

## RESEARCH ARTICLE

# Information for climate finance accountability regimes: Proposed framework and case study of the Green Climate Fund

Rishi Basak  | Sylvia Karlsson-Vinkhuyzen | Katrien J. A. M. Termeer

Wageningen University & Research,  
Wageningen, The Netherlands

## Correspondence

Rishi Basak, Wageningen University & Research, P.O. Box 8130, 6700 EW Wageningen, The Netherlands.  
Email: [rishi.basak1@gmail.com](mailto:rishi.basak1@gmail.com)

## Abstract

This paper addresses the role performance information plays in the accountability regimes of international climate change financing institutions and how this can be improved. It has been argued that the quality of the performance information of projects financed by public and private sources, as well as how that information is used, influences decisions made by the various actors in the accountability regimes, including the ability to hold actors to account. A theory-based framework is developed to analyze and enable the improvement of the information produced and used in climate finance accountability regimes. The framework is tested by applying it to the Green Climate Fund via document analysis and key informant interviews. With the help of the framework, gaps are identified, and improvements are suggested so that account holders and account givers can better fulfill their respective roles in the given accountability regime.

## KEYWORDS

accountability, accountability information assessment framework, accountability regime, civil society engagement, climate finance, Green Climate Fund, performance information, performance measurement

## 1 | INTRODUCTION

Climate change financing is necessary to help developing countries mitigate greenhouse gases and adapt to climate change. The specific requirements and particular circumstances of the Global South concerning funding are widely recognized, including in the Solidarity and Just Transition Silesia Declaration at the United Nations climate conference in Katowice in 2018 (UNFCCC, 2018). To meet the financial needs of developing countries, resources are being mobilized by donors and put toward large multilateral funds, such as the Green Climate Fund (GCF). In turn, these multilateral funds allocate the resources to projects executed by entities such as

regional development banks and United Nations organizations, who often hire third-party implementers accountable for results. This delegation chain forms a set of accountability regimes, or accountability “webs” (Romzek, 2015). For instance, there is evidence that financial instruments, such as green bonds, are being issued in part to finance climate action and for the achievement of Nationally Determined Contributions (Tolliver et al., 2020). Such financial instruments are associated with accountability webs and have post-issuance reporting requirements (environmental and otherwise) to satisfy actors in capital markets (Ng, 2018). Reporting on performance is an essential component of accountability (Gomes, 2017).

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. Public Administration and Development published by John Wiley & Sons Ltd.

Throughout this paper, the term accountability will refer to: “[A] relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences” (Bovens, 2007, p. 450). Accountability regimes are the actors involved in giving account and holding others to account, combined with the management systems in place to foster accountability. Each set of account giver and account holder (and associated management systems) therefore represents an individual accountability regime (Wolfe, 2015). In this paper, each accountability regime is approached as a standalone “principal-agent” relationship (Basak & van der Werf, 2019; Brett, 1993).

As previous research has shown (see, for example, Goldsmith and Basak (2001)), a key impediment to resolving the principal-agent problem in accountability relationships is the lack of appropriate performance information for accountability purposes. Asymmetric information exists whenever the agent possesses information not available to the principal (Grossman & Hart, 1983; Sappington, 1991). Asymmetric information increases the likelihood of the agent not providing the maximum level of effort toward project implementation and risks reducing project performance (Grossman & Hart, 1983; Sappington, 1991; Spence & Zeckhauser, 1971). Improving performance is one of the major expectations of a diverse set of account holders and a reason for the rising importance of accountability in “good governance” (Dubnick, 1998). Information asymmetry also invites the embellishment of environmental performance and what some have called “greenwashing” (Laufer, 2003; Milne & Patten, 2002) and can reduce the amount of capital that can be raised (El Ghoul et al., 2011, 2017; Meyer et al., 2009).

A growing body of literature recognizes that the quality of the information for projects financed by public and private sources, as well as how this information is used, have a bearing on the decisions made by the various actors involved in accountability regimes (Adam & Gunning, 2002; Holzapfel, 2016; McGillivray, 2003). For instance, deciding whether to penalize or reward an agent for their performance will be influenced by the quality of information (Basak & van der Werf, 2019). The reduction of informational problems in political accountability relationships can reduce corruption (Lederman et al., 2005). However, although performance information is acknowledged as fundamental to accountability regimes, few authors guide the specific information requirements for a properly functioning accountability regime (Boyne et al., 2002; Connolly & Hyndman, 2004). This lack of guidance in the literature is the gap that this paper attempts to fill. We do so by developing a theory-based framework to systematically determine the information requirements and how such information is best used for account giving and account holding purposes in climate finance accountability regimes. The research question addressed in this paper is: What performance information should be produced, and how should it be used to strengthen the accountability regimes of international climate change financing institutions?

The remainder of the paper is organized as follows: the next section outlines the accountability information framework for international climate change financing and how it was developed. Then, in Section 3, the framework is applied to the GCF. This is followed by a discussion section, where considerations are raised regarding the framework's improvement and application. Finally, conclusions are provided, and areas for further research are suggested.

## 2 | ASSESSMENT FRAMEWORK

The framework described in this section is an assessment tool to systematically determine the information requirements in accountability regimes and how such information is best used for account giving and account holding purposes. The literature on the role of information in accountability regimes was reviewed to identify framework components and evaluative criteria. The literature review was undertaken as a developmental review (Templier & Paré, 2015). As such, the review was iterative, with an initially broad search that included empirical and conceptual studies, which was then refined based on evidence from the initial set of papers found. The initial search covered several streams in different disciplines (e.g., accounting, management, organizational behavior), emphasizing the public administration literature. Public administration literature is particularly relevant for this paper as most climate finance is managed by public sector organizations (UNFCCC Standing Committee on Finance, 2018). The review was not time-bound to the most recent articles, as the literature from the last few years is scant on the topic. The emphasis was on peer-reviewed journal articles, but other sources (e.g., book chapters) were included when relevant. The main search terms were “accountability and information,” “information for account holding,” as well as “performance information and accountability.” The search was limited to English language literature and was undertaken via the Wageningen University online library, which includes the Web of Science and Scopus databases.

The literature review helped identify the three main components of the framework: the nature of accountability relationships; the timeline of accountability, and several evaluative criteria for accountability information. Once initial criteria were identified and defined, these were evaluated to ensure they added analytical value to the framework and that criteria were distinct and not overlapping. This evaluation was undertaken iteratively by the authors with expert consultation. The criteria were then tested by applying them to a case study through document analysis to see if the criteria captured key aspects of accountability information. This resulted in merging certain criteria and clustering under two categories: attributes of information and attributes of the performance information utilization process. The components of the developed assessment tool, called the Accountability Information Assessment Framework (AIAF), are described in further detail below.

## 2.1 | Component 1: Nature of the accountability relationship

The nature of the relationship between the main actors in a given accountability regime, that is, the account giver (agent) and account holder (principal), plays a crucial role in determining the information flow between them (Bovens, 2007). Accountability relationships can be of a vertical, horizontal, diagonal and social nature, as described in Table 1 below. Depending on the nature of the relationship, information requirements and how the principal best uses such information to hold the agent to account may differ (Kloot & Martin, 2001).

A key issue in the relationship between account holder and account giver is the length of the delegation chain in the accountability relationship. As Nielson and Tierney (2003) point out, the longer the chain, the greater the risk of dissonance between the expectations of the principal and those of the agent at the first and last levels in the chain. In many international climate change financing projects, the long accountability chain involves vertical, horizontal, diagonal and social relationships between principals and agents, creating what other authors have called a complex web of accountability (Page, 2006). It is difficult in such cases to monitor performance due to the large number of agents and the diffusion of projects across the globe (Upton, 2000). These accountability webs face asymmetric information between the many principals and agents. AIAF facilitates the systematic mapping of the information requirements and information utilization process across the relationships between principals and agents.

## 2.2 | Component 2: Timeline of accountability

The other key consideration for this framework is how accountability relates to time, or what Lindberg (2013) calls the timeline of accountability. The point in time in the climate change financing lifecycle will affect the type of information required for account holding purposes. For this framework, the term “ex-ante” is used for

any information used prior to project implementation (i.e., at the project concept or planning phase) and “ex-post” for information used thereafter (i.e., in early implementation, at closeout and post-implementation). Much of international climate finance is undertaken via what Boyne et al. (2002) call accountability through contracts. In this contracting context, ex-ante relates to the period when the principal puts in place the contract, whereas ex-post pertains to the period for the agent's contract execution. This terminology aligns with Broadbent et al. (1996). See Figure 1 below for a graphical representation of the project lifecycle.

## 2.3 | Component 3: Evaluative criteria

The main point of interest is determining what information is pertinent to help the account giver (or agent) and account holder (or principal) effectively play their respective role as actors in the accountability regime. Also of interest is determining the appropriateness of the process whereby these actors can use the information. This allows answering the question: “What performance information should be produced, and how should it be used to strengthen the accountability regimes of international climate change financing institutions?”

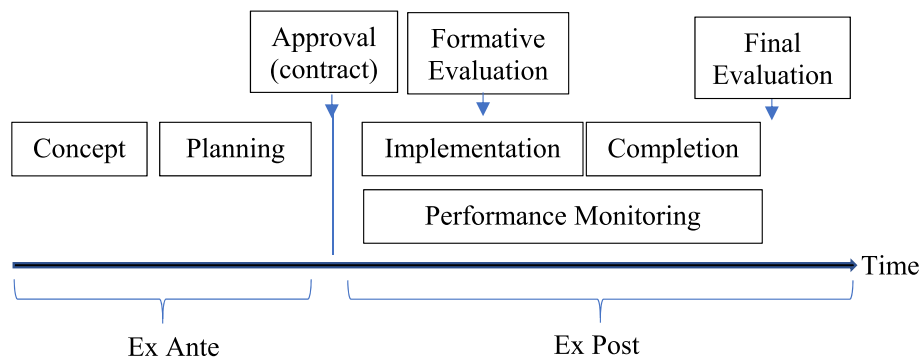
### 2.3.1 | Evaluative criteria for the attributes of information

Comprehensiveness of rationale for input (re)allocation: Information on how funding decisions were made, that is, the evidence used and rationale for allocation or reallocation of project resources have been highlighted as important for accountability (Nelson, 2001).

Ability to measure performance against standards: Woods and Narlikar (2001) mention the importance of information about compliance with given standards, as set through commitments, rules and procedures in the horizontal accountability relationship between

TABLE 1 Nature of the accountability relationship

Nature of accountability relationship	Description of relationship	Climate finance example
Vertical	Principal has formal, hierarchical or contractual authority over the agent (Bovens, 2007; O'Donnell, 1998).	Project implementing entity (agent) and donor agency (principal).
Horizontal	Relationship of “equals” between account holder and account giver (O'Donnell, 1998), with no hierarchical authority, although the principal has expectations of the agent.	Multilateral organization (agent) and a member country (principal).
Diagonal	No hierarchical relationship exists, but an indirect line of authority is present via another party that has hierarchical relationship to account giver (Pereira et al., 2017).	Project implementing entity (agent) and evaluator or auditor (principal).
Social	Neither a hierarchical relationship nor a relationship of equals between account holder and account giver exists. The principal can be a single organization representing a set of actors (e.g., Civil Society Organizations) or can be diffused (e.g., “the electorate”) (Pereira et al., 2017).	Multilateral organization (agent) and Civil Society Organizations (principal).



**FIGURE 1** The project lifecycle, from concept to final evaluation. Adapted from multiple sources (Anandajayasekeram et al., 2004; Khang & Moe, 2008; Ward & Chapman, 1995). [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

the World Trade Organization and its member countries (Woods & Narlikar, 2001). Similarly, in the diagonal accountability relationship involving evaluators and auditors, specific standards and methodologies guide their work (Donaldson, 2001; Moizer, 1997). In the context of social accountability relationships, Devas and Grant (2003) found that the citizenry needs information about service standards, such as service availability, how to use such services and how these services are being provided (i.e., service quality).

**Alignment of indicators with program goals:** Information on the extent to which indicators chosen to measure performance align with program goals is crucial for accountability. Heckman and Smith (1995) warn that poorly aligned performance measures chosen to monitor projects or programs risk creating the wrong incentives for managers and employees. Similarly, Ebrahim (2002) suggests that efforts should be made to avoid positivist and easily quantifiable (and therefore likely inadequate, erroneous or even misleading) measures of success and failure. To that end, tools such as “logic models” and “theories of change” can ensure there is a good match between performance measures and project objectives (Chen, 2015; Mayne, 2015). Such tools can also improve the understanding of how the program or project will likely achieve program goals (Kneale et al., 2015).

**Quality and credibility of evaluation data:** The quality and credibility of the evaluations for the projects and programs funded play an essential role in accountability. Evaluators and auditors are guided by specific standards and methodologies to undertake their work and have their professional reputations at stake regarding the quality of their work (Donaldson, 2001; Moizer, 1997). Some authors have recommended independent evaluations and inspections to improve accountability (Woods, 2001).

### 2.3.2 | Evaluative criteria for the attributes of the performance information utilization process

**Comprehensiveness of performance measurement and management system:** A performance measurement and management system that makes use of performance information enables to track compliance with rules and procedures, as well as measuring against standards,

which has been identified as being key to accountability (Frink & Ferris, 1998; Woods & Narlikar, 2001). This assessment against standards facilitates passing judgment (Wheeler et al., 1993) and is crucial for effective performance management via sanctions and rewards (Starbird, 2001). In addition, Ebrahim (2002) has argued that information chosen for account giving should be helpful for internal management and decision-making needs of implementing entities, as opposed to solely focusing on donors' expectations. As such, projects and programs should therefore strive to have a process to use performance information to improve internal decision-making.

**Diligence of evaluation follow-up:** For evaluators to play an effective role in accountability regimes, evaluation findings must be shared with program implementers so that successes can be celebrated and improvements can be made, but also with funders and other stakeholders to increase their understanding of the program's performance (Hoefer, 2000). Some authors have suggested that a process of follow-up on evaluations be put in place to ensure evaluation recommendations are effectively addressed to avoid a vital accountability gap (e.g., Woods & Narlikar, 2001).

**Breadth of disclosure approach:** Monfardini (2010) points out that increasing the disclosure of information to the public can help regain (or increase) civil society's confidence in given institutions. In terms of specific documents that are suggested for disclosure, some have argued that all internal review documents and documents produced by evaluators be made public, while other authors have even suggested that all documents produced by intergovernmental organizations should be disclosed to ensure account holders can effectively play their role (Roberts, 2004).

**Level of engagement of civil society via performance reporting:** Civil society participation is seen by many scholars are being essential to accountability (Box, 1998; Ostrom, 1997). Citizen participation in performance management is increasingly being used to improve accountability (Heikkila & Isett, 2007). The primary means of disseminating accountability information from a public institution to the general public is the institutional annual report (Cameron, 2004), although the literature shows that target audiences (or account holders) tend to underuse such reports (Mays-ton, 1992; Steccolini, 2004). Alternate forms of accountability dissemination tools need to be developed and used to serve better

the needs of social accountability relationships, such as social audits, community scorecards and participatory performance monitoring (Sharma, 2011). Cohen and Karatzimas (2015) suggest a new model coined “Integrated Popular Reporting,” which, they argue, is more suitable for the public sector. Integrated Popular Reporting combines the user-friendliness of popular reporting with the greater scope of integrated reporting, which goes beyond narrow financial information. Others highlight the potential of participatory online platforms as means to use citizens in the account holding process (Linders, 2012). For citizen-centered account giving, reporting needs to go beyond financial information, be user-friendly and use more participatory approaches.

## 2.4 | Overall framework

The overall framework is presented in Table 2. It is organized by attributes of information and processes in place to use performance information. The table also includes separate cells where one can indicate if criteria are applicable ex-ante and ex-post. Several evaluative criteria are applicable across the four types of accountability relationships, while others are unique to a given type of relationship. In certain instances, a given criterion may have been mentioned in the literature in the context of a given type of accountability relationship, yet it arguably applies to other relationships, as per practitioner common knowledge (as Milgrom (1981) defines it). For instance, “Ability to measure performance against standards” applies across all types of relationships (as it is pertinent to all principals), whereas “Level of engagement of civil society via performance reporting” is of sole interest to principals involved in social accountability relationships. Similarly, the evaluative criteria may apply ex-ante or ex-post, depending on the situation. For instance, for the criterion “Alignment of indicators with program goals,” it is

often the case that indicators are set ex-ante (i.e., before contracts are signed) but can be adjusted during implementation (i.e., ex-post).

In Table 2, the evaluative criteria for the attributes of information and the processes in place to utilize performance information are found on the left-hand side. The right-hand side of the table includes the different types of accountability relationships (from vertical to social), indicating whether a given criterion is applicable ex-ante or ex-post (the areas shaded in the table show instances where a given criterion is not applicable).

## 2.5 | Protocol for applying AIAF

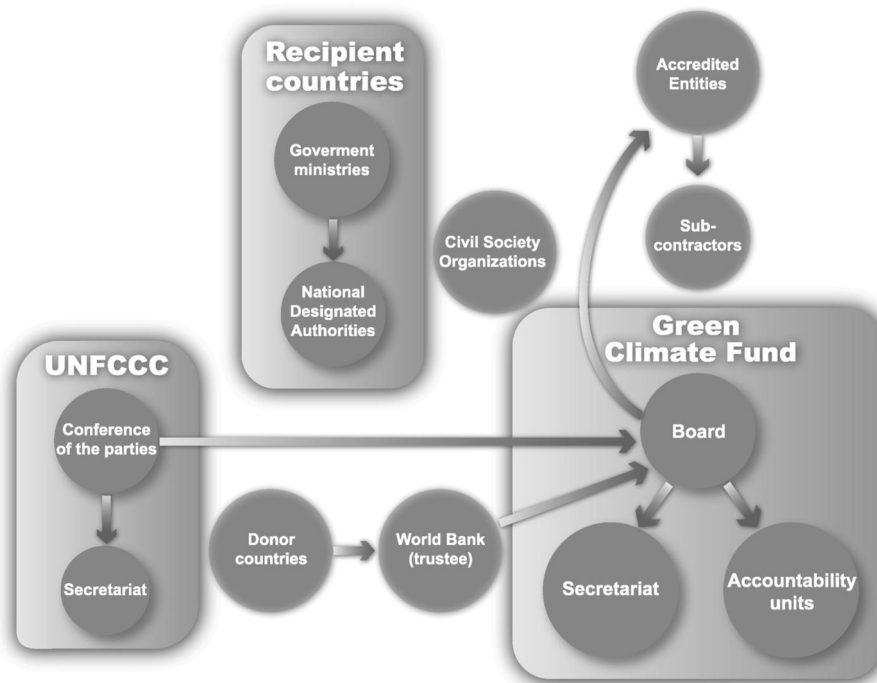
The first step in applying AIAF is preparing for the research. This step entails reaching a clear understanding and internalizing the meaning of each framework component, including individual evaluative criteria. This is followed by identifying a clear research focus: which accountability regime(s) is to be studied.

Next, data must be collected for each framework component, filling the cells with either “yes/no” and supporting evidence (e.g., statistics, narrative form). Data collection can be undertaken through various means, including document analysis, interviews and observations. The choice of data collection approach will be influenced by the regime under study, resource availability and the researcher’s access to documents and key informants.

The data are then analyzed to produce an assessment that is documented, in qualitative terms, in the AIAF table. The documentation of the scope of (and gaps in) attributes of information and attributes of processes that are in place for the utilization of performance information effectively requires the researcher to fill out the relevant cells within the AIAF table, depending on the accountability regime(s) studied. This requires the researcher to communicate the strengths and weaknesses of the regime(s)’s information and

TABLE 2 Accountability information assessment framework

	Nature of relationship							
	Vertical		Horizontal		Diagonal		Social	
	Ex ante	Ex post	Ex ante	Ex post	Ex ante	Ex post	Ex ante	Ex post
<b>Attributes of information</b>								
Comprehensiveness of rationale for input (re)allocation								
Ability to measure performance against standards								
Alignment of indicators with program goals								
Quality and credibility of evaluation data								
<b>Attributes of performance information utilization process</b>								
Comprehensiveness of performance measurement and management system								
Diligence of evaluation follow-up								
Broadness of disclosure approach								
Level of engagement of civil society via performance reporting								



**FIGURE 2** Green Climate Fund (GCF) accountability relationships, including the role of the UNFCCC, donor countries, recipient countries, and the GCF. Drawn by the authors based on document review and key informant interview input.

the processes to use such information. The researcher should then draw conclusions in terms of the areas that need to be improved for the agent(s) and principal(s) to effectively play their respective roles as actors in the accountability regime(s).

The focus of the next section is on the application of AIAF to one of the GCF's accountability regimes.

### 3 | APPLYING AIAF: THE GREEN CLIMATE FUND AND ITS ACCREDITED ENTITIES AS AN EXAMPLE

In this section, AIAF is applied to a critical accountability regime of the GCF—the relationship between the GCF and its Accredited Entities (AEs). The GCF accountability regime actors are first described, followed by an explanation of how the framework was applied. The attributes of information and processes in the GCF regime are then documented, with strengths and weaknesses identified.

#### 3.1 | Describing the GCF accountability regime actors

This study applied the framework to the vertical accountability relationship between the GCF and its AEs. AEs are implementing agents that can receive GCF funding once they have undergone a stringent accreditation process to ensure they are well-positioned to manage projects and report on results. GCF AEs range from small developing country private sector firms or nonprofits to large international organizations. AEs are among many actors in the GCF

accountability web, as Figure 2 shows.<sup>1</sup> AEs are accountable to the GCF Board for project performance (GCF, 2015, 2016). The choice to focus on that specific relationship is because it can be argued to be the most important accountability relationship within the GCF's accountability web (ref. unpublished).

#### 3.2 | How the framework was applied

To assess the accountability regimes of the GCF, content analysis of documents and key informant interviews was conducted. All documents were collected during the period March 2016–December 2019. The key informant interviews, conducted between June 2016 and April 2020, were semi-structured and mostly used “mini tour” questions. Mini tour questions require respondents to provide details on particular or more specific issues or experiences (Spradley, 2016). The key informants interviewed are representative of the target population, as they all play, or have played, essential roles in the GCF accountability regimes as account holders or account givers. The semi-structured interviews with knowledgeable respondents made it possible to obtain the in-depth knowledge required for this within-case analysis (George & Bennett, 2004; Paterson, 2010). The documents and interview transcripts were then coded to identify and understand the various elements of the accountability regime. Coding relevant descriptive text and statements related to accountability was undertaken using a directed approach (Hsieh & Shannon, 2005),

<sup>1</sup>This is a simplified representation. For instance, some countries are both donors and recipients (e.g., Peru, Vietnam).



using the accountability regime contour-defining questions suggested by Mashaw (2006) for the key concepts for the initial coding categories. Mashaw's questions are: Who is accountable? To whom? For what? What is the process whereby an account can be given? Against what standards is the account giver to be judged? What are the effects of poor (or strong) performance? The answer to these six questions provides a comprehensive understanding of what an "accountability regime" looks like for a particular principal-agent relationship.

### 3.3 | Documenting the attributes of information and processes in the GCF regime

Table 3 summarizes the attributes of information and processes in place for the utilization of performance information in the relationship between the GCF Board and its AEs, as per the findings of the document review and key informant interviews.

### 3.4 | Strengths and weaknesses within the analyzed GCF accountability regime

As Table 3 shows, the GCF has ex-ante elements in place for producing reliable performance information across the four assessment criteria for the attributes of information. This includes: the rationale for input (re)allocation; the measurement of performance against standards; the alignment of indicators with program goals; and the quality and credibility of evaluation data. However, the lack of strong oversight and limited monitoring and evaluation capacity within the GCF Secretariat risks the above being primarily a "box-ticking exercise." In addition, the quality and credibility of the annual performance reports might be in doubt, as they are not required to be third-party verified. Finally, several of the early projects funded by the GCF did not collect baseline data, making performance reporting and the conduct of evaluations challenging.

More gaps and weaknesses exist concerning the processes that are in place for the utilization of performance information, namely:

- There is no clear indication that performance information will be integrated within project management decision-making (e.g., via employee performance agreements).
- There are no explicit requirements or established processes for AE management to address project evaluation recommendations.
- The GCF disclosure policy limits information made publicly available, including deliberative information prepared for or derived from the exchanges between the GCF and its AEs.

However, the GCF has recently started to publish "operational documents" on its website, including Environmental and Social Safeguards Reports and Information disclosure decisions. The publication of these documents also broadens AE disclosure by making

more information regarding potential project impacts publicly available. A GCF key informant also mentioned that deliberative information would be disclosed publicly shortly. However, it must be noted that many AEs were already disclosing such documents on their website.

It is too early to assess the ex-post information and process attributes, as AEs are primarily in the planning or early implementation phase of the project lifecycle.

## 4 | DISCUSSION

This section briefly describes the results of the application of the framework to the GCF, how the framework's theoretical underpinnings could be improved and the framework's practical applications.

### 4.1 | Identification of accountability regime strengths and weaknesses with AIAF

AIAF was applied to a vertical accountability relationship within the GCF accountability web. Sufficient information was available to assess ex-ante elements of this accountability relationship, as other authors have found that the account-giving process for GCF AEs is well formalized (ref. unpublished). However, it was too early to assess the ex-post information and process attributes, as AEs are primarily in the planning or early implementation phase of the project lifecycle.

Applying the AIAF to the accountability regime between the GCF and its AEs allowed the identification of the strengths and weaknesses in that regime. The application of the framework revealed a lack of third-party verified annual performance reports. This could be easily addressed by allocating GCF resources toward such verification. However, some of the gaps and weaknesses uncovered concerning the processes in place for utilizing performance information are more challenging to address. Certain gaps and weaknesses would demand more fundamental changes at the GCF and in individual organizations accredited by the GCF. For instance, integrating performance information within project management decision-making and ensuring project evaluation recommendations are substantially addressed would require operational changes within all AEs and stronger oversight within the GCF Secretariat. As for making deliberative exchanges between the GCF and its AEs public, this information will likely be made available to the public soon, based on crucial informant input received.

The timing of the assessment via the AIAF limited its usefulness because it was too early to assess the GCF's ex-post information and process attributes. However, the application of AIAF to the GCF shows that it may be beneficial for account givers to discuss expectations with their account holders ex-ante to put the appropriate mechanisms for information generation and use in place.

**TABLE 3** Ex ante and ex post attributes of information and processes that are in place for the utilization of performance information in a Green Climate Fund (GCF) vertical accountability relationship

	Ex ante	Ex post
<b>Attributes of information</b>		
Comprehensiveness of rationale for input (re) allocation	<ul style="list-style-type: none"> <li>GCF monitoring and accountability framework and Accreditation Master Agreement mentions that disbursements may be suspended and AEs may be asked to return funds due to poor performance.</li> <li>GCF Results Management Framework proposes that ex-post allocation decisions be informed by regular performance measurement exercises conducted by AEs; impact assessments at the end of a project; and evaluation results. However, there is no strong oversight within the GCF Secretariat to challenge or verify AEs' performance targets and claims.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine if any reallocation will be required in the current portfolio of projects funded by the GCF.</li> </ul>
Ability to measure performance against standards	<ul style="list-style-type: none"> <li>GCF monitoring and accountability framework includes targets and metrics.</li> <li>The lack of monitoring and evaluation capacity within the GCF Secretariat has led to measuring process indicators, as opposed to more meaningful results.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine if performance data that is planned to be collected will be available or suitable for measuring against targets set by AEs.</li> </ul>
Alignment of indicators with program goals	<ul style="list-style-type: none"> <li>As per GCF project preparation guideline requirements, all AE project proposals need to include indicators that align with the GCF goals and demonstrate alignment with country priorities.</li> <li>The lack of monitoring and evaluation capacity within the GCF Secretariat hinders its ability to quality-assure AEs' choice of indicators.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine if performance data associated with current indicator selection will be available or suitable for measuring against targets set by AEs, which could lead to modification of indicators and misalignment.</li> </ul>
Quality and credibility of evaluation data	<ul style="list-style-type: none"> <li>Establishment of independent evaluation unit increases credibility of evaluation data to be produced. However, the unit does not undertake project-level evaluations per se.</li> <li>GCF draft Evaluation Policy establishes the principles, criteria, processes, types of evaluations, roles and responsibilities for stakeholders involved in its oversight and implementation.</li> <li>No requirement for third-party verification of annual performance report and no substantive review by the GCF Secretariat.</li> <li>Several of the early projects funded by the GCF did not collect baseline data, making evaluations challenging.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine—no GCF project has been evaluated yet.</li> </ul>
<b>Attributes of performance information utilization process</b>		
Comprehensiveness of performance measurement and management system	<ul style="list-style-type: none"> <li>GCF monitoring and accountability framework requires: Ongoing monitoring of performance; annual performance reporting; annual reviews; mid-term accreditation reviews; ad hoc checks or periodic reviews; and internal and external audits.</li> <li>Project proposals need to include a logic model to ensure appropriate performance measurement. However, many of the earlier projects funded by the GCF had poor logic models that lacked meaningful performance measures.</li> <li>Process to address poorly performing projects outlined in GCF monitoring and accountability framework and Accreditation Master Agreement</li> <li>No clear indication that performance information will be integrated within project management decision-making based on formal requirements.</li> <li>Some AEs have internal processes that foster integration of performance information into decision-making, but this is done independently of GCF requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine as projects are in early implementation.</li> </ul>
Diligence of evaluation follow-up	<ul style="list-style-type: none"> <li>No explicit requirement or established process to address project evaluation recommendations.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine—no GCF project has been evaluated yet.</li> </ul>
Broadness of disclosure approach	<ul style="list-style-type: none"> <li>GCF disclosure policy limits information made publicly available, including deliberative information exchanged, prepared for or derived from the exchanges between the GCF and its AEs. This information is planned to be disclosed publicly in the near future.</li> </ul>	<ul style="list-style-type: none"> <li>Too early to determine—no GCF project has been evaluated yet.</li> </ul>



TABLE 3 (Continued)

	Ex ante	Ex post
	<ul style="list-style-type: none"> <li>• “Operational documents” now on GCF website, broadening AE-related disclosure, as well as information on potential project impacts. However, many AEs were already disclosing such documents on their own website.</li> </ul>	
Level of engagement of civil society via performance reporting	<ul style="list-style-type: none"> <li>• NA<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>• NA</li> </ul>

<sup>a</sup>This is not an applicable criterion as it applies to a different accountability relationship, namely that of civil society as account holder vis-à-vis AEs and/or the GCF.

## 4.2 | Strengthening the framework's theoretical underpinnings

The framework's theoretical underpinnings for vertical relationships are based on a rich body of literature. As underlined in the literature, vertical accountability relationships have well-established and formalized accountability processes (e.g., via legal contracts), which facilitate assessments using a tool such as AIAF. Similarly, the literature on diagonal relationships (e.g., the role of auditors and external financial verification) is well established. The public administration literature clearly describes the many formal processes such as audits, evaluations and financial verifications that public sector and international organizations are subjected to (Bradlow, 2005; Monfardini & von Maravic, 2019). This rich literature, in turn, produces many documents to draw from for an assessment using AIAF.

In contrast, very little was found in the literature on the question of information needs for horizontal accountability relationships. In the absence of specific guidance from the literature on horizontal accountability relationships, the framework relies on some evaluative criteria stemming from the literature that focused on vertical and diagonal accountability relationships and applied them to horizontal relationships. Horizontal relationships are relationships of two actors on an equal footing, yet one acts as an account holder (principal), and the other is required to give account (agent). This “relationship of equals” can be diplomatically charged when the account holder and the account giver are a donor country and a multilateral fund, for instance. The framework should therefore be revisited to ensure that it can build on any future insights from the literature on horizontal accountability relationships and their particular information needs. In terms of the information needs and expectations for social accountability, again, the literature tends to advocate broad transparency. There are few insights in the literature about which information should be prioritized so that social actors can effectively mobilize other players involved in vertical, horizontal and diagonal relationships within accountability regimes. These two areas would benefit from further academic study to develop normative guidance and gather empirical evidence of successful approaches, which could then be used to strengthen AIAF further.

## 4.3 | Practical use and relevance of the framework

The AIAF was used to assess the attributes of information and those of the processes in place for the utilization of performance information in the vertical accountability relationship between the GCF and one of its AEs. It was found that to assess all attributes contained in AIAF properly, there is a need to have access to a significant number of documents and key informants, which can be resource-intensive and a considerable constraint. Practitioners could apply AIAF more efficiently if they have direct access to performance measurement experts within the organization they want to assess instead of using a broader set of informant interviews. It may also be possible to use AIAF solely via a document review for expediency purposes, but this would reduce the richness of qualitative information that can be gathered through interviews (Brenner, 2012). The AIAF could also be used for project teams to self-assess, which could be done more informally and expeditiously. A further improvement to the AIAF would be to develop a color and scoring system (numerical or qualitative). A simple traffic light color system could be developed, with weak areas coded red and strong areas in green, which would make the tool less resource intensive to use. This traffic light color system would also offer practitioners a more communicative, albeit more explicitly judgmental tool (Gupta et al., 2010).

A key consideration in establishing account-giving requirements is the implementation cost of monitoring and reporting systems. The design and selection of performance indicators, data collection, and editing and publication of performance reports can add substantial sums in money and staff time (Basak & van der Werf, 2019; Ebrahim, 2003; Woods, 2001). These costs are indirectly borne by the ultimate beneficiaries of projects (Ebrahim, 2005), which are developing country recipients facing climate impacts. Using AIAF could guide project design and implementation to help better align the expectations of the various account holders and account givers across the accountability regimes within complex climate finance accountability webs. This improved alignment would help minimize monitoring and reporting costs.

Another critical consideration is the receptivity of the principal in using performance information to hold their agent to account. Boyne et al. (2002) argue that in addition to increasing the quality and relevance of performance information in accountability regimes,

account holders need to use this information to fulfill their role by motivating agents (or account givers) to improve their performance. This also requires a regime whereby account holders are empowered to play their role via effective means of motivating or incentivizing agents (e.g., through penalties or rewards). Or, as Ehresman and Stevis (2014) call it, a system of capabilities or human rights justice, not merely distributive justice. According to the interviews conducted as part of this research, there are signs that certain account holders in the GCF accountability web are reluctant to play that role forcefully. Determining the principal's receptivity level would complement the assessment undertaken using the AIAF.

## 5 | CONCLUSIONS

This study set out to develop a framework to assess the attributes of information and those of the processes in place for utilizing performance information for serving accountability. More precisely, the framework helped us answer the question: "What performance information is produced, and how does its use strengthen or weaken the accountability regimes of international climate change financing institutions?" Undertaking such an assessment becomes increasingly important in the context of complex accountability webs that involve multiple principals and agents and various accountability relationships, as is often the case in international climate change financing.

The assessment framework (AIAF) was developed based on reviewing relevant literature and expert consultation and identifies three critical criteria for strengthening accountability regimes: measuring performance against standards; aligning indicators with program goals; and having high-quality and credible evaluation data. As for how this information is used, it needs to be integrated into a comprehensive performance measurement and management system; a diligent evaluation follow-up process and a broad disclosure approach must be in place. In addition, a high level of civil society engagement via performance reporting must occur for social accountability to function correctly.

The application of AIAF to the accountability relationship between the GCF and its AEs identified areas of strengths and weaknesses within the accountability regime. Strengths include: several ex-ante elements in place for producing reliable performance information, including the rationale for input (re)allocation; the measurement of performance against standards; the alignment of indicators with program goals; and the quality and credibility of evaluation data. Weaknesses found include: the lack of strong oversight and limited monitoring and evaluation capacity within the GCF Secretariat risks the above being primarily a "box-ticking exercise." Also, this study's findings suggest weaknesses in the processes for utilizing performance information. These include: the lack of evidence that performance information will be integrated within project management decision-making; the absence of explicit requirements or established process to address project evaluation recommendations; and the limitations imposed by the GCF disclosure policy regarding the information on deliberations between the GCF and its AEs (although the GCF

Secretariat is said to make some of this information public soon). It is too early to assess the ex-post information and process attributes, as AEs are primarily in the planning or early implementation phase of the project lifecycle. Trade-offs between the production of accountability information and the resources available for delivering project outcomes were also discussed.

Further research might explore the use of AIAF across an entire climate change financing accountability web. Using the AIAF in this fashion would allow for systematically assessing the information produced and used in diagonal, vertical, horizontal and social accountability regimes. In addition, the empirical analysis should be undertaken to determine whether accountability webs assessed as robust across all AIAF criteria have indeed projects that tend to perform better than those in accountability webs that are weak across most assessment criteria. Such analysis would need to quantify the influence of performance measurement budgets and the receptivity of principals on project performance. Finally, the framework could be improved by building on any future insights from an as yet too limited literature on horizontal accountability relationships and their particular information needs.

## ACKNOWLEDGMENTS

We thank experts from the CGIAR for their helpful comments that helped us to improve the framework developed for this paper.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy restrictions.

## PRACTICE IMPACT STATEMENT

The framework developed has value to development practitioners and academics, as it helps uncover gaps in complex accountability regimes, which are common in international development projects. The case study of the Green Climate Fund is of vital interest as it is a significant new source of financing for developing countries facing the impacts of climate change.

## ORCID

Rishi Basak  <https://orcid.org/0000-0001-5450-8051>

## REFERENCES

- Adam, C. S., & Gunning, J. W. (2002). Redesigning the aid contract: Donors' use of performance indicators in Uganda. *World Development*, 30(12), 2045–2056. [https://doi.org/10.1016/s0305-750x\(02\)00123-7](https://doi.org/10.1016/s0305-750x(02)00123-7)
- Anandajayasekeram, P., Van Rooyen, C. J., & Liebenberg, F. (2004). In P. Anandajayasekeram, C. J. Van Rooyen, & F. Liebenberg (Eds.), *Agricultural project planning and analysis: A sourcebook* (2nd ed.). University of Pretoria.
- Basak, R., & van der Werf, E. (2019). Accountability mechanisms in international climate change financing. *International Environmental Agreements: Politics, Law and Economics*, 19(3), 297–313. <https://doi.org/10.1007/s10784-019-09437-8>
- Bovens, M. (2007). Analysing and assessing accountability: A conceptual framework. *European Law Journal*, 13(4), 447–468. <https://doi.org/10.1111/j.1468-0386.2007.00378.x>

- Box, R. C. (1998). *Citizen governance: Leading American communities into the 21st century*. SAGE Publications.
- Boyne, G., Gould-Williams, J., Law, J., & Walker, R. (2002). Plans, performance information and accountability: The case of best value. *Public Administration*, 80(4), 691–710. <https://doi.org/10.1111/1467-9299.00324>
- Bradlow, D. D. (2005). Private complainants and international organizations: A comparative study of the independent inspection mechanisms in international financial institutions. *Georgetown Journal of International Law*, 36(2), 403–494.
- Brenner, M. E. (2012). Interviewing in educational research. In J. L. Green, G. Camilli, & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 357–370). Routledge.
- Brett, E. A. (1993). Voluntary agencies as development organizations: Theorizing the problem of efficiency and accountability. *Development and Change*, 24(2), 269–303. <https://doi.org/10.1111/j.1467-7660.1993.tb00486.x>
- Broadbent, J., Dietrich, M., & Laughlin, R. (1996). The development of principal-agent, contracting and accountability relationships in the public sector: Conceptual and cultural problems. *Critical Perspectives on Accounting*, 7(3), 259–284. <https://doi.org/10.1006/cpac.1996.0033>
- Cameron, W. (2004). Public accountability: Effectiveness, equity, ethics. *Symposium*, 63(December), 59–67. <https://doi.org/10.1111/j.1467-8500.2004.00402.x>
- Chen, H. (2015). *Practical program evaluation: Theory-driven evaluation and the integrated evaluation perspective* (2nd ed.). SAGE Publications.
- Cohen, S., & Karatzimas, S. (2015). Tracing the future of reporting in the public sector: Introducing integrated popular reporting. *International Journal of Public Sector Management*, 28(6), 449–460. <https://doi.org/10.1108/ijpsm-11-2014-0140>
- Connolly, C., & Hyndman, N. (2004). Performance reporting: A comparative study of British and Irish charities. *British Accounting Review*, 36(2), 127–154. <https://doi.org/10.1016/j.bar.2003.10.004>
- Devas, N., & Grant, U. (2003). Local government decision-making? Citizen participation and local accountability: Some evidence from Kenya and Uganda. *Public Administration and Development*, 23(4), 307–316. <https://doi.org/10.1002/pad.281>
- Donaldson, S. I. (2001). Overcoming our negative reputation: Evaluation becomes known as a helping profession. *American Journal of Evaluation*, 22(3), 355–361. [https://doi.org/10.1016/s1098-2140\(01\)00148-5](https://doi.org/10.1016/s1098-2140(01)00148-5)
- Dubnick, M. J. (1998). Clarifying accountability: An ethical theory framework. In N. Preston & C. Sampford (Eds.), *Public sector ethics: Finding and implementing values* (pp. 68–81). Routledge.
- Ebrahim, A. (2002). Information struggles: The role of information in the reproduction of NGO-funder relationships. *Nonprofit and Voluntary Sector Quarterly*, 31(1), 84–114. <https://doi.org/10.1177/0899764002311004>
- Ebrahim, A. (2003). Making sense of accountability: Conceptual perspectives for northern and southern nonprofits. *Nonprofit Management and Leadership*, 14(2), 191–212. <https://doi.org/10.1002/nml.29>
- Ebrahim, A. (2005). Accountability myopia: Losing sight of organizational learning. *Nonprofit and Voluntary Sector Quarterly*, 34(1), 56–87. <https://doi.org/10.1177/0899764004269430>
- Ehresman, T., & Stevis, D. (2014). Transparency and environmental equity: The International Finance Corporation's disclosure practices. In A. Gupta & M. Mason (Eds.), *Transparency in global environmental governance: Critical perspectives*. MIT Press.
- El Ghoul, S., Guedhami, O., & Kim, Y. (2017). Country-level institutions, firm value, and the role of corporate social responsibility initiatives. *Journal of International Business Studies*, 48(3), 360–385. <https://doi.org/10.1057/jibs.2016.4>
- El Ghoul, S., Guedhami, O., Kwok, C. C. Y., & Mishra, D. (2011). Does corporate social responsibility affect cost of capital? *Journal of Banking & Finance*, 35(9), 2388–2406. <https://doi.org/10.1016/j.jbankfin.2011.02.007>
- Frink, D. D., & Ferris, G. R. (1998). Accountability, impression management, and goal setting in the performance evaluation process. *Human Relations*, 51(10), 1259–1283. <https://doi.org/10.1177/001872679805101003>
- GCF. (2015). *DECISION B.11/10 – Agenda item 15: Initial monitoring and accountability framework for accredited entities*. Songdo International Business District.
- GCF. (2016). *Accreditation master agreement between the Environmental Investment Fund and the Green Climate Fund*. GCF.
- George, A. L., & Bennett, A. (2004). *Case studies and theory development in the social sciences*. MIT Press.
- Goldsmith, P. D., & Basak, R. (2001). Incentive contracts and environmental performance indicators. *Environmental and Resource Economics*, 20(4), 259–279. <https://doi.org/10.1023/a:1013065801547>
- Gomes, P. S. (2017). Performance evaluation and reporting. In *Global encyclopedia of public administration, public policy, and governance* (pp. 1–13). Springer.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Constructing a research database of social and environmental reporting by UK companies. *Accounting, Auditing & Accountability Journal*, 8(2), 78–101. <https://doi.org/10.1108/09513579510086812>
- Grossman, S. J., & Hart, O. D. (1983). An analysis of the principal-agent problem. *Econometrica*, 51(1), 7–45. <https://doi.org/10.2307/1912246>
- Gupta, J., Termeer, C. J. A. M., Klostermann, J., Meijerink, S., Van Den Brink, M., Jong, P., Nooteboom, S., & Bergsma, E. (2010). The Adaptive Capacity Wheel: A method to assess the inherent characteristics of institutions to enable the adaptive capacity of society. *Environmental Science and Policy*, 13(6), 459–471. <https://doi.org/10.1016/j.envsci.2010.05.006>
- Heckman, J. J., & Smith, J. (1995). *The performance of performance standards: The effects of JTPA performance standards of efficiency, equity and participant outcomes*. (Papers in Political Economy No. 73). University of Western Ontario.
- Heikkilä, T., & Isett, K. R. (2007). Citizen involvement and performance management in special-purpose governments. *Public Administration Review*, 67(2), 238–248. <https://doi.org/10.1111/j.1540-6210.2007.00710.x>
- Hoefer, R. (2000). Accountability in action? Program evaluation in nonprofit human service agencies. *Nonprofit Management and Leadership*, 11(2), 167–178. <https://doi.org/10.1002/nml.11203>
- Holstein, J. A., & Gubrium, J. F. (1995). *The active interview*. SAGE Publications.
- Holzappel, S. (2016). Boosting or hindering aid effectiveness? An assessment of systems for measuring donor agency results. *Public Administration and Development*, 36(February), 3–19. <https://doi.org/10.1002/pad.1749>
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Khang, D. B., & Moe, T. L. (2008). Success criteria and factors for international development projects: A life-cycle-based framework. *Project Management Journal*, 39(1), 72–84. <https://doi.org/10.1002/pmj.20034>
- Kloot, L., & Martin, J. (2001). Local government accountability: Explaining differences. *Accounting, Accountability and Performance*, 7(1), 51.
- Kneale, D., Thomas, J., & Harris, K. (2015). Developing and optimising the use of logic models in systematic reviews: Exploring practice and good practice in the use of programme theory in reviews. *PLoS One*, 10(11), 1–27. <https://doi.org/10.1371/journal.pone.0142187>
- Laufer, W. S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics*, 43(3), 253–261. <https://doi.org/10.1023/a:1022962719299>
- Lederman, D., Loayza, N. V., & Soares, R. R. (2005). Accountability and corruption: Political institutions matter. *Economics and Politics*, 17(1), 1–35. <https://doi.org/10.1111/j.1468-0343.2005.00145.x>

- Lindberg, S. I. (2013). Mapping accountability: Core concept and subtypes. *International Review of Administrative Sciences*, 79(2), 202–226. <https://doi.org/10.1177/0020852313477761>
- Linders, D. (2012). From e-government to we-government: Defining a typology for citizen coproduction in the age of social media. *Government Information Quarterly*, 29(4), 446–454. <https://doi.org/10.1016/j.giq.2012.06.003>
- Mashaw, J. L. (2006). Accountability and institutional design: Some thoughts on the grammar of governance. In M. Dowdle (Ed.), *Public accountability: Designs, dilemmas and experiences* (pp. 115–156). Cambridge University Press.
- Mayne, J. (2015). Useful theory of change models. *Canadian Journal of Program Evaluation*, 30(2), 119–142. <https://doi.org/10.3138/cjpe.230>
- Mayston, D. (1992). Financial reporting in the public sector and the demand for information. *Financial Accountability and Management*, 8(4), 317–324. <https://doi.org/10.1111/j.1468-0408.1992.tb00446.x>
- McGillivray, M. (2003). *Aid effectiveness and selectivity: Integrating multiple objectives into aid allocations*. (WIDER Discussion Papers No. 2003/71). WIDER Discussion Papers // World Institute for Development Economics (UNU-WIDER).
- Meyer, K. E., Estrin, S., Bhaumik, S. K., & Peng, M. W. (2009). Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal*, 30(1), 61–80. <https://doi.org/10.1002/smj.720>
- Milgrom, P. (1981). An axiomatic characterization of common knowledge. *Econometrica: Journal of the Econometric Society*, 49, 219–222.
- Milne, M. J., & Patten, D. (2002). Securing organizational legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing & Accountability Journal*, 15(3), 372–405. <https://doi.org/10.1108/09513570210435889>
- Moizer, P. (1997). Auditor reputation: The international empirical evidence. *International Journal of Auditing*, 1(1), 61–74. <https://doi.org/10.1111/1099-1123.00013>
- Monfardini, P. (2010). Accountability in the new public sector: A comparative case study. *International Journal of Public Sector Management*, 23(7), 632–646. <https://doi.org/10.1108/09513551011078897>
- Monfardini, P., & von Maravic, P. (2019). Too big to be audited? The new world of auditing in international organizations. *Financial Accountability and Management*, 35(2), 143–157. <https://doi.org/10.1111/faam.12186>
- Nelson, P. J. (2001). Transparency mechanisms at the multilateral development banks. *World Development*, 29(11), 1835–1847. [https://doi.org/10.1016/s0305-750x\(01\)00073-0](https://doi.org/10.1016/s0305-750x(01)00073-0)
- Ng, A. W. (2018). From sustainability accounting to a green financing system: Institutional legitimacy and market heterogeneity in a global financial centre. *Journal of Cleaner Production*, 195(September 2018), 585–592. <https://doi.org/10.1016/j.jclepro.2018.05.250>
- Nielson, D. L., & Tierney, M. J. (2003). Delegation to international organizations: Agency theory and World Bank environmental reform. *International Organization*, 57(02), 241–276. <https://doi.org/10.1017/s0020818303572010>
- O'Donnell, G. A. (1998). Horizontal accountability in new democracies. *Journal of Democracy*, 9(3), 112–126. <https://doi.org/10.1353/jod.1998.0051>
- Ostrom, V. (1997). *The meaning of democracy and the vulnerability of democracies: A response to Tocqueville's challenge*. University of Michigan Press.
- Page, S. (2006). The web of managerial accountability: The impact of reinventing government. *Administration & Society*, 38(2), 166–197. <https://doi.org/10.1177/0095399705285990>
- Paterson, B. L. (2010). Within-case analysis. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of case study research*. SAGE Publications, Inc.
- Pereira, A. E., Horochovski, R. R., de Almeida Cruz, M. M., & Rodrigues, N. (2017). Accountability in international organizations: The case of World Bank Inspection Panel (1993–2015). *Brazilian Political Science Review*, 11, 1–28. <https://doi.org/10.1590/1981-3821201700010002>
- Roberts, A. (2004). A partial revolution: The diplomatic ethos and transparency in intergovernmental organizations. *Public Administration Review*, 64(4), 410–424. <https://doi.org/10.1111/j.1540-6210.2004.00388.x>
- Romzek, B. S. (2015). The tangled web of accountability in contracting networks. In M. J. Dubnick & H. G. Frederickson (Eds.), *Accountable governance: Problems and promises* (pp. 22–39). Routledge.
- Sappington, D. E. M. (1991). Incentives in principal-agent relationships. *The Journal of Economic Perspectives*, 5(2), 45–66. <https://doi.org/10.1257/jep.5.2.45>
- Sharma, R. (2011). Use of social accountability tools and information technologies in monitoring and evaluation. (PremNotes No. 7).
- Spence, M., & Zeckhauser, R. (1971). Insurance, information, and individual action. *The American Economic Review*, 61(2), 380–387.
- Spradley, J. P. (2016). *The ethnographic interview*. Waveland Press, R. and W. Holt.
- Starbird, S. (2001). Penalties, rewards, and inspection: Provisions for quality in supply chain contracts. *Journal of the Operational Research Society*, 52(1), 109–115. <https://doi.org/10.1057/palgrave.jors.2601048>
- Steccolini, I. (2004). Is the annual report an accountability medium? An empirical investigation into Italian local governments. *Financial Accountability and Management*, 20(August), 327–350. <https://doi.org/10.1111/j.0267-4424.2004.00389.x>
- Templier, M., & Paré, G. (2015). A framework for guiding and evaluating literature reviews. *Communications of the Association for Information Systems*, 37(August), 112–137. <https://doi.org/10.17705/1cais.03706>
- Tolliver, C., Keeley, A. R., & Managi, S. (2020). Drivers of green bond market growth: The importance of Nationally Determined Contributions to the Paris Agreement and implications for sustainability. *Journal of Cleaner Production*, 244(January 2020), 118643. <https://doi.org/10.1016/j.jclepro.2019.118643>
- UNFCCC. (2018). *Solidarity and just transition Silesia declaration*. UNFCCC.
- UNFCCC Standing Committee on Finance. (2018). *2018 Biennial assessment and overview of climate finance flows*. United Nations Climate Change Secretariat.
- Upton, B. (2000). *The multilateral development banks: Improving U.S. leadership*. Praeger.
- Ward, S. C., & Chapman, C. B. (1995). Risk-management perspective on the project lifecycle. *International Journal of Project Management*, 13(3), 145–149. [https://doi.org/10.1016/0263-7863\(95\)00008-e](https://doi.org/10.1016/0263-7863(95)00008-e)
- Wheeler, P., Haertel, G. D., & Scriven, M. (1993). *Teacher evaluation glossary*. Western Michigan University.
- Wolfe, R. (2015). An anatomy of accountability at the WTO. *Global Policy*, 6(1), 13–23. <https://doi.org/10.1111/1758-5899.12160>
- Woods, N. (2001). Making the IMF and the World Bank more accountable. *International Affairs*, 77(1), 83–100. <https://doi.org/10.1111/1468-2346.00179>
- Woods, N., & Narlikar, A. (2001). Governance and the limits of accountability: The WTO, the IMF, and the World Bank. *International Social Science Journal*, 53(170), 569–583. <https://doi.org/10.1111/1468-2451.00345>

**How to cite this article:** Basak, R., Karlsson-Vinkhuyzen, S., & Termeer, K. J. A. M. (2022). Information for climate finance accountability regimes: Proposed framework and case study of the Green Climate Fund. *Public Administration and Development*, 42(5), 261–280. <https://doi.org/10.1002/pad.2000>

## APPENDIX

## Methodological note

List of documents for content analysis	See list of documents below
Number of interviews	17
Interviews length	Between 18 and 74 min, with median of 41 min
Key informant characteristics	The detailed key informant interviews included two officials from the UNFCCC Secretariat, four GCF Board members, two GCF Secretariat officials, four representatives from Accredited Entities, three officials from Civil Society Organizations and two National Designated Authorities. The key informants interviewed are representative of the target population, as they all play, or have played, important roles in the GCF accountability regimes as account holders or account givers.
Interview questions	See list of questions below
Coding procedures	See codebook below

## Documents reviewed and subjected to content analysis

The documents reviewed were limited to the latest versions of documents approved by the GCF Board and available online. All documents were collected during the period of March 2016 and April 2021. A total of 41 documents were included in the review.

1. Agreement on the Terms and Conditions for the Administration of the Green Climate Fund Trust Fund
2. Governing Instrument for the Green Climate Fund
3. Consideration of Funding Proposal—Funding Proposal Package FP001
4. Consideration of Funding Proposal—Funding Proposal Package FP002
5. Consideration of Funding Proposal—Funding Proposal Package FP003
6. Consideration of Funding Proposal—Funding Proposal Package FP004
7. Consideration of Funding Proposal—Funding Proposal Package FP005
8. Consideration of Funding Proposal—Funding Proposal Package FP006
9. Consideration of Funding Proposal—Funding Proposal Package FP007
10. Consideration of Funding Proposal—Funding Proposal Package FP008
11. Consideration of Funding Proposal—Funding Proposal Package FP125
12. Consideration of Funding Proposal—Funding Proposal Package FP126
13. Consideration of Funding Proposal—Funding Proposal Package FP127
14. Consideration of Funding Proposal—Funding Proposal Package FP128
15. Selection Process and Terms of Reference of the Heads of the Accountability Units: Recommendations of the Appointment Committee
16. GCF Accredited Master Agreement between the Environment Investment Fund and the Green Climate Fund
17. Annex II: Initial Fiduciary Principles and Standards of the Fund
18. Guidelines Relating to the Observer Participation, Accreditation of Observer Organizations and Participation of Active Observers
19. Comprehensive Information Disclosure Policy of the Fund
20. Rules of Procedure of the Board
21. Initial Monitoring and Accountability Framework for Accredited Entities
22. Decision of the Board on the Administrative Guidelines on the Internal Control Framework and Internal Audit Standards
23. Initial Proposal Approval Process, Including the Criteria for Program and Project Funding (Progress Report)
24. Annex XIII: Initial Best-Practice Guidelines for the Selection and Establishment of National Designated Authorities and Focal Points
25. Trust Fund Contribution Arrangement (Canada)
26. Trust Fund Contribution Arrangement (Japan)
27. Trust Fund Contribution Arrangement (United Kingdom)
28. Trust Fund Contribution Arrangement (United Kingdom)
29. Report of the Green Climate Fund to the Conference of the Parties (2015)
30. Arrangements between the Conference of the Parties and the Green Climate Fund
31. Decision-making in the absence of consensus: Co-Chairs' proposal
32. Review of the financial mechanism
33. Decision of the Board on updated Terms of Reference of the Independent Redress Mechanism (Revised)
34. Independent Redress Mechanism Case register
35. Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA)
36. Draft decision -/CP.25 Report of the Green Climate Fund to the Conference of the Parties and guidance to the Green Climate Fund
37. Workplan and budget of the Independent Integrity Unit for 2020
38. Annual Implementation Report on the Policy on Prohibited Practices
39. Annual Implementation Report on the Policy on the Protection of Whistleblowers and Witnesses
40. Independent Evaluation Unit 2021 Work Plan and Budget and Update of its Three year Objectives and Work Plan
41. Fifth Review of the Financial Mechanism



## Key informant interviews

The key informant interviews were semi-structured and mostly used “mini tour” questions, that is, questions requiring respondents to provide details on particular or more specific issues or experiences (Spradley, 2016). Closed questions were also used to probe and obtain additional details from respondents, as suggested by Holstein and Gubrium (1995). The detailed key informant interviews included five GCF Board members, five representatives from AEs, three officials from Civil Society Organizations, two National Designated Authorities and two GCF Secretariat officials. The key informants interviewed are representative of the target population, as they all play, or have played, important roles in the GCF accountability regimes as account holders or account givers. The semi-structured interviews with very knowledgeable respondents made it possible to obtain in-depth knowledge required for this within-case analysis (George & Bennett, 2004; Paterson, 2010). The interviews were conducted between June 2016 and April 2020. All interviews were recorded with the concurrence of participants to facilitate the transcription and coding process, and respondents were assured of the anonymity of their responses.<sup>2</sup> To preserve anonymity, the quotes used in the paper refer to respondent groups, as opposed to specific institutions or individuals.

## Interview questions

**Opening comment:** Thank you for agreeing to participate in this study led by Wageningen University. This study aims to improve our understanding of the accountability regime of the GCF. We are interested in various facets and elements of accountability, including

Accountability element	Questions
Accountable to whom?	
Internal—formal	<ol style="list-style-type: none"> <li>1. a) Within your organization, what are the formal internal sources of control for accountability that you can think of to ensure that projects funded by the GCF perform well?</li> <li>1. b) How could this be improved?</li> <li>2. a) How does the hierarchical structure within your organization foster accountability regarding how well GCF-funded projects perform?</li> <li>2. b) How could this be improved?</li> <li>3. a) In terms of your professional accountability, what schemes or processes are in place to hold people to account regarding how well GCF-funded projects perform?</li> <li>3. b) How could this be improved?</li> </ol>
Internal—informal	<ol style="list-style-type: none"> <li>4. a) Are there any informal sources of control for accountability within your organization that affect how GCF-funded projects perform</li> </ol>

<sup>2</sup> Respondents were assured that the feedback they provided would be kept confidential; that is, no specific responses would be attributed to them directly and results would be clustered by respondent category (e.g., responses from AEs, GCF Board members).

(Continued)

Accountability element	Questions
External—formal	<p>(e.g., peer pressure, competitive work environment, collaborative culture)?</p> <ol style="list-style-type: none"> <li>4. b) How could this be improved?</li> <li>5. a) What are the formal sources of control for accountability within your organization that affect how GCF-funded projects perform (e.g., legislative or contractual)</li> <li>5. b) How could this be improved?</li> </ol>
	<ol style="list-style-type: none"> <li>6. a) What informal tools or approaches can the GCF Secretariat use to hold grant recipients to account?</li> <li>6. b) How could this be improved?</li> <li>7. How does pressure from civil society organizations and other informal accountability pressures influence your relationship with the GCF Board and Secretariat?</li> <li>8. a) What informal tools or approaches can you or your organization use to hold the GCF Secretariat to account?</li> <li>8. b) How could this be improved?</li> </ol>
Accountable about what?	<ol style="list-style-type: none"> <li>9. a) What is your organization accountable for with respect to the GCF?</li> <li>9. b) How is this established (e.g., via formal documentation, informal pressure)</li> </ol>
Accountability process	<ol style="list-style-type: none"> <li>10. a) What is the process whereby account can be given about the performance of GCF-funded projects?</li> <li>10. b) How is this done by staff and managers within your organization?</li> <li>10. c) How is this done with respect to elected officials (e.g., Secretary/Minister, parliament/legislature)?</li> <li>10. d) How is this done by staff and managers within the GCF Secretariat?</li> <li>10. e) How is this done by the GCF Board?</li> <li>10. f) How is this done with respect to the UNFCCC COP?</li> <li>10. g) How is this done with respect to GCF donors?</li> </ol>
Accountability criteria/standards	<ol style="list-style-type: none"> <li>11. a) When GCF grant recipients give (or will give) account on their performance, against what will they be judged?</li> <li>12. b) Are there clear criteria or standards?</li> </ol>
Penalties and rewards	<ol style="list-style-type: none"> <li>13. a) What are the impacts or penalties associated with poor performance of projects funded by the GCF?</li> <li>13. b) Do you believe the impact or penalty, as well as the likelihood of facing the consequences, are a sufficient incentive to perform well as a recipient?</li> <li>13. c) What would help increase the incentive to perform better?</li> </ol>
Information for accountability	<ol style="list-style-type: none"> <li>14. a) What information obtained from AEs is most important for the GCF board to effectively play its role as account holder?</li> <li>14. b) How could it be improved?</li> </ol>



(Continued)

Accountability element	Questions
	15. How satisfied are you with the information you receive from AEs
	16. How does this information improve how projects are managed and achieve results?
	17. a) Are decisions about the board funding (re)allocation documented?
	17. b) How comprehensive is the written rationale for funding allocation?
	18. Do you think the GCF has a good ability to measure AEs' performance against standards?
	19. How well are AEs' indicators aligned with program goals?
	20. How would you describe the quality and credibility of evaluation data that will be produced by AEs?
	21. How comprehensive are the performance measurement and management systems that AEs need to put in place and follow?
	22. a) Are you familiar with the process of evaluation follow-up?
	22. b) Will the GCF undertake such follow-ups or request status updates from AEs?
	23. How broad is the disclosure approach for AEs and the GCF board?
	24. How does performance reporting engage of civil society?

internal and external stakeholders, formal and informal accountability drivers, the specific processes by which accountability is managed, the criteria or standards against which recipients are judged and the penalties and rewards for bad or good performance.

### Coding of documents and transcripts

The documents and interview transcripts were then coded to identify and understand the various elements of the GCF's accountability regimes. To do so, all documents and interview transcripts were uploaded into Atlas.ti, a software program for coding and interpreting textual, audio and visual data. Coding and quantification of relevant descriptive text and statements related to accountability was undertaken using a directed approach (Hsieh & Shannon, 2005), by using existing theory on accountability to identify key concepts as initial coding categories. Definitions for each code were then determined based on this theoretic foundation and coding instructions were written to ensure consistency in the use of the codes. The codebook developed included code definitions, as well as criteria for inclusion and exclusion. Additional codes were created as the first documents were being coded (i.e., inductively emerging themes). Some of these codes were to add specificity (i.e., narrowing down the concepts), while other codes were created with new findings. Gray et al. (1995) suggest that the preferred unit of analysis in document content analysis is sentences, as they are best suited to infer meaning. As such, coding was applied to individual sentences.

## Codebook for document review and interviews

Accountability element	Information source	Code Accountability element	Code Accountable to whom	Code Who is account giver	Code for ex ante/ex post and nature of obligation <sup>a</sup>	Coding instructions
Accountable to whom?						
Internal—formal	Institutions' terms of reference/charter and other documents	AIF (accountability element, internal, formal)	GM (GCF Secretariat management) GB (GCF Board)	GEa (GCF Secretariat employee) GMa (GCF Secretariat management) GBa (GCF Board)	XA (ex ante) XP (ex post)	To code as internal, the person/entity giving account and the forum (i.e., the person to whom account is given) must be within the GCF. The Board is considered internal for the purposes of this study. To code as formal, there needs to be evidence that documentation or process exists.
Internal—informal	Interview of GCF officials, donors and NGOs	Aii (accountability element, internal, informal)	GM (GCF Secretariat management) GB (GCF Board)	GEa (GCF Secretariat employee) GMa (GCF Secretariat management) GBa (GCF Board)	XA (ex ante) XP (ex post)	Even if there is evidence of ad hoc use/adoption, the element can still be considered formal. The coder should put in (in vivo) an additional code to describe the actor(s) involved in the accountability relationship (e.g., Administrative Accountability: Auditors, Inspectors and Controllers). Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient. Ex post accountability elements would be outputs and results achieved (after the transfer of money and the expending of effort). Vertical accountability refers to the situation where the forum formally wields power over the actor, perhaps due to the hierarchical relationship between actor and forum (e.g., employee to management). Horizontal accountability is when a hierarchical relationship is lacking between actor and forum (e.g., giving account to various stakeholders in society on a voluntary basis, mutual accountability between bodies standing on equal footing). Diagonal accountability are mostly administrative in nature (e.g., ombudsman, audit offices, inspectorates, supervisory authorities and accountants stand) with no direct hierarchical relationship, but a reporting function to the minister or to parliament and thus derive the requisite informal power from this. This is an indirect, two-step relation with a forum.
Internal—informal	Interview of GCF officials, donors and NGOs	Aii (accountability element, internal, informal)	GM (GCF Secretariat management) GB (GCF Board)	GEa (GCF Secretariat employee) GMa (GCF Secretariat management) GBa (GCF Board)	XA (ex ante) XP (ex post)	To code as informal, the person/entity giving account and the forum (i.e., the person to whom account is given) must be within the GCF. The Board is considered internal for the purposes of this study. To code as informal, there needs to be evidence that there is no documentation (e.g., policy, directive) or formal process that exists.
Internal—informal	Interview of GCF officials, donors and NGOs	Aii (accountability element, internal, informal)	GM (GCF Secretariat management) GB (GCF Board)	GEa (GCF Secretariat employee) GMa (GCF Secretariat management) GBa (GCF Board)	XA (ex ante) XP (ex post)	Evidence of ad hoc use/adoption is not a sufficient condition to be considered informal. Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient.

(Continued)

Accountability element	Information source	Code Accountability element	Code Accountable to whom	Code Who is account giver	Code for ex ante/ex post and nature of obligation <sup>a</sup>	Coding instructions
External—formal	Institutions' terms of reference/charter and other documents	AEF (accountability element, external, formal)	DD (donor, direct)	GEa (GCF Secretariat employee)	XA (ex ante)	To code as external, the person/entity giving account and the forum (i.e., the person to whom account is given) must not be within the GCF. The Board is considered internal for the purposes of this study.
			DI (donor, indirect, e.g., parliament)	GMa (GCF Secretariat management)	XP (ex post)	To code as formal, there needs to be evidence that documentation or process exists.
		UN (UNFCCC)	GBa (GCF Board)		Vertical	The coder should put in (in vivo) an additional code to describe the actor(s) involved in the accountability relationship (e.g., elected representative, political parties, voters, media).
		R (recipient country)		DDa (donor, direct)	Horizontal	Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient.
				Dla (donor, indirect, e.g., parliament)	Diagonal	Ex post accountability elements would be outputs and results achieved (after the transfer of money and the expending of effort).
				UNa (UNFCCC)		Vertical accountability refers to the situation where the forum formally yields power over the actor, perhaps due to the hierarchical relationship between actor and forum (e.g., employee to management).
				Ra (grant recipient)		Horizontal accountability is when a hierarchical relationship is lacking between actor and forum (e.g., giving account to various stakeholders in society on a voluntary basis, mutual accountability between bodies standing on equal footing).
				NGOa		Diagonal accountability are mostly administrative in nature (e.g., ombudsman, audit offices, inspectorates, supervisory authorities and accountants stand) with no direct

(Continues)

(Continued)

Accountability element	Information source	Code Accountability element	Code Accountable to whom	Code Who is account giver	Code for ex ante/ex post and nature of obligation <sup>a</sup>	Coding instructions			
External—informal	Interview of GCF officials, donors and NGOs	AEI (accountability element, external, informal)	DD (donor, direct)	GEa (GCF Secretariat employee)	XA (ex ante)	hierarchical relationship, but a reporting function to the minister or to parliament and thus derive the requisite informal power from this. This is an indirect, two-step relation with a forum.			
	Web commentary		DI (donor, indirect, e.g., parliament)	GMa (GCF Secretariat management)	XP (ex post)	To code as external, the person/entity giving account and the forum (i.e., the person to whom account is given) must not be within the GCF. The Board is considered internal for the purposes of this study.			
	COP21 Tweets		UNFCCC	GBa (GCF Board)	Vertical	To code as informal, there needs to be evidence that there is no documentation (e.g., policy, directive) or formal process that exists.			
Accountable about what?	Institutions' terms of reference/charter and other documents; Interview of donors and NGOs	AWhatFin (accountable about what—finance) AWhatRep (accountable about what—reporting)	GM (GCF Secretariat management) GB (GCF Board)	GEa (GCF Secretariat employee) GMa (GCF Secretariat management)	XA (ex ante) XP (ex post)	Finance includes official financial statements for a given project of organization, but also any financial information (e.g., expenditures, travel claims). Reporting includes official reports (e.g., financial statements, annual reports, technical reports), as well as any ad hoc reporting requested by interested parties.			
							DDa (donor, direct)	Horizontal	The coder should put in (in vivo) an additional code to describe the actor(s) involved in the accountability relationship (e.g., elected representative, political parties, voters, media).
							NGO	Diagonal	Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient.
							UNa (UNFCCC)	Vertical	Ex post accountability elements would be outputs and results achieved (after the transfer of money and the expending of effort).
							Ra (grant recipient)	Diagonal	Vertical accountability refers to the situation where the forum formally wields power over the actor, perhaps due to the hierarchical relationship between actor and forum (e.g., employee to management).
NGOa	Horizontal	Horizontal accountability is when a hierarchical relationship is lacking between actor and forum (e.g., giving account to various stakeholders in society on a voluntary basis, mutual accountability between bodies standing on equal footing). Diagonal accountability are mostly administrative in nature (e.g., ombudsman, audit offices, inspectorates, supervisory authorities and accountants stand) with no direct hierarchical relationship, but a reporting function to the minister or to parliament and thus derive the requisite informal power from this. This is an indirect, two-step relation with a forum.							

(Continued)

Accountability element	Information source	Code/Accountability element	Code Accountable to whom	Code Who is account giver	Code for ex ante/ex post and nature of obligation <sup>a</sup>	Coding instructions
Accountability element	AWhatPerf (accountable about what—performance)	Peer	GBa (GCF Board)		Performance includes any benchmarking information, outputs, outcomes/results/impact data/information.	
		DD (donor, direct)	DDa (donor, direct)		Process includes any procedure, rules or regulations that ought to be followed.	
		DI (donor, indirect, e.g., parliament)	Dla (donor, indirect, e.g., parliament)		“Other” should be used when there is indication of accountability about a specific issue that is not clearly financial or performance-related. In this case, the coder should put in (i.e., in vivo) an additional code that further describes “accountability about what”.	
		UNFCCC Cit (citizens) NGO	UNa (UNFCCC) Ra (grant recipient) NGOa			
Accountability process	Institutions' terms of reference/charter and other documents; Interview of donors and NGOs	APF (accountability process, formal)	GM (GCF Secretariat management)	GEa (GCF Secretariat employee)	To be construed as a process, one or more steps that ought to be followed must be identified.	
		APF (accountability process, informal)	GB (GCF Board)	GMa (GCF Secretariat management)	Processes can be formal or informal and even ad hoc if ad hoc, the coder should make note of it by adding “ah” as a code.	
		Peer	Peer	GBa (GCF Board)	As many of the parties involved in the process should be identified and this should be coded in vivo.	
		DD (donor, direct)	DDa (donor, direct)	DDa (donor, direct)	Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient.	
		DI (donor, indirect, e.g., parliament)	Dla (donor, indirect, e.g., parliament)	Diagonal	Ex post accountability elements would be outputs and results achieved (after the transfer of money and the expending of effort).	
		UNFCCC	Cit (citizens)	UNa (UNFCCC)		
		NGO		Ra (grant recipient) NGOa		

(Continues)

(Continued)

Accountability element	Information source	Code Accountability element	Code Accountable to whom	Code Who is account giver	Code for ex ante/ex post and nature of obligation <sup>a</sup>	Coding instructions
Accountability criteria/standards	Institutions' terms of reference/charter and other documents; Interview of donors and NGOs	ACI (accountability criterion/criteria, informal) ACF (accountability criterion/formal) ASI (accountability standard(s), informal) ASF (accountability standard(s), formal)	GM (GCF Secretariat management) GB (GCF Board) Peer	GEa (GCF Secretariat employee) GMa (GCF Secretariat management) GBa (GCF Board)	XA (ex ante) XP (ex post) Vertical	Criteria can be documented or informal, as well as applied on an ad hoc basis. If ad hoc, the coder should make note of it by adding "ah" as a code.
Penalties and rewards	Institutions' terms of reference/charter and other documents; Interview of GCF officials, donors and NGOs	API (accountability penalty, informal) APF (accountability penalty, formal) ARI (accountability reward, informal) ARF (accountability reward, formal)	GM (GCF Secretariat management) GB (GCF Board) Peer DD (donor, direct) DI (donor, indirect, e.g., parliament) UNFCCC Cit (citizens) NGO	GEa (GCF employee) GMa (GCF Secretariat management) GBa (GCF Board) DDa (donor, direct) Dla (donor, indirect, e.g., parliament) UNa (UNFCCC) Ra (grant recipient) NGOa	XA (ex ante) XP (ex post) Vertical Horizontal Diagonal	Penalties and rewards for bad or good performance can include fines, disciplinary measures, civil remedies or even penal sanctions, but they can also be based on unwritten rules, as in the case of the political accountability of a minister to parliament, where the consequence can comprise calling for the minister's resignation. Penalties and rewards can be documented or informal, as well as applied on an ad hoc basis. If ad hoc, the coder should make note of it by adding "ah" as a code. Ex ante accountability elements are put in place prior to any work being undertaken or even before any money has been transferred between donor and recipient. Ex post accountability elements would be outputs and results achieved (after the transfer of money and the expending of effort).

<sup>a</sup>Nature of obligation<sup>a</sup> is the terminology used by Bovens (2007) and was used for the categorization of the accountability findings (for the document review and the informant interviews).