-Carbon and Resilient Transformation in your methodology. For example, are there resource barriers, data gaps, organizational constraints, or





opportunities you see for improvement?

### **Part 3 Final reflections**

3a. Are there any elements of your methodology that are relevant for integrity but not covered by one of the four principles listed above?

3b. How does this methodology stand out/differ from other/similar methodologies from other researchers?

3c. What can/will be included to make your assessment method more inclusive of integrity aspects?

3d. To which extent have methodological changes implemented in the last 2-3 years been a response to greater demands for integrity? e.g. in direct or indirect response to the UN High-Level Expert Group (HLEG) 's Integrity Matters report, UNFCCC's Recognition and Accountability. Framework (RAF), or (other) societal demands.

3e. To which are planned methodological changes responding to greater demands for integrity? e.g. in direct or indirect response to the UN High-Level Expert Group (HLEG) 's Integrity Matters report, UNFCCC's Recognition and Accountability. Framework (RAF), or (other) societal demands.





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