

# Accounts of NGO performance as calculative spaces

Cuckston, Thomas

DOI:

[10.1016/j.cpa.2021.102374](https://doi.org/10.1016/j.cpa.2021.102374)

License:

Creative Commons: Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

*Document Version*

Peer reviewed version

*Citation for published version (Harvard):*

Cuckston, T 2022, 'Accounts of NGO performance as calculative spaces: wild animals, wildlife restoration and strategic agency', *Critical Perspectives on Accounting*, vol. 84, 102374.

<https://doi.org/10.1016/j.cpa.2021.102374>

[Link to publication on Research at Birmingham portal](#)

## General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

## Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact [UBIRA@lists.bham.ac.uk](mailto:UBIRA@lists.bham.ac.uk) providing details and we will remove access to the work immediately and investigate.

# Accounts of NGO Performance as Calculative Spaces: Wild Animals, Wildlife Restoration and Strategic Agency

Thomas Cuckston, University of Birmingham, [t.j.cuckston@bham.ac.uk](mailto:t.j.cuckston@bham.ac.uk)

## Abstract

Whereas corporations typically share a common primary objective of generating profits for their owners, non-governmental organisations (NGOs) principally pursue a panoply of various social and/or ecological objectives. Accordingly, an NGO's performance in pursuit of its objectives can rarely be accounted for in straightforwardly comparable quantitative terms. How then can an NGO instead construct qualitative accounts of its performance that show how it makes a difference in pursuit of its objectives? This paper examines qualitative accounts of performance against an objective to restore wildlife, which are included in the annual reports of a large conservation NGO. These accounts are conceptualised as being calculative spaces, configured by framing work being done within these accounts. Analysis of this framing work finds that these accounts identify a performance object (i.e. specific wild animal populations), establish relations that seemingly affect this performance object (i.e. threats to wild animal populations and actions to conserve these populations), and attribute the NGO with agency to make a difference to this performance object (i.e. as a strategic actor directing and co-ordinating wildlife restoration). Thus, this paper demonstrates that seeing quantitative and qualitative accounts of organisational performance in the same conceptual terms creates conditions of possibility for developing a fuller understanding of an organisation's calculations of its own capacity to act upon society.

## 1. Introduction

I am reading annual reports of WWF-UK, a conservation NGO to which I make a small donation each month<sup>1</sup>. WWF describes itself as 'the world's leading conservation organisation' and states its mission as being 'to create a world in which people and wildlife can thrive together' (WWF-UK, 2020). This is a mission that appeals to my own values and is the principal reason I want to (in a very small way) contribute towards supporting the organisation's work. These annual reports appear to be explicitly addressed to supporters like myself, with messages of thanks included each year to those who 'give us a donation, back our campaigns, or take part in one of our events' (WWF-UK, 2014, p. 9). The annual reports from 2013-14 to 2017-18 include sections purporting to report on WWF-UK's performance at restoring wildlife. Each of these sections is comprised of accounts relating to a particular wild animal species. The accounts contain both quantitative and qualitative information about the populations of these animals. However, upon reading these accounts, it quickly becomes apparent that there is no consistent quantitative measure here being used to account for WWF-UK's performance. I cannot directly compare across the accounts of animal species, nor track performance of the organisation through time. As a supporter of WWF-UK, I feel I am owed some accountability

---

<sup>1</sup> Throughout this paper, I have sought to walk a fine line between reflecting on a personal philosophical exploration (written largely in "first-person") and reporting the findings of a rigorously conducted interpretive academic study (typically requiring a more formal, distant, "third-person" style of writing).

regarding the effectiveness of my donation, but I am struggling to make sense of how these accounts can be (as they purport to be) accounts of this NGO's performance at restoring wildlife.

Extant accounting research on NGO annual reporting largely tells me I should dismiss these supposed accounts of performance as being mere self-serving impressions management. Various critical accounting studies argue that qualitative accounts in NGO annual reporting should be seen as being analogous to those in corporate annual reporting, written to legitimise rather than to discharge any kind of accountability (Conway, O'Keefe, & Hrascky, 2015; Dhanani, 2019; Dhanani & Connolly, 2015). But, I question whether this is a reasonable analogy. Corporations have a common primary objective, which is to generate profits for their owners (Gray, 2010). Performance against this objective is straightforwardly quantifiable and measurable through financial accounting. It therefore seems likely that qualitative accounts in corporate annual reports are indeed peripheral to the corporation's performance against this primarily financial objective. In stark contrast, NGOs have a panoply of various social and/or ecological objectives. Accordingly, there is no single metric that can universally account for NGO performance (Gray, Bebbington, & Collison, 2006). Indeed, an NGO's performance against its social and/or ecological objective(s) is unlikely to be straightforwardly amenable to quantitative measurement (Agyemang, O'Dwyer, & Unerman, 2019). Therefore, it seems reasonable to suggest that qualitative accounts in NGO annual reporting can have a more substantive role in accounting for organisational performance than is the case in corporate reporting.

In this paper, I will develop a conceptual framework for analysing and interpreting qualitative accounts of NGO performance. In order to do this I will draw on theoretical insights from Callon and Law (2005) and Callon and Muniesa (2005) on the framing work involved in achieving any particular form of calculation. I will thus conceptualise qualitative accounts of NGO performance as working to frame calculative spaces in which particular forms of agency – i.e. the capacity to perform by acting in some way that makes a difference (MacKenzie, 2009) – can be attributed to an NGO. I will then deploy this framework in the analysis of the framing work being done in WWF-UK's accounts of its performance at restoring wildlife within its 2013-14 to 2017-18 annual reports.

This paper makes three principal contributions to extant accounting literature. Firstly, by highlighting the framing work being done within qualitative accounts of NGO performance to configure a particular calculative space, the paper contributes to critical accounting literature on NGO annual reporting. Rather than simply dismiss such accounts as being mere self-serving impressions management akin to that found in corporate annual reporting (Conway et al., 2015; Dhanani, 2019; Dhanani & Connolly, 2015), focusing on framing work allows for a nuanced and constructive form of critical evaluation based on identifying what has been brought into, and what has been excluded from, any particular framed calculative space. Secondly, by drawing on theoretical insights from Callon and Law (2005) and Callon and Muniesa (2005) to identify three calculative stages of the framing work involved in constructing accounts of NGO performance, the paper contributes to a broader literature on NGO accountability. This extant literature identifies a tension in NGO accountability whereby NGOs can face increasing demands for quantified measures of their performance, but can also feel that such quantification and measurement produces an overly narrow and restrictive account of their organisational performance (O'Dwyer & Boomsma, 2015; O'Dwyer & Unerman, 2007, 2008). This paper offers a way for an NGO to better navigate this tension and resist demands for restrictive quantification and measurement of performance by more consciously engaging in the kind of framing work needed to discharge its accountabilities by more qualitative means. Thirdly, by showing that qualitative accounts of performance can be analysed in the same calculative terms as quantitative accounts of performance, the paper contributes to extant literature examining the framing work involved in performance measurement (Skaerbaek & Tryggestad, 2010; Vinnari & Skaerbaek, 2014),

extending the explanatory power of Callon's (1998b) notion of framing (and overflowing) as a way to analyse and understand what accounting does.

The remainder of this paper is structured as follows: the next section reviews extant literature on NGO accountability; section 3 theorises the framing work done by qualitative accounts of NGO performance; section 4 details the methods used in analysing the WWF-UK accounts; section 5 explains the results of this analysis; section 6 discusses these results and the implications for NGO accountability research and practice; section 7 then concludes the paper.

## 2. NGO Accountability

Roberts (1991, p. 365) argues that, at its heart, accountability is 'an insistence that one's actions make a difference to both self and others'. What is left open in this definition is how, in any given context, one is able to construct such an insistence. To insist that one is making a difference requires work to specify the criteria that define the difference one is seeking to make, and thus what constitutes desirable performance (Sinclair, 1995).

Increasingly, demands for organisations to be accountable have become akin to demands for the production of accounts that somehow render their performance measurable, commensurable, and therefore straightforwardly comparable (Power, 1996).

Perhaps the most intuitive contemporary function of accounting is that of performance measurement as a basis for evaluation and accountability. [...] [M]aking organisations accountable today typically means [...] appealing to the calculative infrastructure of accountancy to measure and compare performance (Miller and Power, 2013, p. 584).

In capitalist societies, profit-seeking corporations are typically regarded as being principally accountable to their shareholders, meaning that accounts of organisational performance tend to be dominated by concerns around financial performance (Penman, 2011; Schroeder, 2008). These concerns tend to be straightforwardly quantifiable in terms of financial statement numbers, and thus comparable through time and across different corporations<sup>2</sup> (Beunza & Garud, 2007). Increasingly, however, corporations are being encouraged to produce accounts of other aspects of their organisational performance, including in respect of the social and ecological impacts of their activities (Deegan, 2017; Thomson, 2014). These aspects of organisational performance are not as readily amenable to quantification and commensuration as financial performance, so such accounts tend to take a more qualitative approach, conveying narratives about the corporation's various social and/or ecological initiatives (Tregidga, Milne, & Kearins, 2014). Qualitative accounts of performance may contain numerical information. But whereas quantitative accounts of performance seek to systematically measure performance in terms of numbers, qualitative accounts of performance will use numbers in more *ad hoc* ways, as part of the narratives they convey. Where numerical information is presented in qualitative accounts of performance, this is presented as being only part of the story of how an organisation has performed in respect of some particular social and/or ecological objective(s). Such numerical information is not deployed consistently and is not presented as constituting an account of performance in and of itself. Quantitative and qualitative accounts of performance can thus be distinguished on the basis of their comparability. Quantitative accounts of

---

<sup>2</sup> It is perhaps worth noting that the apparent ease with which financial performance of organisations can be quantified and compared is itself a consequence of a great deal of framing work done by numerous parties across the accounting profession and beyond (Hines, 1988, 1991).

performance are numerical accounts that are commensurable across time and/or different organisations, meaning that the numbers these accounts contain are measurements of performance that can be directly compared to ascertain relative performance (i.e. whether an organisation is performing better or worse over time or in comparison to another organisation). Conversely, qualitative accounts of performance are not commensurable with each other, meaning that (even if they contain some numerical information) these accounts cannot be directly compared to ascertain relative performance. Qualitative accounts of performance are largely dismissed by critical accounting scholars as failing to address a corporation's social and environmental accountabilities (Dillard & Vinnari, 2019), being little more than mere impressions management aimed at helping to legitimise the corporation's profit-seeking activities (Gray, 2010; Milne & Gray, 2013).

Like corporations, large NGOs often include various qualitative accounts of performance in their annual reporting (Cordery, Belal, & Thomson, 2019). Recent critical accounting literature has characterised these accounts as being akin to the qualitative accounts produced in corporations' annual reports, serving merely as a means for impressions management. For example, Dhanani and Connolly's (2012, p. 1159) analysis of NGO annual reports and annual reviews leads them to conclude that such accounts 'appear to be crafted to cultivate a positive image of the organization ... [and so do] not discharge accountability but rather serve as publicity material'. Similarly, in a study of the annual reports of 19 Australian NGOs acting as overseas development aid agencies, Conway et al. (2015, p. 1091) find that the qualitative accounts conveyed within these reports do not serve to discharge these NGOs' accountabilities but rather are 'more reflective of impressions management'. Likewise, Dhanani and Connolly (2015, p. 617) analyse the annual reports of 12 large NGOs and find that these organisations, 'like their business counterparts, construct their reports to self-promote and portray themselves in a positive light'. They suggest that 'the growth in the size of NGOs has encouraged some to adopt, perhaps uncritically, the very practices from the business or private sector that the NGO sector has challenged' (p. 632). In a similar vein, Dhanani (2019, p. 28) analyses the photographs used in the annual reports of large international development NGOs and finds that these NGOs are 'mimicking the practices of corporate organisations' to manage their identities in ways that serve their own interests.

However, it is questionable whether it is fair to draw this analogy between corporate and NGO annual reporting. A fundamental difference between corporations and NGOs is that they pursue very different kinds of objective. Corporations tend to share a primary objective of generating profits for their owners (Annisette & Cooper, 2017). In contrast, NGOs pursue a panoply of social and/or ecological objectives, such as reducing poverty, improving public health, preventing human rights abuses, tackling climate change, or conserving nature (Ebrahim, 2003a, 2003b). Therefore, unlike for corporations, there is no obvious way to identify what constitutes desirable performance in pursuit of these varying objectives (Chenhall, Hall, & Smith, 2013, 2017). Whereas a corporation's performance in pursuit of its primary objective can be readily measured in terms of its profitability, an NGO's performance in pursuit of its objective(s) is unlikely to be amenable to measurement and commensuration.

[T]he relationship between [NGOs] and their stakeholders – and especially their funders – is not a purely economic one (unlike that between shareholder and company). It is a more complex relationship and reflects more complex attitudes and interactions between the organisation and its stakeholders. [...] Therefore to adjudge an NGO as "accountable" or "not accountable" on the presence of or absence of a predetermined singular measure of some performance or other is almost certainly mistaken (Gray et al., 2006, p. 335).

This suggests the possibility that qualitative accounts in NGO annual reporting play a more substantive role in addressing accountabilities than in corporate annual reporting. In corporate annual reports such accounts are peripheral to the primary performance metric of profitability. However, for an NGO there is no such straightforward performance metric, so these accounts may be seen to be more central to defining and reporting on its performance in pursuit of its objective(s).

Indeed, a pioneering study by Davison (2007), analysing the imagery used by Oxfam in one of its annual reports, highlights how the somewhat nebulous and contested accountabilities of this NGO cannot be discharged through numerical measures of performance alone.

The annual report is a prime vehicle of communication for large NGOs, and presents an opportunity to discharge such non-quantifiable accountability (Davison, 2007, p. 137).

Davison uses an interpretive method of analysis from cultural studies (Barthes, 1980) to show how the photograph on the front cover of Oxfam's annual report communicates information about its objectives and, thus, contributes to defining how Oxfam sees the 'intangible aspects of [its] accountability' (p. 152). This insight is supported by Hyndman and McConville's (2018) interview study of NGO managers responsible for preparing annual reports and annual reviews. These interviewees highlighted how, when producing these reports, they 'grapple with identifying and meeting the expectations of individual donors' (Hyndman & McConville, 2018, p. 234). Echoing Roberts' (1991) characterisation of accountability as an insistence that one's actions make a difference, interviewees suggest that donors ultimately want to know that the organisation to which they are donating 'is making a difference to the cause' (Hyndman & McConville, 2018, p. 234).

[T]hey want to know that they're *making a difference* (NGO manager, quoted in Hyndman & McConville, 2018, p. 234, emphasis added).

However, whilst both Davison (2007) and Hyndman and McConville (2018) link an NGO's annual reporting to the articulation of objectives against which the NGO deems itself accountable, both studies are silent on the question of how the NGO annual reporting can actually work to convey performance against these objectives. To begin to explore this question, it may be beneficial to consider how the wider NGO accountability literature has conceptualised NGO performance.

O'Dwyer and Unerman (2007) juxtapose what they see as two opposing forms of NGO accountability. They describe functional accountability as being concerned with aspects of NGO performance that can be reported as measurable outputs. Conversely, social accountability encompasses a wider, longer-term view of an NGO's performance in terms of outcomes and societal impacts resulting from the NGO's activities. Whereas functional accountability can be readily discharged through the reporting of quantitative performance indicators, the discharge of social accountability involves 'promotion of a qualitative orientation to accountability' (O'Dwyer & Unerman, 2007, p. 447). O'Dwyer and Unerman examine a case in which a large funder sought to encourage NGOs to adopt a performance reporting approach more akin to social accountability. However, they find that a lack of clear guidance for NGOs on what was expected of them, coupled with a continuing demand from the funder for verifiable indicators of their societal impact, led to 'confusion regarding the "how" of social accountability' (p. 461) and meant that NGOs mostly continued to report in ways characteristic of functional accountability. O'Dwyer and Unerman conclude that the funder's attempt to shift the accountability relationship failed largely because it 'mistakenly assumes that the attainment of [NGO] socially-oriented goals such as empowerment or policy advocacy can always be formally and exactly measured' (p.464).

In a subsequent study, O'Dwyer and Unerman (2008) take a slightly different approach to theorising the functional/social accountability divide. They introduce the term hierarchical accountability to mean a form of accountability to a small set of powerful stakeholders, particularly funders. O'Dwyer and Unerman suggest that a focus on hierarchical accountability leads to a 'temptation to measure impacts mechanically, in order to provide an impression of precision' (p. 804).

NGO 'performance' tends to be conceptualised around resource use, measuring immediate impacts using short-term quantitative targets (O'Dwyer & Unerman, 2008, p. 804)

In contrast, they define holistic accountability as being a form of accountability to a wider set of stakeholders, encompassing anyone who is impacted by the NGO's activities. A move towards holistic accountability 'expands the concept of 'performance' [...] to embrace quantitative and qualitative mechanisms concerned with signifying the long term achievement of organisational mission' (p. 804). Examining the case of Amnesty Ireland's efforts to strengthen its accountability mechanisms, O'Dwyer and Unerman find that the NGO has adopted a hierarchical approach, focussing principally on a small set of wealthy donors whose continuing support is seen as being critical to Amnesty Ireland's survival. This approach is seen to have led Amnesty Ireland towards developing quantitative performance indicators aimed at demonstrating the efficiency and effectiveness of particular campaigns. However, some of the managers interviewed by O'Dwyer and Unerman see this as actually undermining Amnesty's pursuit of its human rights mission, because they see these quantitative indicators as being overly simplified and misleading measures of the NGO's organisational performance. Furthermore, these managers complain that Amnesty's campaigns now have to be designed with quantitative performance measurement in mind, potentially limiting the scope for imaginative campaigns with complex outcomes.

A third approach to conceptualising forms of NGO accountability is offered by O'Dwyer and Boomsma (2015). They introduce the construct of imposed accountability, which they say 'prioritises formal, coercive, compliance-based forms of accountability that seek to hold NGOs responsible for their actions in a hierarchical manner using mainly quantitative measures' (p. 38). This is set against what they term felt accountability, in which people managing NGOs 'voluntarily take responsibility for opening themselves up to scrutiny, and for assessing their performance in relation to goals aligned to their NGO's mission' (p. 38). They examine the case of Oxfam Novib, which sought to influence accountability demands from its key funder, the Dutch government, in order to avoid the imposition of a rigid and restrictive accountability regime that detracted from its organisational mission. The notion of felt accountability is further developed in a study by Agyemang, O'Dwyer, Unerman, and Awumbila (2017), in which they interview NGO fieldworkers to understand their attitudes to accountability processes. They find that fieldworkers tend to see themselves as 'change agents' (p. 1001) and, far from being opposed to quantitative indicators *per se*, these fieldworkers seek out ways to make use of indicators to help enable them to do their work. These fieldworkers stressed, however, their desire to enrich such indicators with more qualitative reporting of stories from the field to place the quantitative measures in their proper context.

These divisions of functional/hierarchical/imposed versus social/holistic/felt forms of accountability highlight a fundamental tension in accounting for an NGO's performance. In line with trends throughout contemporary society (Miller & Power, 2013; Power, 1996), NGOs seemingly feel pressure to try to quantify and measure their performance as part of their efforts to discharge their accountabilities. However, NGOs also seemingly regard such quantification and measurement as producing overly narrow and restrictive accounts of their performance. Accordingly, an NGO can seek out (but perhaps fail to find) ways to account for its performance by more qualitative means, with the aim of discharging its accountabilities by establishing how its actions make a difference in the pursuit

of its social and/or ecological objective(s). This is encapsulated in Gray, Bebbington and Collison's (2006, p. 335) conceptualisation of the discharge of accountability for an NGO:

The very actions are the accountability and, more importantly perhaps, it is the knowledge that one is providing funding to an organisation which is doing something one would wish to do but which one is unable to do that is sufficient in and of itself (Gray et al., 2006, p. 335).

Whereas the critical accounting literature on NGO annual reporting would suggest that qualitative accounts of an NGO's performance should be dismissed as mere impressions management (Conway et al., 2015; Dhanani, 2019; Dhanani & Connolly, 2015), this wider NGO accountability literature instead suggests that these qualitative accounts can have a much more substantive role in defining what it means for a particular NGO to perform – that is, to act in a way that makes a difference.

This review of the NGO accountability literature has thus shed new light on my efforts to interpret WWF-UK's accounts of its performance in respect of restoring wildlife. These are ostensibly qualitative accounts purporting to be about the NGO's performance in pursuit of one of its stated objectives. So rather than dismiss these accounts as mere impressions management (cf. Conway et al., 2015; Dhanani, 2019; Dhanani & Connolly, 2015), it seems reasonable to infer that these accounts could be about establishing how WWF-UK's actions make a difference to the cause of wildlife restoration. What is still needed, however, is a way of analysing these accounts to understand how this is being done. In the next section, I will develop a framework for guiding such analysis.

### 3. Framing performance

[A]ny thing that does modify a state of affairs by *making a difference* is an actor (Latour, 2005, p. 71, emphasis added).

It is a basic tenet of the study of accounting as a social practice that accounts do not simply passively record reality, but rather accounts actively contribute to constructing reality (Hines, 1988). Accounting makes some things visible and keeps other things hidden, in ways that influence how people – and the organisations they comprise – are able to see and understand the world, creating particular possibilities for thought and action (Hopwood, 1992; Hopwood & Miller, 1994). Indeed, the capacity for people and organisations to act and give meaning to their actions – i.e. their sense of their own agency – is tied, in large part, to the calculative networks in which they are embedded (Miller, 1992, 2001).

Calculation and agency are two sides of the same coin. The agent-network is by construction calculative, but calculativeness could not exist without calculating tools, most notably the lowly and often disclaimed tools of accounting (Miller & O'Leary, 2007, p. 710).

In his work on calculation and calculativeness in markets, Callon (1998a, 1998b) employs a metaphor of framing to help make sense of how calculation and calculative action are achieved. He describes how markets engage in framing work to delineate spaces which define what is to be brought into a calculation and what is to be excluded, thus creating conditions in which market agents are able to perceive the world in some particular calculative format.

In short, a clear and precise boundary must be drawn between the relations which the agents will take into account and which will serve in their calculations, on the one hand, and the multitude of relations which will be ignored by the calculation as such, on the other (Callon, 1999, pp. 186-187).



In later work, Callon and Law (2005) generalise this conceptualisation of the framing work involved in any form of calculation and/or judgement. They argue that any distinction between calculation and judgement can be collapsed, such that both may be 'understood as a process in which entities are detached from other contexts, reworked, displayed, related, manipulated, transformed, and summed in a single space' (Callon & Law, 2005, p. 730). A calculative space can take any socio-material form. Its configuration depends upon the arrangement of all manner of entities that interact to organise the calculating process. In this way, the term calculation can be broadened so that it is not restricted only to processes involving quantification and measurement, but rather also includes any process of arranging entities within a space so as to as to derive a result<sup>3</sup>.

[W]e can think in the same terms about (quantitative) calculations and (qualitative) judgements. They are all about arraying and manipulating entities in a space in order to achieve an outcome, a conclusion (Callon & Law, 2005, p. 719).

Calculation (and/or judgement)<sup>4</sup> may be understood, therefore, to be a collective achievement. Different forms of calculation can be achieved depending on the configuration of a framed space. Correspondingly, work will always be required to frame a space configured to enable any particular form of calculation. This conceptualisation of calculation as a collective achievement leaves open the question of exactly how agency can be attributed within any given collective.

All action is collective [...]; what vary are the mechanisms for attributing the source of action (Caliskan & Callon, 2010, p. 10).

Indeed, attributing agency is itself a calculation requiring framing work to make such attribution possible. Different ways of framing actions will lead to different calculative judgements about where agency lies<sup>5</sup>. In this way, we can attribute different forms of agency to different actors, depending on how we frame the collective actions of these actors. Different accounts of these actions will, therefore, lead to different judgements being made about what particular difference has been made by what particular actor(s) in any given event. This judgement of how to attribute agency is, therefore, a result that can be extracted from a calculative space framed by some particular account of some particular action(s).

This way of understanding calculation and agency as a product of framing work has been deployed in various ways in extant accounting literature to theorise how various forms of accounting make performance measurement possible. Christensen and Skaerbaek (2007) study the emergence of

---

<sup>3</sup> A potentially helpful example of a qualitative form of calculation is a legal judgement. To achieve a judgement on a particular legal case requires a carefully structured process of bringing together various kinds of evidence, arranging these in ways that allow for it to be considered and tested, such that a clear and definitive conclusion can be reached (e.g. on whether or not a particular defendant is guilty). The process for achieving a legal judgement is determined by numerous socio-material entities, such as legal texts, the arrangement of a courtroom, the organisational structures of the judiciary, police and legal profession, and all manner of other things that interact to produce a calculative space in which this calculating process takes place.

<sup>4</sup> Callon and Law (2005) suggest borrowing Cochoy's (2002) term *qualculation* to capture the sense that calculation and judgement are fundamentally the same kind of process. However, I find it more helpful and intuitive to adopt Callon and Muniesa's (2005) approach of using the term *calculation* in the broad sense conceptualised here, to include both quantitative and qualitative elements of calculation and/or judgement. I will do so for the remainder of this paper.

<sup>5</sup> Caliskan and Callon (2010) suggest the example of a football game, where a victory can be attributed to the performance of a specific player (e.g. a star striker), or a group of players (e.g. a strong defence), or perhaps an experienced manager, or some other actor, depending on how one analyses the game and frames the actions of the team. Different accounts of the game will lead to different calculative judgements about which actor has made the key difference and thus about how that victory has been achieved.

performance reporting in the Australian and Danish public sectors, finding that particular reporting formats imposed by central governments affect how public sector organisations come to make sense of their own performance and sense of purpose. Skaerbaek (2009) studies the framing work of public sector auditors in Denmark as they seek to construct performance indicators that can render organisational efficiency measurable and auditable. Similarly, Vinnari and Skaerbaek (2014) examine the framing work involved in risk management and the forms of calculative agency that this produces. Explicitly linking calculation and strategy, a study of the formulation of corporate strategy in a Danish ferry company leads Skaerbaek and Tryggestad (2010, p. 122) to ‘conceive of strategy as an emerging calculative collective and temporary achievement’. They identify how accounting tools play a vital role in the framing work that establishes particular interested parties as being strategic actors, capable of strategizing and instigating changes in corporate activities. Building on this understanding of strategy as calculation, Kornberger (2017) conceptualises strategic agency in terms of an actor’s capacity to influence and navigate the calculative regimes in which it operates. Cuckston (2018c) also identifies accounting as playing a role in enabling strategy, showing how the calculative tools that comprise the *International Union for the Conservation of Nature* (IUCN) Red List of Threatened Species frame species extinction risk in a way that enables the formulation of various kinds of conservation strategies. Also on the issue of conservation, Sobkowiak, Cuckston, and Thomson (2020) analyse the framing work involved in calculating UK biodiversity indicators, which are used to define the UK government’s performance against its commitments to address biodiversity loss. Sobkowiak et al. find that this framing work drives the formulation of policy by making it possible for policy-makers to comprehend the problem of biodiversity loss in the UK and to envisage actions to address it. Likewise, Munasinghe, Cuckston, and Rowbottom (2021) analyse how sustainability certifications can frame the performance of agricultural practices in ways that enable movement towards sustainable production. This stream of research on the framing work involved in performance measurement shows how the process of constructing accounts of performance takes strategic effort to frame performance in ways that make possible particular forms of calculation and action. The specifics of what is included and what is excluded from performance measurement calculations contribute to determining what forms of agency can be attributed as a result of any given calculative framing.

To assist with the analysis of the framing work involved in achieving calculation, Callon and Law (2005), as well as Callon and Muniesa (2005), break down the process of calculation into three stages, as follows:

**First, the relevant entities are sorted out, detached, and displayed within a single space.** Note that the space may come in a wide variety of forms or shapes: a sheet of paper, a spreadsheet, a supermarket shelf, or a court of law – all of these and many more are possibilities. **Second, those entities are manipulated and transformed.** Relations are created between them, again in a range of forms and shapes: movements up and down lines; from one place to another; scrolling; pushing a trolley; summing up the evidence. **And, third, a result is extracted.** A new entity is produced. A ranking, a sum, a decision. A judgement. A calculation (Callon & Law, 2005, p. 719, emphasis added).

Analysing the framing work involved in achieving any particular form of calculation, therefore, involves identifying how a given calculative space is configured in respect of each of these three stages. Consideration of the first stage requires identification of what entities are being brought into the framed space. It is important to be mindful that such a space does not pre-exist the process of calculation, but rather is constructed by this process.

This single space has to be conceived of in a very broad sense: it is the 'account' itself but also, by extension, the surface on which the entities to calculate are moved (Callon & Muniesa, 2005).

Consideration of the second stage requires identification of the new relations created between entities brought into a framed space. Then, consideration of the third stage requires identification of the kind of result that can be extracted from a framed space. This result is the outcome of a calculation process and takes on an independent existence that, though derived from this process, is now separated from it.

A new entity must be produced (a sum, an ordered list, an evaluation, a binary choice, etc.) that corresponds precisely to the manipulations affected in the calculative space and, consequently, links (*summa*-rizes) the entities taken into account. [...] But it has to be able to leave the calculative space and circulate elsewhere in an acceptable way (without taking with it the whole calculative apparatus) (Callon & Muniesa, 2005, p. 1231).

These three stages of calculation thus provide a framework that can guide analysis of how any particular calculation is made possible by particular framing work. Moreover, it can be used to guide critical evaluation of a calculation. Callon (1998b) highlights how the process of framing a calculative space inevitably creates conditions whereby relations that have been ignored by a calculation will come to overflow the frame, threatening to challenge and undermine the calculation. No frame can entirely isolate a calculative space from the outside world. There will always be relations between entities inside a frame and entities outside a frame. Such overflowing relations cause effects that are not taken into account in calculations that have seemingly been achieved by the framing process. Overflows can inevitably occur and challenge the achieved calculation in respect of each of the three stages of calculation.

A flaw in a calculation may be connected to a shortcoming in one (or more) of the three steps of the calculation process (Callon & Muniesa, 2005, p. 1232).

As discussed above, extant literature tends to treat accounts as being components of larger assemblages, contributing to a framing process (Christensen & Skaerbaek, 2007; Skaerbaek & Tryggestad, 2010; Sobkowiak et al., 2020). However, in this paper, the WWF-UK accounts of its performance in respect of restoring wildlife will be conceptualised as being calculative spaces in their own right. Accordingly, this paper analyses how the text of these accounts frames a space in which some form of calculation of WWF-UK's performance is made possible. In line with Gray et al. (2006), this means analysing how these accounts establish how WWF-UK is able to make a difference to wildlife restoration – i.e. how these accounts achieve a calculation that attributes WWF-UK with agency to restore wildlife.

This paper's analysis of WWF-UK's accounts of its performance in respect of restoring wildlife deploys Callon and Law's (2005) and Callon and Muniesa's (2005) three stages of the calculation process to identify how these accounts frame a space for calculating this performance. In respect of the first stage, this involves identifying the entity that is being brought into these accounts to serve as a performance object – i.e. an entity that has clear, unambiguous qualities and defines what constitutes performance in pursuit of some stated objective. In the case of these WWF-UK accounts, this means identifying how wildlife is being brought into these accounts and what exactly is supposed to constitute performance in restoring this wildlife. In respect of the second stage, this involves identifying the new relations that are created within the framed space between the identified performance object and those entities understood to be affecting the performance object. In the case

of these WWF-UK accounts, this means identifying the relations created within these accounts between wildlife and other entities seen, within these accounts, to be affecting the restoration of this wildlife. In respect of the third stage, this involves identifying the result that can be extracted from the calculation process. In the case of these WWF-UK accounts, this means identifying the form of agency – the capacity to perform and make a difference to the restoring of wildlife – which can, as a result of these accounts, be attributed to WWF-UK. The next section will set out the methods by which this analysis has been conducted.

#### 4. Research design

In this paper, I am seeking to make sense of a set of accounts of performance against a specified objective, which have been included in the annual reports of a large conservation NGO. I aim to understand how these accounts are constructed to frame a space for calculating this NGO's performance against its specified objective, where calculation is broadly defined to include any quantitative or qualitative process of arranging entities within a space so as to achieve a result (Callon & Law, 2005; Callon & Muniesa, 2005).

Annual reports are not the only medium by which NGOs account for their performance. NGOs also make use of their websites, social media channels, newsletters, and *ad hoc* reports (Agyemang et al., 2019; Goddard, 2021). The accounts of performance included within annual reports are therefore part of a broader body of texts produced by the NGO. However, the annual report is a particularly useful document for analysing accounts of performance because providing accounts of organisational performance is the annual report's explicit purpose (Cordery et al., 2019). In the case of WWF-UK, the annual reports from 2013-14 to 2017-18 each contain a section reporting on 'performance against our objectives' (WWF-UK, 2014, p. 13), with accounts of performance against each of six objectives set out in WWF-UK's five year strategy for 2013-18 (WWF-UK, 2013b). The focus in this paper is on the accounts of performance against just one of these objectives – i.e. the objective to restore wildlife. Focusing on just one of WWF-UK's objectives allows for an in-depth analysis of the framing work taking place within these accounts to achieve a calculation of performance against this particular objective.

The focus of the analysis is on the framing work being done within these accounts of performance, rather than any broader work within the organisation to frame its performance, or the motivations of managers who produce these accounts, or the way these accounts are perceived by readers. The accounts themselves are understood to be implicated in this framing work (cf. Latour, 1987), and so it is the accounts themselves that are being interrogated in this study, rather than the producers or readers of these accounts (Bebbington, Larrinaga-Gonzalez, & Moneva, 2008; Cuckston, 2017, 2019; Tregidga et al., 2014).

By conceptualising these accounts as calculative spaces (see section 3, above), the analytical aim is to identify the framing work within these accounts that configures these calculative spaces so as to achieve some particular form of calculation. To conduct this analysis, an interpretive close reading approach to discourse analysis has been adopted to examine and interpret these accounts (cf. Craig & Brennan, 2012; Cuckston, 2018a; Mauws, 2000). Discourse analysis is a way of examining how texts are constructed and organised in ways that create particular social realities (Phillips & Hardy, 2002). In research into accounting's role in creating social realities, discourse analysis is 'particularly suitable for researchers who seek to reveal how accounting language is a form of social action' (Khalifa & Mahama, 2017, p. 254). Given the vast array of possible texts that can be analysed, and the numerous theoretical lenses through which such analyses can be conducted, there is no standard procedure that

can be straightforwardly followed to ensure any particular discourse analysis will be considered to be robust and rigorous.

Analysing discourses [...] is an ongoing interpretive process. It [...] cannot be stripped down to particular sets of detailed rules (Khalifa & Mahama, 2017, p. 256).

Consequently, it is incumbent on the researcher to formulate a procedure for analysing the text in line with their own research aims and theoretical perspective. This particular analysis draws on theoretical insights from Callon and Law (2005) and Callon and Muniesa (2005), using their three stages of calculation as a guiding heuristic for examining the framing work being done within these accounts. A close reading was conducted of each of fourteen textual accounts in WWF-UK annual reports from 2013-14 to 2017-18 relating to a wild animal species and WWF-UK's performance in respect of restoring wildlife. Two levels of coding were used to support the analysis of the text. In the first level of coding, text was categorised in each of the fourteen accounts to identify those parts of the text involved in each of the three stages of calculation respectively. All extracts of text categorised as being involved in the framing work for each stage of calculation respectively were then brought together. For each stage of calculation, a second level of coding was then used to identify the specifics of the framing work being done in these accounts. Once all these extracts were coded, key themes were identified that could explain the framing work across these accounts at each stage of calculation.

Discourse analysis is inherently subjective, and so requires the researcher to give serious consideration to how their own values and preconceptions will affect their analysis (Tregidga et al., 2014). Another researcher, with a different set of values and preconceptions, would likely take a different approach to a discourse analysis of these accounts, and potentially could come to different conclusions about what these accounts are doing. My aim here, therefore, is to present my interpretation of what these accounts are doing, whilst being mindful that this interpretation stems (at least in part) from own subjective perspective.

[F]or discourse analysis, there is no one stable truth, but various unstable and, at times, conflicting "truths" (Khalifa & Mahama, 2017, p. 256).

The final part of this analysis identified potential points of overflow to the framing constructed within these accounts. This involved examining other texts relating to WWF-UK's performance at restoring wildlife and identifying how these texts potentially threaten to undermine the calculation achieved within these accounts. Relevant texts were identified by reflecting on my own experiences of engaging with WWF-UK as a supporter and small donor. Overflows can come from all manner of different sources (Callon, 1998b) and my aim here is to illustrate some possible sources of overflow to the framing in these WWF-UK accounts of performance. Texts were therefore identified to challenge each of the three stages of calculation respectively, from different kinds of sources. In respect of the first stage, texts were identified from within WWF-UK's own annual reports, challenging the framing of wildlife. In respect of the second stage of calculation, texts were identified from investigative journalism, challenging the framing of conservation actions. In respect of the third stage of calculation, texts produced by WWF-International (a coordinating body for WWF's national offices) were identified as challenging the framing of WWF-UK's strategic agency. For each of these texts I sought to extract an outline of how it challenges the respective framing in the WWF-UK accounts of performance in respect of restoring wildlife. This is a highly subjective process and is meant to illustrate how the framing work within these accounts of NGO performance can be critically evaluated by considering some of the myriad points of overflow that are inevitably created by this framing work.

## 5. Restoring wildlife

This section presents the results of the discourse analysis of the WWF-UK accounts of performance in respect of its objective to restore wildlife. Each of the following three subsections outlines the ways these accounts address each of the three framing problems outlined in section 3, and highlights potential sources of overflow to this framing.

### 5.1 Identifying wildlife as a performance object

A first stage of calculation is detaching those entities that are to be taken into account, bringing them into a single space (Callon & Law, 2005; Callon & Muniesa, 2005). For a calculation of performance, this means identifying a performance object that has clear, unambiguous qualities that define what performance means in a particular case.

In these accounts of its performance, WWF-UK specifies its objective as being to restore wildlife. The framing problem here is for WWF-UK to clearly and unambiguously identify the qualities that comprise wildlife as a performance object, thus defining what performance means in respect of restoring this wildlife.

WWF-UK's five-year strategy document asserts that its focus in respect of restoring wildlife is on '[p]opulations of 10 of the world's most iconic and threatened species' (WWF-UK, 2013b, p. 5). In each of the following five years of its annual reports, WWF-UK's accounts of its performance in respect of restoring wildlife concern a different combination of animal species<sup>6</sup>. Table 1 shows the species that are included in each year's accounts. Figure 1 shows a screenshot of the first of these qualitative accounts of performance (i.e. the 2013-14 account on tigers) to illustrate the narrative format of these accounts.

	2013-14	2014-15	2015-16	2016-17	2017-18
Tigers	x		x		
Amur leopards	x	x	x		
Giant pandas	x	x			
River dolphins		x			
Snow leopards		x			
Black rhinos				x	x
Javan rhinos				x	x
Mountain gorillas <sup>7</sup>				x	

Table 1. Wild animal species for which WWF-UK provides narrative accounts of its performance in respect of its wildlife restoration mission, included in its 2013-14 to 2017-18 annual reports.

<sup>6</sup> All the accounts in the restoring wildlife section of the annual reports from 2013-14 to 2016-17 are on a single wild animal species. In the 2017-18 annual report, the restoring wildlife section also includes two accounts that do not focus on a wild animal species. One is on tackling illegal wildlife trade and one is on strengthening the UK's Arctic policy. I have focussed this analysis on the accounts of wild animal species. However, these two issues-based accounts are brought into the analysis in sections 5.1.1 and 5.2 below.

<sup>7</sup> Mountain gorillas are not actually included in the list of chosen flagship species in the WWF-UK 2013-18 five-year strategy document, but are similar to those listed in respect of being large terrestrial mammals that are considered by western cultures to be charismatic.



Figure 1. Screenshot of a qualitative account of performance at restoring wildlife in WWF-UK's 2013-14 annual report. Each of the fourteen species-based accounts of performance at restoring wildlife in the 2013-14 to 2017-18 WWF-UK annual reports adopt this simple textual format.

In each of these accounts, the performance object is specified as a single animal species. With the focus repeatedly shifting from one animal species to another, the performance object is being specified differently in different accounts. Whilst some animal species are included in successive accounts, none are included across the whole five-year period. Consequently, there is an obvious incommensurability to these accounts, whereby the reports of performance within these accounts are not manifestly comparable with each other. This repeated switching of performance object means there is no way of using these accounts to meaningfully track changes over time in WWF-UK's performance in respect of restoring wildlife. This distinct lack of commensurability becomes even more apparent when considering the ways that these accounts report on these animal populations. The accounts frequently refer to quantitative information about population numbers. However, this information is not accounted for in any systematic fashion, but rather in *ad hoc* ways that are not amenable to direct comparison, either across species or through time. Repeatedly switching focus from one animal species to another thus creates what Callon and Law (2005) call an incalculability, whereby a space excludes the possibility of particular forms of calculation. In this case, these accounts create an incalculability around population numbers, whereby the information provided on population numbers does not allow for any kind of straightforward quantitative measurement of

performance<sup>8</sup>. However, Callon and Law (2005) argue that incalculabilities and calculabilities are two complementary outcomes of the same work of framing, such that creating possibilities for some forms of calculation necessitates excluding possibilities for other forms of calculation. Indeed, this quantitative incalculability around population numbers in the WWF-UK accounts opens up the possibility, within these accounts, of a more qualitative form of calculation of performance, in which identifying the particular qualities comprising these particular wild animal populations as performance objects is merely a first step in this calculating process. Table 2 provides an overview of the quantitative information on population numbers provided in each account.

[INSERT TABLE 2 HERE]

All except three of the accounts include quantitative information about population numbers. In those three accounts that do not include quantitative information, the accounts speak of efforts being made to obtain information about population numbers (see further discussion in section 5.3 below). The performance object in each of these accounts is thus being attributed with this shared quantified quality of its population number. This abstraction of wild animals into population numbers makes possible an account of restoring wildlife. Within these accounts, restoring wildlife seemingly means increasing the numbers for these wild animal populations. Indeed, where changes in population numbers are included (in half of these accounts), these are all reported as being increases<sup>9</sup>.

With the exception of the Ganges river dolphin, all the wild animal populations included in these accounts are described as being located in particular named protected areas (see table 2). Protected areas are places that are designated as being managed principally for the benefit of wildlife. By attributing wild animal populations with this quality of being located in protected areas, these accounts are further abstracting their respective performance objects. Being situated in protected areas means these wild animal populations are seemingly separated from the growing encroachment of human societies into wild places. These protected areas have supposedly been reserved for these animals, so that they can indeed be wild, separated from the developed and cultivated landscapes that are increasingly dominating Earth's biosphere. As such, within these accounts, the restoring of wildlife becomes a question of restoring the wildlife in these protected areas, these avowedly wild places that humanity has set aside for this purpose.

For two of these wild animal species – Amur leopards and Javan rhinos – the accounts take the abstraction of wild animal populations a step further by speaking, not just of population numbers, but also of number of populations. For both these species, their respective accounts express concern that all the wild animals of this species exist in a single remaining population in one place, greatly increasing their risk of extinction.

---

<sup>8</sup> Callon and Law (2005) argue that creating incalculabilities requires work in the same way that creating calculabilities requires work. They suggest two approaches to creating incalculabilities, which they call rarefaction and proliferation. Rarefaction involves withdrawing the resources necessary for calculation. Conversely, proliferation involves providing an overload of calculative resources. The WWF-UK accounts studied in this paper include elements of both approaches. On the one hand, rarefaction is deployed by providing only very limited information on changes in population numbers for these species over time, eliminating the possibility of using these straightforwardly as quantitative measurements of WWF-UK's performance. On the other hand, proliferation is deployed by repeatedly switching focus from one performance object to another, offering various snippets of incommensurable quantitative information that overload any possibility of bringing these together as a basis for quantitatively calculating performance.

<sup>9</sup> A possible exception to this is where an account in the 2015-16 annual report highlights how the lack of any recent tiger surveys in Malaysia means 'the situation [there] is unclear and of real concern' (WWF-UK, 2016, p. 16), with an estimated 250 wild tigers in the country compared to 500 in 2010.



The total wild population of Amur leopards is thought to be perilously low, at around 70 animals. All are found in Russia’s Land of the Leopard National Park and the adjacent border area with China. So it’s vital that we help to establish a second viable population (WWF-UK, 2016, p. 17).

The perilously small population of Javan rhinos is under severe threat from poaching. And because the last 67 of these rhinos are limited to one area – Ujung Kulon National Park, on the western tip of Java – they could face extinction if there is a natural disaster such as a volcanic eruption or tsunami. Establishing a separate population would reduce this threat. So, with our partners, we are developing a programme to translocate several rhinos, to begin establishing a viable second population (WWF-UK, 2017, p. 14).

This analysis therefore suggests that by framing wildlife in terms of these specified quantifiable wild animal populations inhabiting protected areas, these accounts can effectively detach wildlife from the biosphere and bring it into these abstract spaces produced within the WWF-UK annual reports. The abstraction of wildlife as quantified population numbers (and sometimes number of populations) in these particular places creates a clear and unambiguous sense, within these accounts, of what it means to restore wildlife. Performance against WWF-UK’s objective to restore wildlife becomes, within these accounts, a matter of somehow causing these numbers to increase.

#### 5.1.1 Overflow: Wildlife beyond protected areas

The focus in this paper is on the framing work done by accounts of performance against the objective of restoring wildlife. As discussed above in section 5.1 above, this objective frames wildlife in terms of 10 iconic and threatened species. These 10 species are all large terrestrial mammal species and can be described as what WWF calls flagship species, defined as ‘a species selected to act as an



Figure 2. The front cover of each WWF-UK annual report from 2013-14 to 2017-18 features a photograph of a large ‘charismatic’ terrestrial mammal species.

ambassador, icon or symbol for a defined habitat, issue, campaign or environmental cause' (WWF-International, 2021). These flagship species are 'usually relatively large, and considered to be 'charismatic' in western cultures' (WWF-International, 2021). Flagship species have featured prominently in materials produced by WWF since its creation in 1961 (Schwarzenback, 2011). Strikingly, iconic flagship species adorn the front covers of each of the 2013-14 to 2017-18 WWF-UK annual reports (see figure 2), perhaps highlighting the importance of these charismatic animal species in WWF-UK's framing of its organisational performance.

However, within these annual reports, WWF-UK also provides accounts of its performance against five other objectives stated in its five-year strategy document for 2013-18. These other objectives are: sustaining oceans and forests, keeping rivers flowing, ensuring timber and seafood are traded sustainably, reducing carbon emissions, and integrating the value of nature into political and economic decision-making. Within these accounts, wildlife is framed in various different ways, generating sources of overflow to WWF-UK's framing of what it means to restore wildlife.

The accounts of WWF-UK performance against its objective of sustaining oceans and forests identify the importance of marine protected areas to the conservation of marine animal species, including whales, penguins and harbour porpoises. Therefore, whereas the animal species included in the accounts of performance at restoring wildlife are all terrestrial species, these accounts now bring in marine animal species, extending the framing of wildlife to include wild animal populations inhabiting marine protected areas. There is thus an overflowing relation between the terrestrial and marine wild animal populations included in these two sets of accounts, highlighting how marine species in marine protected areas have been excluded from WWF-UK's accounts of its performance in restoring wildlife.

The accounts of WWF-UK performance against its objective of keeping rivers flowing identify various species that rely on free-flowing rivers, including river dolphins, freshwater porpoises, and gharials (a fish-eating crocodile), as well as species that depend on habitats created by free-flowing rivers, like overwintering wetland birds and migrating wildebeest. These species do not necessarily inhabit protected areas and are threatened by human use of rivers, such as dams, water extraction for agriculture, and industrial pollution. What it might mean to restore wildlife thus becomes a very different kind of challenge to that set out in WWF-UK's accounts of its performance in restoring wildlife. This overflowing relation highlights how increasing population numbers in protected areas will not, by itself, lead to restoration of wildlife dependent on rivers outside protected areas<sup>10</sup>.

The accounts of WWF-UK performance against its objective of ensuring timber and seafood are traded sustainably identifies various animal species that are being overexploited by the fishing industry, including various species of tuna, as well as Atlantic cod, Madagascan shrimp, and Orkney crabs. This framing of wildlife suggests that restoring wildlife does not mean protecting these wild animal populations *per se*, but rather ensuring these populations are sustainably managed in order to maintain sufficient stocks to exploit in the future.

The accounts of WWF-UK performance against its objective of reducing carbon emissions identify how a warming world threatens wildlife by changing the ecological conditions of the biosphere. This framing of wildlife identifies it as an interdependent element of ecological systems, in stark contrast

---

<sup>10</sup> This overflowing relation between different framings of wildlife becomes visible in the one account in the 2014-15 annual report on the Ganges river dolphin, which appears as something of an outlier in the WWF-UK accounts of performance in restoring wildlife, being a wild animal population that seemingly is not principally located in protected areas.

to the framing of wildlife as particular wild animal populations effectively detached from the wider biosphere<sup>11</sup>.

Finally, the accounts of WWF-UK's performance against its objective of integrating the value of nature into political and economic decision-making identify how doing so can encourage investment in 'natural capital restoration and improvement' (WWF-UK, 2015, p. 27). Here, wildlife is being subsumed into being a part of the human economy, providing essential ecosystem services to human society. This is a framing of wildlife far removed from the wild animal populations inhabiting places specifically designated and protected for wildlife.

These differing framings of wildlife serve to facilitate accounts of performance against each of these differing objectives. But, in different ways, these framings challenge what WWF-UK identifies as what it means to restore wildlife, and thus what it means for WWF-UK to perform in the pursuit of restoring wildlife. By separating out its accounts of performance against each of its objectives, WWF-UK has created its own source of overflows that challenge the framing work making such accounts of performance possible.

### *5.2 Manipulating the wildlife performance object*

A second stage of calculation concerns the manipulation of entities within a single space, creating new relations between them (Callon & Law, 2005; Callon & Muniesa, 2005). For a calculation of performance, this means establishing relations between the performance object and those entities that are seen to be able to affect the performance object.

The WWF-UK accounts of its performance in respect of restoring wildlife establish various relations between the wild animal populations that have been rendered into performance objects and other entities deemed to be affecting these populations. Some of these relations are seen to threaten these populations, causing decreases in population numbers (thus increasing their risk of extinction). Other relations are seen to help conserve these populations, supporting and perhaps increasing population numbers. Table 3 shows the threats and conservation actions identified in each of the fourteen accounts.

[INSERT TABLE 3 HERE]

Some of the threats to these wild animal populations mentioned in these WWF-UK accounts include reduction, degradation and fragmentation of habitat (especially giant pandas and Amur leopards, due to illegal or unsustainable logging practices), as well as vulnerability of small populations to disease and natural disasters (particularly Javan rhinos and Amur leopards). In respect of the Ganges river dolphins, these threats include effluent pollution from factories and chemical run-off from agriculture. However, by far the most prevalent threat in these accounts is that posed by illegal poaching of these wild animals. Poaching is cited in eleven out of the fourteen accounts, and is included as a threat to every animal species in these accounts, except for the river dolphins.

Notably, poaching is consistently spoken of in abstract terms, with no mention at all of the people who are actually doing this poaching, beyond asserting that poaching is being done 'to supply the

---

<sup>11</sup> In the 2017-18 WWF-UK annual report, this overflowing relation becomes visible in an account included within the restoring wildlife section, on WWF-UK's work on the UK government's Arctic policy, which identifies how climate change is 'dramatically changing the lives of the people and wildlife that live in the region' (WWF-UK, 2018, p. 17).

illegal wildlife trade' (WWF-UK, 2017, p. 14). Indeed, the accounts describe poaching in various ways that all add to this sense of it being a kind of abstract force threatening these animals<sup>12</sup>. Tiger poaching is described as being 'rife owing to the persistent demand for tiger products' (WWF-UK, 2014, p. 13). Black rhino poaching is described as being 'rampant' (WWF-UK, 2017, p. 14) and occurring at 'huge levels' (WWF-UK, 2018, p. 17). Similarly, the accounts speak of a 'resurgence of poaching' threatening giant pandas (WWF-UK, 2015, p. 14), a 'huge surge in poaching' threatening black rhinos (WWF-UK, 2017, p. 14), and a 'poaching outbreak' threatening Javan rhinos (WWF-UK, 2018, p. 17).

These accounts thus establish a prominent relation between the wild animal populations that comprise their respective performance objects and the seemingly abstract poaching threat. This relation affects these performance objects, putting downward 'pressure' (WWF-UK, 2017, p. 14) on population numbers.

Acting counter to these threats, the accounts establish various relations between wild animal populations and conservation actions. These include initiatives to reduce industrial and agricultural pollution (aimed at supporting Ganges river dolphins), the introduction of a livestock insurance scheme (aimed at supporting snow leopards by discouraging retribution from communities for livestock hunted by these wild animals), and reintroduction and translocation initiatives to create new populations (of Amur leopards and of Javan rhinos). However, by far the most prevalent of conservation actions in these accounts are efforts to improve the management and security of the protected areas inhabited by these wild animal populations.

Some of the accounts identify specific actions being taken to improve the suitability of protected areas for supporting these wild animal populations. For example, an account relating to Amur leopards speaks of 'boosting populations of prey species' (WWF-UK, 2016, p. 17). Likewise, an account relating to Javan rhinos gives some details about the work to better manage the protected area it inhabits.

[W]e're supporting the Ujung Kulon National Park Authority to scale up its habitat management. For instance, over the next five years we'll support work to control arenga palm in a 2,500-hectare area. This palm inhibits the growth of plants that rhinos eat. So removing it will mean the park will be able to support a bigger population of these critically endangered rhinos (WWF-UK, 2017, p. 15).

However, just as the most prominent threat in these accounts is illegal poaching, so the most prominent conservation action in these accounts is efforts to strengthen legal enforcement of protections to help tackle this poaching threat. For example, an account relating to tigers speaks of supporting 'improvements to the way anti-poaching camps function' (WWF-UK, 2014, p. 13) as well as 'widening the wireless communication network [...] to make patrolling operations more effective' (WWF-UK, 2014, p. 13). Similarly, an account relating to snow leopards asserts that strengthening enforcement of legal protections has been effective in preventing illegal poaching:

No snow leopards were poached during this reporting period in Nepal's Kanchenjunga Conservation Area (KCA). We have helped to achieve this by supporting the training of enforcement agencies and communities to improve their role in tackling poaching and illegal wildlife trade (WWF-UK, 2015, p. 15).

---

<sup>12</sup> The restoring wildlife section of the 2017-18 WWF-UK annual report includes an account of WWF-UK's efforts to tackle illegal trade in wildlife. This account describes how '[t]he world faces a poaching crisis', being driven by 'organised crime' (WWF-UK, 2018, p. 16).

Likewise, an account relating to black rhinos highlights work to better equip those actors seeking to disrupt illegal poaching:

[W]e provide vital equipment for rangers, as well as training for rangers and prosecutors to help ensure poachers are successfully prosecuted (WWF-UK, 2017, p. 14).

This analysis suggests that having framed wildlife in terms of wild animal populations in protected areas (see section 5.1 above), these accounts also frame the means by which this wildlife can supposedly be restored. By identifying specific relations that threaten these wild animal populations – most prominently the threat of illegal poaching – these accounts create a clear sense of the challenges that need to be overcome in order to restore wildlife. This then allows for identification of conservation actions – most prominently efforts to strengthen enforcement of legal protections – to overcome these challenges and thus pursue wildlife restoration. Within these accounts, restoring wildlife becomes a matter of engaging in these conservation actions to help overcome these challenges. It becomes clear and unambiguous, within these accounts, what WWF-UK should be (and apparently is) doing to pursue its objective. Performance against this objective can, within these accounts, be achieved by these means.

#### *5.2.1 Overflow: Ethical enforcement of protections*

In March 2019, BuzzFeed News published an investigative news report called ‘WWF’s Secret War’ (Warren & Baker, 2019)<sup>13</sup>, which offers an account of poachers and rangers that overflows the framing within the WWF-UK accounts. The BuzzFeed report describes WWF-funded rangers as being ‘vicious paramilitary forces’ engaging in beatings and torture of people suspected of being involved in poaching. Whilst the WWF-UK accounts frame illegal poaching as a kind of abstract force driving down wild animal population numbers, the BuzzFeed report provides accounts of individuals, including an account of a man named Shikharam Chaudhary, who died whilst imprisoned by wildlife rangers at Chitwan National Park in Nepal. He was suspected of helping his son to bury a rhinoceros horn in his backyard. His wife, Hira, told police that the rangers had ‘beat him mercilessly and put saltwater in his nose and mouth’. The rangers, funded by WWF, have special powers under Nepalese law to arrest and detain those suspected of wildlife crimes, with little oversight from government or the Nepalese legal system. The chief warden even has quasi-judicial powers to impose prison sentences. The BuzzFeed report asserts that Shikharam Chaudhary’s case is but one of numerous abuses documented by indigenous groups living near Chitwan. Further, the report maintains that similar abuses by rangers are perpetrated upon indigenous peoples and local communities living in and around WWF wildlife reserves across Asia and Africa.

The WWF-UK accounts identify the challenges that need to be overcome in order to restore wildlife, and the means by which this can be achieved, in seemingly clear and unambiguous terms. In stark contrast, the BuzzFeed report opens up profound ethical complications within the work of enforcing legal protections over protected areas and the wild animal populations that inhabit them. Whilst the

---

<sup>13</sup> This BuzzFeed News investigation was quickly picked up by the world’s media (e.g. BBC, 2019; Guardian, 2019). The accusations prompted WWF to appoint an independent panel, led by Judge Navi Pillay, a former UN High Commissioner for Human Rights, to assess the facts of WWF’s involvement in the human rights abuses alleged in the BuzzFeed News investigations. The panel produced its report in November 2020, broadly finding that whilst WWF has policies in place committing to upholding human rights, ‘implementation of [these] commitments has often been weak, at least in part because of a lack of adequate resources and expertise’ (Pillay, Knox, & MacKinnon, 2020, p. 16).

WWF-UK accounts offer a simple set of relations affecting wild animal populations – i.e. threats and conservation actions to counter these threats – the BuzzFeed report brings in relations that do not fit into this simplified frame, notably relations between conservation actions and the people who live alongside these wild animal populations, often (as in the case here with Nepal’s Chitwan National Park) people who have been cleared from their own lands in order to make way for protected areas. With these overflowing relations being rendered visible by the BuzzFeed report, the means by which WWF-UK can/should be pursuing wildlife restoration become considerably less clear and unambiguous.

### *5.3 Extracting agency to restore wildlife*

A third and final stage of calculation is extracting a result, a conclusion (Callon & Law, 2005; Callon & Muniesa, 2005). For a calculation of performance, this means extracting a new entity that can be understood to be performing, to have agency to pursue its objective. This new entity must be able to leave the framed space in which it has been created, so that it can circulate in the world outside.

In its accounts of its performance WWF-UK establishes itself as an agent capable of pursuing wildlife restoration. This is achieved by identifying WWF-UK as being instrumental in the framing work that makes it possible to act to restore wildlife. WWF-UK is seen, within these accounts, as actively working to define what it means to restore wildlife and how this should be pursued. It places itself at the centre of efforts to delineate the problem of wildlife restoration (i.e. increasing the population numbers of particular wild animal populations in protected areas) and the means to address this problem (i.e. strengthening enforcement of legal protections, particularly to tackle poaching). As such, by placing WWF-UK in a frame-making role where it is actively influencing and navigating the calculations that define what it means to perform, these accounts attribute WWF-UK with what Kornberger (2017) describes as strategic agency. These accounts thus establish WWF-UK, not as just one of many actors jostling to conserve wild animal populations, but rather as a key strategic actor, coordinating and directing collective action.

A particularly striking means of establishing WWF-UK as a strategic actor within these accounts is a frequent emphasis on its role in producing and monitoring wild animal population numbers (see table 4).

[INSERT TABLE 4 HERE]

Eleven of the fourteen accounts make explicit reference to conducting population surveys. Even the three accounts that do not reference full population surveys do mention population monitoring work, such as the use of camera traps and genetic analysis of animal faeces. Indeed, the accounts often include considerable detail about this surveying and monitoring work, highlighting the extensive technical challenges involved in producing reliable wild animal population numbers.

This year we provided technical and monitoring support for a comprehensive survey of Amur tigers in Heilongjiang province in north-east China. [...] The survey combined information gathered from camera traps at 600 sites across 6000 sq km, winter transect surveys covering 2600 sq km and DNA analysis of droppings and hair (WWF-UK, 2016, p. 14).

It’s been a huge collaborative effort between three countries – Rwanda, Uganda and the Democratic Republic of the Congo. Together we’ve surveyed the entire 451 sq km of this landscape – twice. We recorded signs of mountain gorillas and other large mammals, as well

as any evidence of illegal activities. We also collected samples of gorilla faeces which can provide information about the health and genetic diversity of the gorillas. By conducting two sweeps and undertaking genetic analysis, we're ensuring we have robust data to provide the most accurate possible estimate of the mountain gorilla population (WWF-UK, 2017, p. 15).

By emphasising the considerable work that WWF-UK has done to produce these population numbers, these accounts establish WWF-UK as being central to the rendering of wildlife into a clear and unambiguous performance object, which is key to being able to organise actions to restore wildlife. WWF-UK is thus identified as actively creating the conditions that make it possible for these accounts to speak of its performance in restoring wildlife. It is not that WWF-UK's performance is simply being rendered visible by the framing work of these accounts. Rather, WWF-UK is seen, within these accounts, to be doing the framing work that makes possible these accounts of its performance.

This frame-making role for WWF-UK is further emphasised within these accounts by numerous references to WWF-UK's role in formulating plans and strategies for coordinating and directing collective conservation actions. Examples include WWF-UK contributing towards 'developing an action plan' for Ganges river dolphins in India (WWF-UK, 2015, p. 15), and 'developing a new rhino strategy' in Kenya and Tanzania (WWF-UK, 2017, p. 14).

Some of the accounts highlight how the survey and monitoring work is crucial for developing such plans and strategies. For example, an account on Amur leopards asserts that 'survey results will provide a basis for developing a landscape-based Amur leopard conservation plan' (WWF-UK, 2014, p. 14). Similarly, the account on Amur tigers in Heilongjiang province in north-east China asserts that a completed comprehensive survey of these animals 'will help us ensure plans to boost recovery of wild tiger numbers are based on the latest science' (WWF-UK, 2016, p. 14). This further underlines how WWF-UK is identified, within these accounts, as creating conditions – through its surveying and monitoring of population numbers – that make it possible to plan and strategise ways to restore wildlife.

Going further, the abstracting of wildlife into population numbers, made possible by this surveying and monitoring, allows for these formulated plans and strategies to incorporate quantitative targets. For example, an account on tigers attributes an observed increase in their global population to a WWF-UK plan called "TX2", described as 'our 12-year goal to help double wild tiger numbers' (WWF-UK, 2016, p. 14). Similarly, a conservation strategy for mountain gorillas is said to incorporate an 'aim of increasing the population from 880 in 2012 to 1100 by 2020' (WWF-UK, 2017, p. 15). Likewise, WWF-UK is said to have 'supported Kenya's government as it developed its 2017-21 black rhino action plan [...] to aim to increase Kenya's black rhino population to 830 by 2021, with an annual growth rate of 5% in areas that have established populations' (WWF-UK, 2018, p. 17).

This analysis suggests that the result that can be extracted from these accounts is an attribution of agency to WWF-UK to coordinate and direct restoration of wildlife. By highlighting WWF-UK's central role in the framing work that makes possible coordinated action to restore wildlife (i.e. the surveying and monitoring of populations, and the formulation of conservation plans and strategies), these accounts work to establish WWF-UK as being a vital strategic actor. In its surveying and monitoring work, WWF-UK is seen and understood to actively construct the particular wild animal populations that comprise the performance objects for wildlife restoration (i.e. constructing the first stage of calculation discussed above in section 5.1). In its formulation of conservation plans and strategies, WWF-UK is seen and understood to actively drive the conservation actions that seemingly can restore this wildlife (i.e. constructing the second stage of calculation discussed above in section 5.2). In this central frame-making role, actively influencing and navigating the calculative space defining

performance in wildlife restoration, WWF-UK is attributed, within these accounts, with strategic agency (cf. Kornberger, 2017). This result – this understanding of WWF-UK as being a strategic actor able to coordinate and direct conservation actions – is something that can leave the calculative space framed by these accounts and exist independently of these accounts. Extracting this result from these accounts of WWF-UK’s performance in respect of restoring wildlife can enable a supporter reading these accounts to take away an assurance that WWF-UK is seemingly a strategic actor capable of making a difference to wildlife restoration. These accounts do not *per se* measure WWF-UK’s performance in respect of restoring wildlife. Rather, these accounts establish WWF-UK as having strategic agency to perform in respect of restoring wildlife.

### 5.3.1 Overflow: A fundamental failure

WWF-International publishes a biennial account of the state of the world’s wildlife, which it calls its Living Planet Report (WWF-International, 2018). The report shows with stark precision, the state of Earth’s wildlife. By calculating and integrating trends in 16,704 wild animal populations across 4,005 different vertebrate species located around the world, the Living Planet Report documents an ‘astonishing decline in wildlife populations [...] – a 60% fall in just over 40 years’ (WWF-International, 2018, p. 4). The Living Planet Report thus offers an account that is considerably larger in scope than the WWF-UK accounts of individual animal species. Whilst the WWF-UK accounts focus solely on a few large mammal species over periods of a few years, the Living Planet Report has a much more expansive view of what constitutes wildlife and a much longer time frame over which changes in population numbers are accounted for.

Furthermore, within the Living Planet Report’s framing of wildlife, the principal threat facing wild animal populations is not poaching, but rather the dramatic loss and degradation of habitats, driven by large-scale land conversion to agriculture, which in turn is driven by ‘spiralling human consumption’ (WWF-International, 2018, p. 28).

[A] recent assessment found that only a quarter of land on Earth is substantively free of the impacts of human activities. This is projected to decline to just one-tenth by 2050 (WWF-International, 2018, p. 6).

In order to address this, the Living Planet Report suggests that humanity will need to instigate ‘major changes to production, supply and consumption activities’ (WWF-International, 2018, p. 28), constituting ‘a dramatic move beyond “business as usual”’ (WWF-International, 2018, p. 108).

Thus, whilst WWF-UK may be able to establish itself as a strategic actor capable of making a difference to the restoration of the wild populations of its chosen animal species, it is much less clear that WWF-UK has any such capability for restoration in respect of a much more inclusive framing of wildlife. Indeed, the Living Planet Report, documenting a vast decline in global wildlife over the lifetime of this NGO, can be read as an account of its fundamental failure to perform in the pursuit of its organisational purpose.

The Living Planet Report argues that the kind of changes to societies required to address the problem can only be achieved through the collective action of national governments, but it seems the NGO does not have the necessary influence to coordinate and direct this kind of action.



The extinction of a multitude of species on Earth seems not to have captured the imagination, or attention, of the world's leaders enough to catalyse the change necessary (WWF-International, 2018, p. 10).

Whilst a result that can be extracted from the WWF-UK accounts is an attribution of strategic agency to coordinate and direct wildlife restoration, this result is somewhat undermined by the overflowing accounts of wildlife, and of the challenge of restoring wildlife, provided by the Living Planet Report. With these overflows being rendered visible by the Living Planet Report, the extracted identity of WWF-UK as a strategic actor that is actually capable of performing in respect of restoring wildlife (beyond a selected handful of flagship animal species) may not, after all, survive intact outside of the space framed by its own accounts of its performance.

## 6. Discussion

In their exploration of what accountability does/should mean for an NGO, Gray et al. (2006) argue that, unlike for profit-seeking corporations, there is no singular measure of performance that can be used as the basis for discharging accountability by organisations that principally pursue various social and/or ecological objectives. Rather, the performance of an NGO is a matter of its action – i.e. what it does that makes a difference to its cause. Accounts of performance, for an NGO, can therefore be understood to be accounts of an NGO's action, in line with Roberts' (1991, p. 365) argument that accountability amounts to 'an insistence that one's actions make a difference'.

In this light, the WWF-UK accounts of its performance against its stated objective to restore wildlife can be seen to be an insistence that WWF-UK's actions make a difference to wildlife restoration. To achieve such an insistence, the accounts frame a calculative space in which (1) wildlife is objectified as population numbers of wild animal species in protected areas, (2) the means by which this wildlife can be restored (most notably strengthening legal protections to tackle illegal poaching) are seemingly clear and unambiguous, (3) WWF-UK is identified as a central strategic actor in planning and co-ordinating this restoring of wildlife. The result that can be extracted from this calculative space is thus to attribute WWF-UK with strategic agency to make a difference to wildlife restoration.

This interpretation of a set of qualitative accounts in an NGO's annual reporting stands in stark contrast to the extant critical accounting literature on NGO annual reporting, which largely dismisses such accounts as mere self-serving impressions management (Conway et al., 2015; Dhanani, 2019; Dhanani & Connolly, 2015). Whereas this extant critical accounting literature sees NGO annual reporting as analogous to corporate annual reporting, this paper has argued that these need to be interpreted in light of fundamentally differing organisational objectives. If it is accepted that NGOs principally pursue social and/or ecological objectives (rather than, for corporations, principally financial objectives), and that organisational performance for NGOs cannot therefore be straightforwardly measured using quantitative metrics, then the qualitative accounts in NGO annual reporting can be interpreted as being alternative means of accounting for organisational performance. The analysis of these WWF-UK accounts shows how this involves framing the NGO's performance to achieve a calculation attributing this NGO with some particular form of agency, in this case as a strategic actor in restoring wildlife. The framing work conducted to achieve this calculation involved abstracting wildlife in terms of quantitative wild animal population numbers to produce clear and unambiguous performance objects. Yet, these *ad hoc* presentations of numbers, pertaining to different wild animal species across different *ad hoc* time periods, do not in themselves constitute quantitative accounts of performance because they are incommensurable with each other. Rather,

these numbers form part of various narratives within these qualitative accounts of performance that establish how WWF-UK, as a seemingly central actor in the work of producing and affecting these numbers, can be seen and understood to possess strategic agency (cf. Kornberger, 2017).

Whilst this is a more sympathetic interpretation of NGO annual reporting, it does not close off the possibility of critical evaluation. Rather than simply dismiss this reporting as evidence that NGOs are mimicking corporations, it becomes possible instead to highlight how the framing work being done within these accounts has actively excluded things from the performance calculation. This conceptualisation of qualitative accounts of NGO performance as calculative spaces thus contributes to critical accounting literature on NGO annual reporting by offering a more nuanced, and potentially more constructive, form of critical evaluation based on identifying points of overflow to an NGO's framing of its performance that potentially undermine the calculation achieved in its accounts. Indeed, extant critiques of NGO annual reporting as being crafted to provide a positive image of the organisation (Dhanani & Connolly, 2012), as being concerned principally with the NGO's organisational legitimacy (Conway et al., 2015), as portraying the NGO in a positive light (Dhanani & Connolly, 2015) and as being constructed to serve to the NGO's own interests (Dhanani, 2019), are somewhat trivial given the context of this reporting. For these organisations that operate in the complex and challenging domains between the markets and the state (Gray et al., 2006), it is imperative to continually re-establish their own purpose, their reasons for existing. These NGOs will inevitably see themselves as doing good, and will seek to convey how they are a positive force in the world (Ebrahim, 2003a, 2003b). Substantive critique of NGO annual reporting, therefore, comes not from merely pointing out that these accounts reflect an NGO's desire to be seen be doing good, but rather from questioning the ways these accounts frame an NGO's capacity to be doing good. This questioning involves somehow identifying overflows to this framing, challenging the ways that NGOs attribute themselves with agency to make a difference. Such overflows can come from myriad different sources (some examples of which have been demonstrated in the WWF-UK case) and are an inevitable consequence of framing (Callon, 1998b). Any attempt by an NGO (or any other kind of organisation) to account for its performance will necessarily give rise to overflows and so be open to challenge. However, by highlighting overflows and their potential consequences, this form of critical evaluation creates opportunities for engagement and reframing to capture overflows and enhance NGO accountabilities. To respond to identified overflows, NGOs can work to try and reframe their performance in ways that capture the overflowing relations, providing a potentially more comprehensive account of how their actions make a difference. Further research in this area could investigate this potential for accounts of NGO performance to evolve over time in response to identified overflows.

This conceptualisation of an NGO's accounts of its performance, as being calculative spaces attributing agency to an NGO, also offers a contribution to the broader accounting literature on NGO accountability. This literature has identified a fundamental tension in how NGOs can account for their performance. A functional/hierarchical view of NGO performance is frequently imposed upon NGOs, with demands for quantification and measurement (O'Dwyer & Unerman, 2007, 2008). But this can be seen by NGOs to be a narrow and restrictive way of accounting for their performance, running up against an apparently felt desire to be accountable for a more social/holistic view of their performance (Agyemang et al., 2017; O'Dwyer & Boomsma, 2015). This literature has documented various efforts by NGOs to seek out alternative ways to account for their organisational performance that do not depend on overly restrictive quantification and measurement. But these efforts have evidently proved very difficult for NGOs. O'Dwyer and Unerman (2007, p. 461), for example, suggest NGOs face considerable 'confusion regarding the "how" of social accountability'. Conceptualising qualitative accounts of NGO performance as calculative spaces attributing agency to an NGO provides a

framework for understanding how such accounts can be constructed. This framework can help to analyse and explain NGO efforts to account for their performance through all manner of mechanisms, beyond just annual reporting. Large institutional funders could adopt this framework in their efforts to encourage NGOs to report their performance in ways amenable to discharging social accountability (O'Dwyer & Unerman, 2007). Rather than trying to fit an NGO's societal impacts into narrow conceptualisations of performance as something that can be formally and precisely measured, funders could establish narrative performance reporting formats structured around identifying (1) a performance object, (2) the relations that affect this performance object, and (3) how the NGO sees and understands its agency in respect of the performance object. Such a format can potentially guide NGOs towards providing qualitative accounts that tell a story of how the NGO has acted to make a difference in pursuit of a funded project's objective. Similarly, it may be that a large NGO can adopt this framework in its efforts to account directly to its stakeholders for its performance in pursuit of its long-term organisational mission (i.e. what O'Dwyer and Unerman (2008) call holistic accountability). In O'Dwyer and Unerman's (2008) case study of Amnesty Ireland, for example, this could be used to help design performance reporting formats that, unlike quantitative performance measurement, do not limit scope for imaginative campaigns with complex outcomes. Likewise, this framework could be used to help design internal accountability mechanisms within NGOs. Fieldworkers interviewed by Agyemang et al. (2017) expressed a desire to enrich their quantitative performance reporting with qualitative stories of their work, demonstrating a sense of what O'Dwyer and Boomsma (2015) call felt accountability. If fieldworkers' performance reporting mechanisms could be supplemented with suitably formatted spaces for narrative reporting, this could potentially help to guide fieldworkers and their managers towards improved understandings of their capacities to make a difference in the field. In summary, within this framework, discharging NGO accountability becomes a matter of somehow constructing accounts that can achieve a calculation attributing the NGO with agency to pursue, and make a difference to, its objective(s). Moreover, by becoming mindful of the three stages of the calculation process, it may be possible for NGOs to more confidently construct qualitative accounts of their performance and better resist demands for narrow and restrictive accounts of performance based on quantification and measurement (cf. Chua, 1986).

The operationalisation of Callon and Law's (2005) and Callon and Muniesa's (2005) three stages of calculation to guide analysis of qualitative accounts of NGO performance also offers a contribution to accounting literature on the framing work involved in performance measurement. Extant literature in this area focuses on accounts that somehow quantify performance. These include investment appraisal tools (Skaerbaek & Tryggestad, 2010), risk calculations (Cuckston, 2018c; Vinnari & Skaerbaek, 2014), product costing techniques (Skaerbaek, 2009), performance indicators (Christensen & Skaerbaek, 2007; Sobkowiak et al., 2020), and certifications (Munasinghe et al., 2021). In various ways, these accounts quantify and measure various aspects of organisational performance that, in turn, contribute to framing particular calculative spaces, from which can be extracted a calculative understanding of what it means for an organisation to perform, to act, and to make sense of such action – i.e. of an organisation's sense of its own agency (cf. Miller & O'Leary, 2007). In the case of NGO organisational performance, such quantification and measurement can be deemed to be highly problematic, leading to an overly restrictive sense of an organisation's agency (Agyemang et al., 2019). However, this paper has shown that qualitative accounts of performance can also be conceptualised and interpreted as framing particular calculative spaces, from which can be extracted particular understandings of organisational agency. This extends the explanatory power of framing/overflowing as a way to understand what accounting does. This conceptualisation shows that we can analyse and interpret qualitative accounts of performance in the same terms as quantitative performance measurement. Both qualitative and quantitative accounts of performance frame particular calculative

spaces for attributing particular forms of agency. This extension of the theoretical insight afforded by framing/overflowing opens up opportunities for analysis of the forms of calculation, and thus forms of agency, that can be achieved as a result of all manner of (qualitative and quantitative) forms of accounting for performance.

Specific opportunities for future research include studies analysing the framing work within accounts of performance beyond those in an NGO's annual reporting. This could include an NGO's website, social media channels, or newsletters. It may prove interesting to study the extent to which an NGO's framing of its performance is consistent across different media, or whether different accounts of performance interact such that overflows generated by one set of accounts are somehow captured by the framing work in another set of accounts. This will require careful reflection on the question of what "counts" as an account of NGO performance. There is also scope for examining the possible contribution of non-text elements of NGO reporting, such as photographs, to the framing work being done by NGO accounts of performance. This will raise further questions about the definition of qualitative accounts of performance and what can be regarded as constituting (part of) such accounts. Further insights could also be generated through interviews with preparers and users of NGO accounts of performance, to gauge the extent to which calculations achieved by these accounts are consciously constructed and/or perceived. Finally, comparative studies across different NGOs with similar objectives could provide valuable insights into how civil society more broadly frames its collective performance in addressing social and/or ecological problems, such as the restoration and conservation of wildlife (Bebbington, Cuckston, & Feger, 2021; Cuckston, 2018b, 2021).

## 7. Conclusion

This paper began with my own efforts to interpret WWF-UK's purported accounts of its performance in restoring wildlife, included in its annual reports from 2013-14 to 2017-18. In building a conceptual framework for such interpretation, this paper addresses a basic problem of understanding how NGOs can construct qualitative accounts of their performance. Conceptualising qualitative accounts of performance as calculative spaces, configured by the framing work being done within these accounts, enables an analysis of the process of calculation achieved by these accounts. Rather than see these accounts as being mere impressions management (Conway et al., 2015; Dhanani, 2019; Dhanani & Connolly, 2015), this conceptualisation allows a view of qualitative accounts of performance as being an insistence that this NGO can make a difference in its pursuit of its objectives (cf. Roberts, 1991). Furthermore, this conceptualisation allows for identification of overflows to the framing work done by these accounts, which potentially challenge the (qualitative) calculations of performance seemingly achieved by these accounts. Framing is never perfect or complete (Callon, 1998b) and neither, therefore, is an NGO's efforts to account for its performance and thus discharge its accountabilities.

In the case examined in this paper, WWF-UK has been seen to attribute itself with strategic agency to pursue the restoration of wildlife. The question of how we can recognise, understand, and account for organisational capacity to act upon society is of vital importance to the societal pursuit of sustainable development (Bebbington & Unerman, 2018; Gray, 1992). NGOs, and other organisations, will increasingly face demands to account for how they can contribute towards addressing the social and/or ecological problems facing humanity (Bebbington & Unerman, 2020). This paper has demonstrated that organisational efforts to discharge such accountabilities can involve more than just quantitative performance measurement. Rather, to more fully understand an organisation's calculations of its own capacity to act upon society we can also take seriously its qualitative accounts

of its performance. Conceptualising both quantitative and qualitative accounts of performance as calculative spaces creates the conditions of possibility for developing this understanding.

## References

- Agyemang, G., O'Dwyer, B., & Unerman, J. (2019). NGO accountability: retrospective and prospective academic contributions. *Accounting, Auditing and Accountability Journal*, 32(8), 2353-2366.
- Agyemang, G., O'Dwyer, B., Unerman, J., & Awumbila, M. (2017). Seeking "conversations for accountability": mediating the impact of non-governmental organization (NGO) upward accountability processes. *Accounting, Auditing and Accountability Journal*, 30(5), 982-1007.
- Annisette, M., & Cooper, C. (2017). Critical studies in accounting: researching the exercise of power. In Z. Hoque, L. Parker, M. Covalleski, & K. Haynes (Eds.), *The Routledge companion to qualitative accounting research methods*. Abingdon: Routledge.
- BBC. (2019). WWF accused of funding guards who torture and kill in poaching war. Retrieved from <https://www.bbc.co.uk/news/world-47444297>
- Bebbington, J., Cuckston, T., & Feger, C. (2021). Biodiversity. In J. Bebbington, C. Larrinaga, B. O'Dwyer, & I. Thomson (Eds.), *Routledge Handbook of Environmental Accounting*. Abingdon: Routledge.
- Bebbington, J., Larrinaga-Gonzalez, C., & Moneva, J. M. (2008). Corporate social reporting and reputation risk management. *Accounting, Auditing and Accountability Journal*, 21(3), 337-361.
- Bebbington, J., & Unerman, J. (2018). Achieving the United Nations Sustainable Development Goals: an enabling role for accounting research. *Accounting, Auditing and Accountability Journal*, 31(1), 2-24.
- Bebbington, J., & Unerman, J. (2020). Advancing research into accounting and the UN Sustainable Development Goals. *Accounting, Auditing and Accountability Journal*, 33(7), 1657-1670.
- Beunza, D., & Garud, R. (2007). Calculators, lemmings or frame-makers? The intermediary role of securities analysts. In M. Callon, Y. Millo, & F. Muniesa (Eds.), *Market Devices* (pp. 13-39). Oxford: Blackwell.
- Caliskan, K., & Callon, M. (2010). Economization, part 2: a research programme from the study of markets. *Economy and society*, 39(1), 1-32.
- Callon, M. (1998a). The embeddedness of economic markets in economics. In M. Callon (Ed.), *The laws of the markets* (pp. 1-57). Oxford: Blackwell.
- Callon, M. (1998b). An essay on framing and overflowing: economic externalities revisited by sociology. In M. Callon (Ed.), *The laws of the markets* (pp. 244-269). Oxford: Blackwell.
- Callon, M. (1999). Actor-network theory - the market test. *The Sociological Review*, 47(51), 181-195.
- Callon, M., & Law, J. (2005). On qualculation, agency, and otherness. *Environment and Planning D: Society and Space*, 23(5), 717-733.
- Callon, M., & Muniesa, F. (2005). Economic markets as calculative collective devices. *Organization studies*, 26(8), 1229-1250.
- Chenhall, R., Hall, M., & Smith, D. (2013). Performance measurement, modes of evaluation and the development of compromising accounts. *Accounting, Organizations and Society*, 38(4), 268-287.
- Chenhall, R., Hall, M., & Smith, D. (2017). The expressive role of performance measurement systems: a field study of a mental health development project. *Accounting, Organizations and Society*, 63, 60-75.
- Christensen, M., & Skaerbaek, P. (2007). Framing and overflowing of public sector accountability innovations: a comparative study of reporting practices. *Accounting, Auditing and Accountability Journal*, 20(1), 101-132.
- Chua, W. F. (1986). Radical developments in accounting thought. *The Accounting Review*, 61(4), 601-632.

- Cochoy, F. (2002). *Une sociologie du packaging ou l'âne de Buridan face au marché*. Paris: Presses Universitaires de France.
- Conway, S., O'Keefe, P., & Hrasky, S. (2015). Legitimacy, accountability and impression management in NGOs: the Indian Ocean tsunami. *Accounting, Auditing and Accountability Journal*, 28(7), 1075-1098.
- Cordery, C., Belal, A., & Thomson, I. (2019). NGO accounting and accountability: past, present and future. *Accounting Forum*, 43(1), 1-15.
- Craig, R., & Brennan, N. (2012). An exploration of the relationship between language choice in CEO letters to shareholders and corporate reputation. *Accounting Forum*, 36(3), 166-177.
- Cuckston, T. (2017). Ecology-centred accounting for biodiversity in the production of a blanket bog. *Accounting, Auditing and Accountability Journal*, 30(7), 1537-1567.
- Cuckston, T. (2018a). Creating financial value for tropical forests by disentangling people from nature. *Accounting Forum*, 42(3), 219-234.
- Cuckston, T. (2018b). Making accounting for biodiversity research a force for conservation. *Social and Environmental Accountability Journal*, 38(3), 218-226.
- Cuckston, T. (2018c). Making extinction calculable. *Accounting, Auditing and Accountability Journal*, 31(3), 849-874.
- Cuckston, T. (2019). Seeking an ecologically defensible calculation of net loss/gain of biodiversity. *Accounting, Auditing and Accountability Journal*, 32(5), 1358-1383.
- Cuckston, T. (2021). Accounting and conservation: to live in harmony with nature, we must organise nature. *Social and Environmental Accountability Journal*, 42(1-2), 1-7.
- Davison, J. (2007). Photographs and accountability: cracking the codes of an NGO. *Accounting, Auditing and Accountability Journal*, 20(1), 133-158.
- Deegan, C. (2017). Twenty five years of social and environmental accounting research within Critical Perspectives on Accounting: hits misses and ways forward. *Critical Perspectives on Accounting*, 43, 65-87.
- Dhanani, A. (2019). Identity constructions in the annual reports of international development NGOs: preserving institutional interests? *Critical Perspectives on Accounting*, 59, 1-31.
- Dhanani, A., & Connolly, C. (2012). Discharging not-for-profit accountability: UK charities and public discourse. *Accounting, Auditing and Accountability Journal*, 25(7), 1140-1169.
- Dhanani, A., & Connolly, C. (2015). Non-governmental organizational accountability: talking the talk and walking the walk? *Journal of Business Ethics*, 129, 613-637.
- Dillard, J., & Vinnari, E. (2019). Critical dialogic accountability: from accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting*, 62, 16-38.
- Ebrahim, A. (2003a). Accountability in practice: mechanisms for NGOs. *World Development*, 31(5), 813-829.
- Ebrahim, A. (2003b). Making sense of accountability: conceptual perspectives for northern and southern nonprofits. *Nonprofit management & leadership*, 14(2), 191-212.
- Goddard, A. (2021). Accountability and accounting in the NGO field comprising UK and Africa - a Bordieusian analysis. *Critical Perspectives on Accounting*, In Press. doi:<https://doi.org/10.1016/j.cpa.2020.102200>
- Gray, R. (1992). Accounting and environmentalism: an exploration of the challenge of gently accounting for accountability, transparency and sustainability. *Accounting, Organizations and Society*, 17(5), 399-426.
- Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability ... and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society*, 35(1), 47-62.
- Gray, R., Bebbington, J., & Collison, D. (2006). NGOs, civil society and accountability: making the people accountable to capital. *Accounting, Auditing and Accountability Journal*, 19(3), 319-348.

- Guardian. (2019). WWF accused of funding guards who 'tortured and killed scores of people'. Retrieved from <https://www.theguardian.com/global-development/2019/mar/04/wwf-accused-of-funding-guards-who-allegedly-tortured-killed-scores-of-people>
- Hines, R. (1988). Financial accounting: in communicating reality, we construct reality. *Accounting, Organizations and Society*, 16(4), 313-351.
- Hines, R. (1991). The FASB's conceptual framework, financial accounting and the maintenance of the social world. *Accounting, Organizations and Society*, 16(4), 313-351.
- Hopwood, A. (1992). Accounting calculation and the shifting sphere of the economic. *The European Accounting Review*, 1, 125-143.
- Hopwood, A., & Miller, P. (1994). *Accounting as social and institutional practice*. Cambridge: Cambridge University Press.
- Hyndman, N., & McConville, D. (2018). Trust and accountability in UK charities: exploring the virtuous circle. *The British Accounting Review*, 50, 227-237.
- Khalifa, R., & Mahama, H. (2017). Discourse analysis in accounting research. In Z. Hoque, L. Parker, M. Covaeski, & K. Haynes (Eds.), *The Routledge Companion to Qualitative Accounting Research Methods* (pp. 250-264). Abingdon: Routledge.
- Kornberger, M. (2017). The values of strategy: valuation practices, rivalry and strategic agency. *Organization studies*, 38(12), 1753-1773.
- Latour, B. (1987). *Science in action: how to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Latour, B. (2005). *Reassembling the social: an introduction to actor-network theory*. London: Pearson.
- MacKenzie, D. (2009). *Material markets: how economic agents are constructed*. Oxford: OUP.
- Mauws, M. K. (2000). But is it art? Decision making and discursive resources in the field of cultural production. *Journal of Applied Behavioral Science*, 36, 229-244.
- Miller, P. (1992). Accounting and objectivity: the invention of calculating selves and calculable spaces. *Annals of scholarship*, 9(1-2), 61-86.
- Miller, P. (2001). Governing by numbers: why calculative practices matter. *Social research*, 68(2), 379-396.
- Miller, P., & O'Leary, T. (2007). Mediating instruments and making markets: capital budgeting, science and the economy. *Accounting, Organizations and Society*, 32(7-8), 701-734.
- Miller, P., & Power, M. (2013). Accounting, organizing, and economizing: connecting accounting research and organization theory. *The Academy of Management Annals*, 7(1), 557-605.
- Milne, M., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the Global Reporting Initiative, and corporate sustainability reporting. *Journal of Business Ethics*, 118, 13-29.
- Munasinghe, A., Cuckston, T., & Rowbottom, N. (2021). Sustainability certification as marketisation: Rainforest Alliance in the Sri Lankan tea production industry. *Accounting Forum*, 45(3), 247-272.
- O'Dwyer, B., & Boomsma, R. (2015). The co-construction of NGO accountability: aligning imposed and felt accountability in NGO-funder accountability relationships. *Accounting, Auditing and Accountability Journal*, 28(1), 36-68.
- O'Dwyer, B., & Unerman, J. (2007). From functional to social accountability: transforming the accountability relationship between funders and non-governmental development organisations. *Accounting, Auditing and Accountability Journal*, 20(3), 446-471.
- O'Dwyer, B., & Unerman, J. (2008). The paradox of greater NGO accountability: a case study of Amnesty Ireland. *Accounting, Organizations and Society*, 33(7-8), 801-824.
- Penman, S. (2011). *Accounting for Value*. New York: Columbia University Press.
- Phillips, N., & Hardy, C. (2002). *Discourse analysis: investigating processes of social construction*. London: Sage.
- Pillay, N., Knox, J., & MacKinnon, K. (2020). *Embedding human rights in nature conservation: from intent to action*. Retrieved from [https://wwfint.awsassets.panda.org/downloads/2\\_ir\\_independent\\_panel\\_statement.pdf](https://wwfint.awsassets.panda.org/downloads/2_ir_independent_panel_statement.pdf)



- Power, M. (1996). *The audit explosion*. London: Demos.
- Roberts, J. (1991). The possibilities of accountability. *Accounting, Organizations and Society*, 16(4), 355-368.
- Schroeder, A. (2008). *The Snowball: Warren Buffet and the Business of Life*. London: Bloomsbury Publishing.
- Schwarzenback, A. (2011). *Saving the world's wildlife: WWF - the first 50 years*. London: Profile Books.
- Sinclair, A. (1995). The chameleon of accountability: forms and discourses. *Accounting, Organizations and Society*, 20(2/3), 219-237.
- Skaerbaek, P. (2009). Public sector auditor identities in making efficiency auditable: the National Audit Office in Denmark as independent auditor and modernizer. *Accounting, Organizations and Society*, 34(8), 971-987.
- Skaerbaek, P., & Tryggestad, K. (2010). The role of accounting devices in performing corporate strategy. *Accounting, Organizations and Society*, 35(1), 108-124.
- Sobkowiak, M., Cuckston, T., & Thomson, I. (2020). Framing sustainable development challenges: accounting for SDG-15 in the UK. *Accounting, Auditing and Accountability Journal*, 33(7), 1671-1703.
- Thomson, I. (2014). Mapping the terrain of sustainability and accounting for sustainability. In J. Bebbington, J. Unerman, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability*. Abingdon: Routledge.
- Tregidga, H., Milne, M., & Kearins, K. (2014). (Re)presenting 'sustainable organizations'. *Accounting, Organizations and Society*, 39, 477-494.
- Vinnari, E., & Skaerbaek, P. (2014). The uncertainties of risk management: a field study on risk management internal audit practices in a Finnish municipality. *Accounting, Auditing and Accountability Journal*, 27(3), 489-526.
- Warren, T., & Baker, K. (2019). WWF's Secret War: WWF Funds Guards who have Tortured and Killed People. Retrieved from <https://www.buzzfeednews.com/article/tomwarren/wwf-world-wide-fund-nature-parks-torture-death>
- WWF-International. (2018). *Living Planet Report - 2018: Aiming Higher*. Gland, Switzerland: WWF.
- WWF-International. (2021). Know your flagship, keystone, priority and indicator species. Retrieved from [https://wwf.panda.org/our\\_work/wildlife/flagship\\_keystone\\_indicator\\_definition/](https://wwf.panda.org/our_work/wildlife/flagship_keystone_indicator_definition/)
- WWF-UK. (2013a). *WWF-UK Annual Report and Financial Statements 2012-13*. Woking: WWF-UK.
- WWF-UK. (2013b). *WWF-UK Strategy 2013-18*. Woking: WWF.
- WWF-UK. (2014). *WWF-UK Annual Report and Financial Statements 2013-14*. Woking: WWF-UK.
- WWF-UK. (2015). *WWF-UK Annual Report and Financial Statements 2014-15*. Woking: WWF-UK.
- WWF-UK. (2016). *WWF-UK Annual Report and Financial Statements 2015-16*. Woking: WWF-UK.
- WWF-UK. (2017). *WWF-UK Annual Report and Financial Statements 2016-17*. Woking: WWF-UK.
- WWF-UK. (2018). *WWF-UK Annual Report and Financial Statements 2017-18*. Woking: WWF-UK.
- WWF-UK. (2020). Who we are. Retrieved from <https://www.wwf.org.uk/who-we-are>



Year	Animal	Quantitative Information about Population Numbers	References to Protected Areas
2014	Tigers	<ul style="list-style-type: none"> <li>increase of 60% from 2009, from around 120 to around 200 in Nepal</li> </ul>	<ul style="list-style-type: none"> <li>Terai Arc Landscape (Nepal)</li> <li>Sathyamangalem Tiger Reserve (India)</li> <li>Philibhit Tiger Reserve (India)</li> <li>Suklaphanta Wildlife Reserve (Nepal)</li> </ul>
	Amur Leopards	<ul style="list-style-type: none"> <li>increase from around 35 adults in 2007 to around 45 in Russia</li> </ul>	
	Giant Pandas		<ul style="list-style-type: none"> <li>Laoxiancheng Nature Reserve (China)</li> <li>Guanyinshan Nature Reserve (China)</li> <li>“20 nature reserves in Sichuan and Shaanxi province” (China)</li> </ul>
2015	Amur Leopards	<ul style="list-style-type: none"> <li>at least 57 individuals (including 6 cubs) in Russia’s Land of the Leopard National Park, up from around 35 in 2007</li> <li>around 20 in China</li> </ul>	<ul style="list-style-type: none"> <li>Land of the Leopard National Park (Russia)</li> <li>Lazovsky Nature Reserve (Russia)</li> </ul>
	Giant Pandas	<ul style="list-style-type: none"> <li>at least 1864 pandas in the wild, a rise of nearly 17% since 2003 (China)</li> </ul>	<ul style="list-style-type: none"> <li>“67 panda nature reserves in China”</li> </ul>
	River Dolphins		
	Snow Leopards	<ul style="list-style-type: none"> <li>population in Nepal estimated to be stable</li> </ul>	<ul style="list-style-type: none"> <li>Kanchenjunga Conservation Area (Nepal)</li> </ul>
2016	Tigers	<ul style="list-style-type: none"> <li>3900 wild tigers globally, up from 3200 six years ago</li> <li>only 250 in Malaysia, down from 500 in 2010</li> <li>no breeding populations in Cambodia, Laos or Vietnam</li> </ul>	
	Amur Leopards	<ul style="list-style-type: none"> <li>around 70 animals globally</li> <li>between 10 and 24 in China</li> </ul>	<ul style="list-style-type: none"> <li>Land of the Leopard National Park (Russia)</li> <li>Lazovsky Nature Reserve (Russia)</li> </ul>
2017	Black Rhinos	<ul style="list-style-type: none"> <li>around 5000 in Africa</li> </ul>	<ul style="list-style-type: none"> <li>Tsavo East National Park (Kenya)</li> <li>Selous Game Reserve (Tanzania)</li> </ul>
	Javan Rhinos	<ul style="list-style-type: none"> <li>increased from 63 to 67 since 2015 in Indonesia</li> </ul>	<ul style="list-style-type: none"> <li>Ujung Kulon National Park (Indonesia)</li> <li>Chikepuh Wildlife Reserve (Indonesia)</li> </ul>
	Mountain Gorillas		<ul style="list-style-type: none"> <li>Virunga Volcanoes (Rwanda, Uganda, DRC)</li> <li>Bwindi Impenetrable Forest (Uganda)</li> </ul>
2018	Javan Rhinos	<ul style="list-style-type: none"> <li>two newborns this year, bringing population to 68</li> </ul>	<ul style="list-style-type: none"> <li>Chikepuh Wildlife Reserve (Indonesia)</li> </ul>
	Black Rhinos	<ul style="list-style-type: none"> <li>745 in Kenya, a rise of 7% in a year</li> </ul>	<ul style="list-style-type: none"> <li>Solio Game Reserve (Kenya)</li> <li>Nakuru National Park (Kenya)</li> <li>Nairobi National Park (Kenya)</li> <li>Tsavo East Rhino Sanctuary (Kenya)</li> </ul>

Table 2: Overview of population numbers and references to protected areas included in each WWF-UK account of its performance at restoring wildlife.

Year	Animal	Threats	Conservation Actions
2014	Tigers	<ul style="list-style-type: none"> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>providing training and equipment to patrols</li> <li>widening wireless communication network for patrols</li> <li>improving management of habitat</li> </ul>
	Amur Leopards		<ul style="list-style-type: none"> <li>improving habitat and prey base</li> </ul>
	Giant Pandas		<ul style="list-style-type: none"> <li>promoting sustainable forest management practices</li> <li>improving management of nature reserves</li> </ul>
2015	Amur Leopards	<ul style="list-style-type: none"> <li>Logging</li> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>improving management of Land of the Leopard National Park</li> <li>tackling illegal activities (notably logging and poaching)</li> <li>reintroducing leopards in Lazovsky Nature Reserve</li> </ul>
	Giant Pandas	<ul style="list-style-type: none"> <li>Habitat Fragmentation</li> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>establishing panda nature reserves</li> <li>provide training for law enforcement to tackle poaching</li> </ul>
	Ganges River Dolphins	<ul style="list-style-type: none"> <li>Pollution</li> </ul>	<ul style="list-style-type: none"> <li>improving dolphin habitat</li> <li>working with leather and brassware industries to reduce pollutants</li> <li>improving water management practices</li> <li>promoting use of organic manures and biopesticides to reduce chemical run-off</li> </ul>
	Snow Leopards	<ul style="list-style-type: none"> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>supporting training of enforcement agencies and communities to tackle poaching and illegal wildlife trade</li> <li>establishing livestock insurance scheme</li> </ul>
2016	Tigers	<ul style="list-style-type: none"> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>improving protected area network</li> <li>increasing prey populations</li> <li>tackling wildlife trafficking and poaching</li> </ul>
	Amur Leopards		<ul style="list-style-type: none"> <li>reintroducing leopards in Lazovsky Nature Reserve</li> <li>improving management of protected areas</li> </ul>
2017	Black Rhinos	<ul style="list-style-type: none"> <li>Poaching</li> <li>Disease</li> <li>Reduced Habitat</li> </ul>	<ul style="list-style-type: none"> <li>providing equipment for rangers</li> <li>providing training for rangers and prosecutors</li> </ul>
	Javan Rhinos	<ul style="list-style-type: none"> <li>Poaching</li> <li>Natural Disaster (e.g. volcanic eruption or tsunami)</li> </ul>	<ul style="list-style-type: none"> <li>translocating rhinos to establish second population</li> <li>improving habitat management (esp. removing arenga palm)</li> </ul>
	Mountain Gorillas	<ul style="list-style-type: none"> <li>Poaching (Snares)</li> </ul>	<ul style="list-style-type: none"> <li>improving management and security of protected areas</li> </ul>
2018	Javan Rhinos	<ul style="list-style-type: none"> <li>Disease</li> <li>Poaching</li> <li>Natural Disaster</li> </ul>	<ul style="list-style-type: none"> <li>translocating rhinos to establish second population</li> </ul>
	Black Rhinos	<ul style="list-style-type: none"> <li>Poaching</li> </ul>	<ul style="list-style-type: none"> <li>equipping rangers to protect against poaching</li> </ul>

Table 3: Overview of threats faced by populations and conservation actions included in each WWF-UK account of its performance at restoring wildlife.

Year	Animal	Monitoring of Populations	Management Plans and Strategies
2014	Tigers	<ul style="list-style-type: none"> <li>helped Nepal's government undertake a national tiger survey</li> </ul>	
	Amur Leopards	<ul style="list-style-type: none"> <li>camera trap images and surveys</li> </ul>	<ul style="list-style-type: none"> <li>developing a landscape-based Amur leopard conservation plan</li> </ul>
	Giant Pandas	<ul style="list-style-type: none"> <li>infrared camera trapping</li> <li>national giant panda survey</li> </ul>	<ul style="list-style-type: none"> <li>using survey result to benchmark work and refine strategy</li> </ul>
2015	Amur Leopards	<ul style="list-style-type: none"> <li>supported a Russian census of the leopard population</li> <li>10,000 camera trap images</li> </ul>	
	Giant Pandas	<ul style="list-style-type: none"> <li>provided financial and technical support for national giant panda survey</li> <li>camera trap monitoring</li> </ul>	
	Ganges River Dolphins	<ul style="list-style-type: none"> <li>supporting preparation for planned census of dolphin population</li> <li>conducting comprehensive biodiversity surveys in Ganga river basin</li> </ul>	<ul style="list-style-type: none"> <li>developing an action plan with government and putting it into operation</li> </ul>
	Snow Leopards	<ul style="list-style-type: none"> <li>camera trapping</li> <li>genetic analysis of scats</li> </ul>	
2016	Tigers	<ul style="list-style-type: none"> <li>providing technical and monitoring support for comprehensive survey in north-east China</li> <li>camera traps at 600 sites</li> <li>winter transect surveys</li> <li>DNA analysis of droppings and hair</li> </ul>	<ul style="list-style-type: none"> <li>TX2: 12-year goal to help double tiger numbers</li> <li>survey results to help ensure plans are based on the latest science</li> <li>where some countries have not carried out recent tiger surveys the situation is unclear and of real concern</li> </ul>
	Amur Leopards	<ul style="list-style-type: none"> <li>status report</li> <li>camera traps and surveys</li> </ul>	<ul style="list-style-type: none"> <li>with Chinese government, jointly produced a status report and conservation action plan</li> </ul>
2017	Black Rhinos		<ul style="list-style-type: none"> <li>national black rhino management strategies for Kenya and Tanzania</li> </ul>
	Javan Rhinos	<ul style="list-style-type: none"> <li>camera traps</li> </ul>	
	Mountain Gorillas	<ul style="list-style-type: none"> <li>census of gorillas in Virunga volcanoes</li> <li>genetic analysis of faeces</li> </ul>	<ul style="list-style-type: none"> <li>survey information is critical in assessing how effective conservation plans are, and informing long-term planning</li> <li>aim to increase the population from 880 in 2012 to 1100 by 2020</li> </ul>
2018	Javan Rhinos	<ul style="list-style-type: none"> <li>camera traps</li> </ul>	
	Black Rhinos	<ul style="list-style-type: none"> <li>Kenya status report on its black rhino population</li> </ul>	<ul style="list-style-type: none"> <li>supported government to develop 2017-21 black rhino action plan</li> <li>aim to increase Kenya's black rhino population to 830 by 2021 with annual growth rate of 5%</li> </ul>

Table 4: Overview of monitoring of population numbers and formulation of management plans included in each WWF-UK account of its performance at restoring wildlife.