



# Is conservation basic income a good idea? A scoping study of the views of conservation professionals on cash giving programmes

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## ABSTRACT

Amongst mounting criticisms surrounding market-based instruments for conservation, there have been calls to develop new tools to incentivise conservation action. Conservation basic income (CBI) has recently been proposed as a means of combining the environmental aims of market-based instruments with the positive social impacts of cash transfer programmes. So far, CBI has only been discussed conceptually, with little attention given to the practicalities of implementing it, especially through empirical work. This scoping mixed-methods study is the first to explore the views of conservation professionals on CBI and applying cash giving for conservation. In our study, we use a questionnaire conducted with 45 conservationists experienced in working in low-income countries (though mostly originally from high income countries) and six in-depth interviews with an environmental NGO implementing cash transfers. The opinions of these professionals, who implement conservation policies and shape their uptake, provide insight into the real-world applicability of cash giving for conservation, and whether CBI might realistically be used. The study found that cash giving has support amongst our sample for use in conservation, and that CBI might be a popular proposal. However, due to the heterogeneity of rural communities and their development needs, CBI may not be applicable everywhere in its suggested form. Instead, CBI could potentially be refocused to 1) act as a framework for bespoke cash transfer programmes, and 2) be intended for use alongside parallel development programmes to enable greater conservation and development outcomes.

## 1. Introduction

Ongoing human-driven degradation of the planet's ecosystems is exacerbating anthropogenic climate change (Právělie, 2018; Gatti et al., 2021) and has led to a biodiversity crisis (Driscoll et al., 2018). To tackle this deterioration, the field of conservation has grown rapidly over recent decades, leading to numerous conservation streams with differing underlying philosophies (Doran and Richardson, 2010). In the late 20th century, a predominant stream became the use of market-based instruments (MBIs) (Fletcher, 2020). MBIs are intended to use or construct markets that assign a monetary value on the services that ecosystems provide, thus creating incentives for their conservation whilst simultaneously providing income towards rural livelihoods (Froger et al., 2015). Examples of MBIs include REDD+ (Reducing Emissions from Deforestation and forest Degradation) and Payments for Ecosystem Services (PES), both originally designed to provide payments to land managers in return for the protection of ecosystems and thus the provision of ecosystem services (Montoya-Zumaeta et al., 2021).

However, MBIs have been subjected to growing criticism. It has been argued that they conform to a neoliberal agenda that, through promoting capitalism, undermines any conservation gains they provide (Büscher et al., 2012). They have also been shown to negatively impact local social structures in some cases (Holmes and Cavanagh, 2016) and evidence of their ecological impact is limited (Börner et al., 2017). Furthermore, they may not work on a market-basis as intended, with certain MBIs instead working more like subsidies, rather than market instruments (Angelsen, 2017; Martin-Ortega and Waylen, 2018; Fletcher and Büscher, 2020; Yu et al., 2020).

The alleged weaknesses of MBIs have led to calls for new forms of environmental governance and conservation (Büscher and Fletcher, 2020; Smallwood, 2021). One possibility is the use of cash giving, or cash transfer programmes (CTPs), for conservation. CTPs do not rely on any market basis, but simply provide “transfers of cash from formal institutions to targeted individuals or households, usually to satisfy minimum consumption needs” (Garcia et al., 2012, p.3). In non-conservation contexts, cash giving has been shown to lead to highly

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positive results related to education, income security and health and nutrition, amongst other areas (Bastagli et al., 2019). However, other literature shows there are risks involved. For instance, cash transfers may have an impact on social relations (MacAuslan and Riemenschneider, 2011) and in some instances have been found to increase forms of abuse, such as controlling behaviour, amongst certain groups of recipients (Bastagli et al., 2016). Numerous forms of cash giving are delivered in the field of international development (Bastagli et al., 2016), but as yet barely at all in conservation. These CTPs can vary according to: the size and frequency of the payment; whether a CTP is targeted at certain recipients or given universally; and whether a CTP is conditional upon certain actions or is unconditional (Benhassine et al., 2015; Banerjee et al., 2017). Universal basic income (UBI) is a form of cash giving based on the foundations of unconditionality and universality. It is designed to provide a basic income (enough to cover one's basic needs) to individuals, often at a national scale (Bidadanure, 2019).

Aligned with their proposals for a new 'convivial conservation', Fletcher and Büscher (2020) propose applying CTPs to conservation through the use of a conservation basic income (CBI). A CBI would involve a basic, unconditional CTP, applied 'universally' amongst communities situated in areas of high conservational importance (Fletcher and Büscher, 2020). According to this design, CBI would resemble MBIs such as PES and REDD+, but would not be subject to the criticisms that have been made around their supposed ties to neoliberalism undermining any conservation gains. Equally, CBI's unconditional nature would not impose upon communities by tying them to certain behaviours to receive payments. Instead, CBI "would combine the social benefits of UBI with PES's focus on environmental protection and hence address shortcomings present in both mechanisms operating independently" (Fletcher and Büscher, 2020, p.5). Supposedly, CBI would therefore place greater emphasis on social justice and equity than its market-based predecessors, but would still address the biodiversity crisis (Fletcher and Büscher, 2020).

It seems plausible that CBI and other forms of cash giving could enable conservation through reducing poverty levels, thus lessening the impact of the poverty-environmental degradation nexus (Aggrey et al., 2010). This would enable recipients to avoid participating in destructive practices out of necessity (Fletcher and Büscher, 2020). Another possibility is that CBI could potentially enable conservation by empowering communities to resist pressures to sell their land to external, potentially destructive influences. However, what the impacts of CBI, or indeed any form of non-market-based cash giving, may be for conservation and environmental governance remains underexplored. While some initial findings indicate that cash giving has promise regarding reduced deforestation rates (Ferraro and Simorangkir, 2020), these relate to programmes conditional on educational, rather than environmental, outcomes. Conversely, others conclude that providing basic incomes might increase widescale resource use (Howard et al., 2019), with Fletcher and Büscher (2020) also acknowledging that this is a possible outcome. As such, whether CBI or other forms of cash giving could be used for conservation remains to be determined. Similarly, whether adjustments to the programme design, potentially through including targeting, conditionality, or varying the size of payments could enhance any environmental outcomes has not been empirically addressed at all. Therefore, despite calls for cash giving to be used as a means of environmental protection (Fletcher and Büscher, 2020), how it could work best in practice, and what the impacts of doing so might be, is uncertain.

The present scoping study aims to contribute to this gap in the literature by first briefly reviewing the literature for cases for and against cash giving. Based on the findings, a survey and interviews are used to assess the views of conservation professionals on CTPs generally, and CBI specifically. The views of professionals play a pivotal role in the uptake and shaping of new practices (Martin-Ortega et al., 2019b). They can therefore help to determine whether CBI (or cash giving more generally) has a future within conservation, and which areas of research will be most critical in developing the concept. Data were collected

through a survey to conservation professionals working in low-income countries, complemented with in-depth interviews to members of the non-governmental organisation (NGO) Cool Earth as a case study. Cool Earth has a longstanding practice on delivering cash transfer programmes to forest communities in Peru and Papua New Guinea, adding depth and highly relevant experience to the debate, and providing a form of 'ground truthing' to the views presented in the survey.

The specific research questions that this study addresses are: 1) What are the views of conservation professionals of using CTPs as conservation mechanisms, including reasons for and against its use? 2) What are the perceived risks and barriers to using cash giving in conservation? 3) Which specific variation(s) of cash giving (including CBI) do conservation professionals perceive to be applicable to conservation?

## 2. The case for cash giving in conservation

### 2.1. Criticisms to market-based instruments and the platform for cash giving

The growth of MBIs has become a notable feature of recent conservation (Sandbrook et al., 2013; Blanchard et al., 2018), while receiving significant criticism in the literature (Arsel and Büscher, 2012; Münster and Münster, 2012; Sandbrook et al., 2013; Holmes and Cavanagh, 2016). In particular, there has been criticism regarding how MBIs supposedly conform to a neoliberal agenda incompatible with environmental protection (Igoe and Brockington, 2007; Arsel and Büscher, 2012; Fletcher and Büscher, 2017; Allen, 2018). The argument goes that capitalism is a leading driver of the current environmental crises (Næss, 2006; Foster and Clark, 2009; Magdoff and Foster, 2011); through promoting the advancement of capitalism – as neoliberalism can be seen to do (Harvey, 2007) – MBIs may indirectly support the degradation of the ecological systems they are designed to conserve (Fletcher and Büscher, 2017; Allen, 2018). Büscher et al. (2012) reinforce this argument, suggesting that the market basis of MBIs restricts conservation to narrow, profit-focused frameworks that blinker it from its wider environmental and social impacts.

This claim is seen to be supported by evidence of PES and REDD+ schemes generating damaging social impacts (Calvet-Mir et al., 2015; Bayrak and Marafa, 2016; Hajjar et al., 2021), for example disrupting community livelihoods leading to food insecurity (Bayrak and Marafa, 2016). While the thorough review of Holmes and Cavanagh (2016) shows how impacts of MBIs are not universally negative, Börner et al. (2017) find little detailed understanding about the environmental effectiveness of PES, and there are allegations from several organisations that REDD+ has had no success in protecting trees or carbon stores (Rainforest Foundation UK, 2017).

Another criticism within the literature is that PES and REDD+ have abandoned their market-based roots. Due to the involvement of various actors (government bodies, NGOs, etc.) which control prices and facilitate payments, PES has been argued to function on a quasi-market basis (Van Hecken and Bastiaensen, 2010; Martin-Ortega and Waylen, 2018), or even via no market at all (Hahn et al., 2015; Fletcher and Büscher, 2017). Yu et al. (2020) support these suggestions through a thorough analysis of the PES literature, finding a large proportion of studies that frame PES as a form of ecological compensation, rather than an MBI. Martin-Ortega et al. (2019a) find that most PES for water services in Latin America have large subsidising components. Similarly, Angelsen (2017) find that contrary to initial intentions, no centralised REDD+ carbon market has materialised, supported by Well and Carrapatoso (2016) who find the REDD+ funding landscape to be highly fragmented. REDD+ can therefore be seen to have become a form of results-based aid (Angelsen, 2017), like PES, shifting away from its marketization origins.

These allegations regarding MBIs have raised calls for alternatives in the conservation agenda (Büscher and Fletcher, 2020; Smallwood, 2021). One recent suggestion is convivial conservation (Büscher and Fletcher, 2020), a post-capitalist movement that suggests we accept our

place as part of nature, living with it, not fencing it off or reducing it via economic valuations (Büscher and Fletcher, 2020). So far, discussions on convivial conservation have centred on its philosophical foundations (Bhola et al., 2020; Dunlap, 2020). While important, equally so is evaluating how it could be implemented practically. One suggested means is via a conservation basic income (Fletcher and Büscher, 2020). Learning from the supposed failings in the market basis of PES and REDD+, CBI moves away from their apparently neoliberal aspects, instead suggesting that we “call a spade a spade” (Fletcher and Büscher, 2020, p. 6), and focus on what it seems they have become – forms of cash giving. Specifically, CBI is a form of cash giving that would provide a basic income to all members of a community in areas of high ecological importance (Fletcher and Büscher, 2020).

## 2.2. The case for cash giving

Cash giving is the means through which poor households receive cash grants to help achieve their basic needs (Owusu-Addo et al., 2018). These grants may be given by a state body or NGO. The transfers may be given in a variety of means (for example via electronic payments), as one-off payments, or provided in regular instalments (Bastagli et al., 2016). Certain behavioural or spending requirements may sometimes be placed on the transfers (Bastagli et al., 2016).

Cash giving is often met with scepticism from a variety of stakeholders (Handa et al., 2018). There are some studies within the literature that support these concerns. For example, MacAuslan and Riemenschneider (2011) find that cash giving can impact social relations, while Jones (2016) highlights how cash giving may not be successful at achieving long-term poverty reduction goals. Importantly, these studies represent a minority of the literature. Many other studies demonstrate that concerns about cash giving are generally unfounded (Evans and Popova, 2017; Handa et al., 2018), with several wide-ranging reviews and evaluations finding highly positive results across education, health and nutrition, income generation, and other areas (Bastagli et al., 2016; Evans and Popova, 2017; Handa et al., 2018; Bastagli et al., 2019; Millan et al., 2019; Agrawal et al., 2020). This suggests that the recent calls for cash giving to be used within conservation (Fletcher and Büscher, 2020; Mumbunan et al., 2021) are coming from a basis of success within the field of poverty reduction.

Supporting these calls further, there is some evidence that applying cash giving to conservation could lead to positive environmental outcomes, in addition to social and economic ones. For example, studies that link poverty to environmental degradation (Aggrey et al., 2010; Masron and Subramaniam, 2019; Baloch et al., 2020) would suggest that the ability of cash transfers to reduce poverty would therefore reduce environmental degradation too. Aligning with this theory, Ferraro and Simorangkir (2020) comprehensively explore the impacts of a national CTP in India on forest cover, finding large reductions in deforestation rates. However, the CTP evaluated by Ferraro and Simorangkir (2020) did not have explicit environmental aims, so the study does not explicitly answer the question as to what the impacts may be when CTPs are applied to conservation. The same applies to Wilebore et al. (2019), who use an advanced randomized control trial and remote sensing data to contrastingly find an increase in resource use. However, the CTP in question here involved a large, one-off payment, not generalisable to CTPs as a whole. This demonstrates that there may be potential for cash giving to be applied to conservation, but the impacts of doing so, and under which form or forms it could be applied, are yet to be fully determined.

## 2.3. Variations of cash giving

Cash transfers cover a large span of programme designs and underlying ideologies (Bastagli et al., 2016). A pertinent example is the contrast between conditional and unconditional cash giving. Conditional CTPs make “transfers conditional on certain behaviours or

actions” (Bastagli et al., 2016, p. 12) from the recipients involved. Unconditional cash transfers, on the other hand, place no such conditions on the recipients. Instead, they are free to spend the money how they wish; recipients “are not tied to any particular behaviours” (Baird et al., 2014, p. 2) to continue receiving the payments.

While some studies have found no difference on certain outcomes because of changes to conditionality (Baird et al., 2014; Evans and Popova, 2017), several others have found slight but significant differences between conditional and unconditional CTPs (Baird et al., 2011; Akresh et al., 2013; Akresh et al., 2016; Bastagli et al., 2016; Banerjee et al., 2019). Each of these studies concludes that for specific outcomes, conditional cash giving is the better option. However, unconditional giving has been shown to produce a wider array of benefits (Baird et al., 2011; Banerjee et al., 2019), suggesting both unconditional and conditional programmes may have their merits and applications.

The choice also has implications from an ethical perspective, as placing conditions on recipients can be seen as colonial (Jenson and Nagels, 2016), or morally wrong (Freeland, 2007). There are practical considerations too, with unconditional CTPs potentially cheaper and easier to implement than enforcing strict conditions (Bastagli et al., 2016). As with cash giving more generally, there is little to no literature detailing the impacts of conditionality on environmental outcomes.

One prominent example of an unconditional CTP is the concept of universal basic income. UBI is “a cash transfer given to all members of a community on a recurrent basis regardless of income level and with no strings attached” (Hasdell, 2020, p. 3). Research up to this point generally points to UBI being a useful tool in social relief and poverty reduction circles (Jagodic, 2019; Hasdell, 2020). However, as Hasdell (2020) says in a thorough cross synthesis of reviews, “there is an obvious research evidence gap in the evaluation of an experimental, sustained UBI” (p. 18), with the study instead often relying on unconditional CTPs acting as approximations for UBI. The ecological impacts of UBI are even less understood, with potential for environmental impacts to be both positive and negative (MacNeill and Vibert, 2019).

The idea of a conservation basic income relies on the assumption of UBI creating positive environmental impacts, as it applies the principles of UBI but with conservation in mind, targeting it to communities in areas of high ecological importance (Fletcher and Büscher, 2020). However, while Fletcher and Büscher (2020) provide well-reasoned arguments in favour of the concept of CBI, how it would be implemented in practice is less certain, particularly while ensuring it remains basic and universal (Mumbunan et al., 2021). Fletcher and Büscher (2020) acknowledge this fact, and admit that, for example, whether CBI would be aimed at those in close proximity to ecological resources, or more widely to those that use said resources is yet to be determined (Fletcher and Büscher, 2020). Some aspects of the concept have been more firmly proposed. For example, the payment is declared to be delivered individually, with an aim for this to enable female empowerment (Fletcher and Büscher, 2020). While Fletcher and Büscher (2020) do not discuss this point in depth, it may be that individual payments could provide women with increased income and greater control over their own finances, in turn providing women with more freedom around work, societal roles, and domestic arrangements, with “a greater – and less gendered – range of ‘life options’” (Koslowski and Duvander, 2018, pp. 11). In whichever form CBI eventually takes, as an untested concept, the effectiveness, limits, and consequences of a CBI remain unknown.

## 3. Methodology

For this scoping study we used a mixed methods research design. We collected primary data from a quantitative questionnaire alongside qualitative semi-structured interviews to assess the perceptions of cash giving for conservation generally, and CBI specifically, amongst conservation professionals. Understanding professionals' views provides insight into how policy and environmental governance concepts may be

implemented in practice, and whether they are likely to be taken up at all (Martin-Ortega et al., 2019b). This is important to begin to determine whether cash giving could have a role in future environmental policies. As they are involved in implementing and designing environmental programmes, conservation professionals can provide insight into whether, or how, they may implement CBI within their work. The views of professionals can also highlight any areas of particular concern or uncertainty, which in turn can help to direct future research. While they may not be able to entirely accurately anticipate the costs and benefits of using CBI, their perspectives can be used to conceptualise potential impacts and what appropriate governance and management might be (Bennett, 2016). Perceptions of professionals can also provide insight into the “effectiveness, legitimacy and acceptability” (Bennett, 2016, p.7) of existing conservation initiatives, which may be useful in the design of future ones.

The questionnaire provides an overview of the views of conservation professionals working in low-income countries on the concept of cash giving and how it could be used for conservation. This offers insights into any consensus on the potential of cash giving and can uncover a wide range of opinions based on experience of multiple low-income country contexts. Restricting the focus to low-income country contexts allows for closer comparison with the literature (e.g., Holmes and Cavanagh, 2016). This is also aligned with the experience of the NGO selected for the interviews as a case study. The addition of a case study enables a development of analysis, “building on initial findings” (Denscombe, 2008, p. 272) from the quantitative survey. Specifically, interviews with staff of an NGO implementing CTPs allows for the opinions given in the questionnaire to be both challenged (to see if risks or perceptions of cash giving were realised in practice) and explored in more detail. While the sample size is small ( $N = 45$ ), as this study is an exploratory one aiming to understand the basic opinions about the potential use of a new concept (cash giving and CBI in conservation), it still adds value to the literature body. This exploratory methodology and application of case studies are accepted practice in the wider literature (Travers et al., 2016; Čapienė et al., 2021; Fuentes et al., 2021; Lauret et al., 2021). While only using one NGO limits the variety of experience regarding cash giving in conservation, this is accepted as a natural limitation, but still provides relevant insights to advance the conversation on cash giving for conservation. The mixed methodology creates a fuller picture of the views of conservation professionals by combining data from different sources (Denscombe, 2008).

### 3.1. Online questionnaire

#### 3.1.1. Sampling

The questionnaire predominantly used opportunity sampling of professionals in the field of conservation, who self-identified as having some experience or familiarity working in lower-income countries. The sample was gathered by sharing the questionnaire amongst specialised networks through academic and conservation practice contacts, as well as on social media, tagging conservation networks. Participants were also asked to disseminate the survey amongst their own contacts, thus incorporating a snowballing approach to sampling as well. The inherent problems of sampling conservationists, such as conservationists being a poorly defined group with no set list of members (Pienkowski et al., 2022), restricted the types of sampling available. While the sampling approach was chosen for feasibility reasons, it is aligned with other accepted research whose aims were targeted at those within the field of conservation with a specific interest in this issue (Sandbrook et al., 2013; Holmes et al., 2017; Martin-Ortega and Waylen, 2018; Martin-Ortega et al., 2019b; Bark et al., 2021).

#### 3.1.2. Respondents

A total of 45 people took part in the survey. Table 1 shows a sample description of the survey respondents, including their work sectors, number of years' experience in their sector, level of seniority within their

**Table 1**  
Sample description of survey respondents.

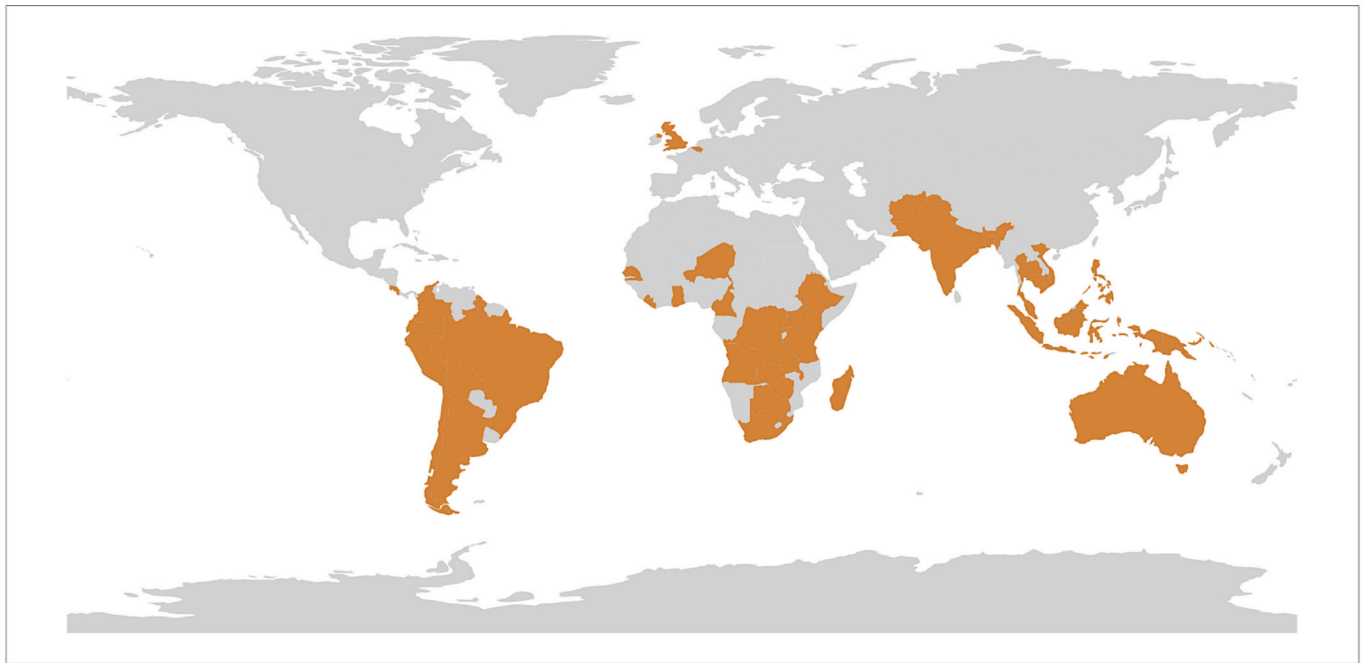
|  | No. of respondents |
|--|--------------------|
| <b>Work sector</b>                                   |                    |
| NGO: Environmental/Conservation focused              | 32                 |
| NGO: Other   | 1                  |
| Private sector: Environmental consultancy            | 1                  |
| National Government/Policy                           | 2                  |
| Academia   | 9                  |
| <b>Years' experience in the sector</b>               |                    |
| 0–5 years  | 17                 |
| 6–10 years   | 8                  |
| 11–20 years  | 17                 |
| 21+ years  | 3                  |
| <b>Level of seniority</b>                            |                    |
| Entry-level  | 7                  |
| Mid-level  | 25                 |
| Senior-level   | 13                 |
| <b>Training/educational background</b>               |                    |
| Biological Sciences                                  | 13                 |
| Environment  | 16                 |
| Social sciences                                      | 4                  |
| Economics  | 6                  |
| Engineering and Physical Sciences                    | 1                  |
| Business and Administration                          | 1                  |
| Other  | 4                  |
| <b>Country in which respondent is based for work</b> |                    |
| UK   | 23                 |
| USA  | 8                  |
| Papua New Guinea                                     | 2                  |
| Rwanda   | 2                  |
| Angola   | 1                  |
| Australia  | 1                  |
| Belgium  | 1                  |
| Brasil   | 1                  |
| Madagascar   | 1                  |
| Netherlands  | 1                  |
| Pakistan   | 1                  |
| Peru   | 1                  |
| Sweden   | 1                  |
| Uganda   | 1                  |

organisation, training or educational background, and the country in which the respondent is currently based for work. Fig. 1 shows a map of the countries in which the respondents' organisations operate. A full breakdown of these countries can be seen in Appendix 1.

As the authors of the present study are based in the UK, a consequence of using their networks within the sampling procedure is that the survey sample is skewed towards UK-based professionals. However, a good mix of countries of operation is present in the sample, with many low-income countries covered, as seen in Fig. 1.

#### 3.1.3. Questionnaire design

The questionnaire, available in full in Appendix 1, was delivered online between July and August of 2021. A definition of cash giving was provided at the start of the questionnaire. Participants were asked how familiar they are with the concept and then, using Likert scale questions, asked: whether they agreed with the use of cash giving as a poverty reduction tool and why; whether they agreed with its use in conservation and why; what the risks of doing so would be; and what the barriers would be. They were then asked their opinions on whether conditional cash transfers, unconditional cash transfers, UBI, and CBI were supported and should be used within cash giving, and why. A list of potential reasons was developed for each choice, based on perceptions, arguments, and discussions found in the literature. The literature used for developing the list was that covered in the literature review section



Note: 13 respondents answered 'global' or 'over 70 countries' to the question of their organisation's countries of operation and are not depicted here

Fig. 1. Map of countries in which survey respondents' organisations operate. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

of this paper, with Bastagli et al. (2016), Bastagli et al. (2019), Handa et al. (2018), Hasdell (2020), and Macneill and Vibert (2019) proving particularly useful in this regard. Any points pertinent to the research questions were recorded throughout conducting the literature review, with points then combined and consolidated into the final list given to participants. Participants were asked to select up to three of these reasons that they agreed with for each choice. Participants were also given the chance to list any other reasons that were not included. A total of 77 additional reasons were given across 14 different questions, covering 26 distinct themes. As this was an exploratory study, with a limited amount of literature and previous studies on the use of cash giving for conservation, a relatively large number of additional responses was anticipated.

After the initial question on cash giving for poverty reduction, the "neither agree nor disagree" option was removed from the Likert scale questions. This was to try and channel participants into making a choice one way or another based on the information provided (Babbie, 2020). As the different types of cash giving were likely to be new concepts to a large proportion of the participants, it was possible that many would simply select "neither agree nor disagree" as an 'easy option'. The chosen format tried to entice them to generate an opinion after consideration. This decision was appropriate as this scoping study was designed to reveal broad views about cash giving.

### 3.2. Case study interviews

In-depth interviews were carried out with staff of the NGO Cool Earth<sup>1</sup> in July 2021. To our knowledge, Cool Earth is one of the few NGOs (if not the only one) implementing CTPs for environmental purposes. Cool Earth are a medium-sized charity with annual income of around £4 million. They have 23 employees working in the UK, Peru and Papua New Guinea. According to their 2019/20 annual report (Cool Earth, 2020), Cool Earth are engaged in 13 community-led partnerships, which covers their work in the Amazon, Congo, and New Guinea

rainforests on development and conservation projects. These partnerships deal with a variety of projects covering areas such as livelihood diversification training, toilet construction, and cacao and coffee farming. As a climate change mitigation charity, Cool Earth have been running CTPs in rural forest communities since 2008 with the intention of protecting the carbon stored in forests. According to Cool Earth's Programmes Team, these CTPs currently cover 46 villages across Peru and Papua New Guinea, with payments varying from £6000 per community per year, up to £30,000 per community per year. The payments are largely unconditional and given to communities rather than individually, with communities typically spending the cash on healthcare, education, and administrative support (Cool Earth Action, 2021).

A critical case sampling method was chosen for the interviews as this allows for testing of ideas specific to the studied phenomena (Bryman, 2016), in this case the use of cash giving and CBI. Using staff from Cool Earth allowed for in-depth understanding of how cash transfers work in practice, and to determine whether the concerns raised during the questionnaire are realised in practice. As such, interviews were conducted with staff who had a significant involvement in, and detailed knowledge of, Cool Earth's cash giving programmes. This included project and programme managers, and senior level staff who had helped to design and implement the relevant programmes. Following introductory discussions with Cool Earth's Programmes Manager, six staff members who fit the criteria were approached by the researchers and invited to interview.

Of the six staff members who were invited to participate, all six agreed to be interviewed. Participants are referred to according to the codes given in Table 2. Interviews were conducted online, using a semi-structured interview format to allow for some flexibility in the interviews, and for participants to have some involvement in directing the conversation. This facilitated more expansive and in-depth explorations of the relevant topics and unexpected themes to be brought up (Bryman, 2016). The topics covered in the interview guide (available in Appendix 1) included definitions of cash giving; views on conservation basic income; preferences for certain forms of cash giving over others; market-based conservation instruments; Cool Earth's own cash giving programmes, including challenges and successes in implementation and

<sup>1</sup> <https://www.coolearth.org/why-we-exist/>

**Table 2**  
Description of Cool Earth Staff Members (CESMs) who participated in the interviews.

| Interview code | Seniority level | Country of residence | Interviewee role   | Education           |
|----------------|-----------------|----------------------|--|---------------------|
| CESM1          | Senior          | UK                   | Oversees programme design and implementation               | Biological sciences |
| CESM2          | Mid-level       | Peru                 | Coordinates Peru programmes                                | Development         |
| CESM3          | Senior          | UK                   | Oversees Cool Earth's strategy, operations, and programmes | Environment         |
| CESM4          | Mid-level       | UK                   | Manages Papua New Guinea programmes                        | Biological sciences |
| CESM5          | Mid-level       | Papua New Guinea     | Coordinates Papua New Guinea programmes                    | Biological sciences |
| CESM6          | Mid-level       | Peru                 | Manages Peru programmes                                    | Law / Environment   |

their impacts; any other experiences of cash giving in practice.

### 3.3. Analysis

Responses from the online questionnaire were analysed using descriptive statistics. Frequencies of responses were used as these are generally the most insightful way to analyse data from Likert scales (Sullivan and Artino, 2013). Frequencies were also used on the follow-up questions to determine the most popular reasons for agreeing or disagreeing with the cash giving scenarios.

A thematic analysis of the interviews was conducted using the Nvivo qualitative data analysis package (QSR International, 2021). A process of 'initial' coding, followed by 'focused' coding, created an iterative approach to the analysis of the data, which ensured that important but unexpected subjects were explored sufficiently (Charmaz, 2006). As cash giving in conservation is underexplored in the literature, with no known previous studies taking this exploratory approach, it was anticipated that unexpected themes were likely to appear. The thematic analysis involved defining themes by arranging the different codes into a thematic map - grouping them together into potential themes and sub-themes, before reviewing them and repeating the process (Braun and Clarke, 2006), with two final themes decided upon.

## 4. Results and discussion

### 4.1. Perceptions of cash giving for conservation

The results of the online questionnaire show that of the 45 respondents, 10 responded that they know lots about the concept of cash giving, 21 that they are generally familiar with it, 12 have heard of it but do not know much about it, and two that they are completely new to the

concept. Amongst our 45 respondents, 29 are in favour of using cash giving for conservation, with 25 agreeing, and four strongly agreeing that "Cash giving should be used in conservation as a means of environmental protection". However, 13 disagree, and three respondents strongly disagree with the idea.

As depicted in Fig. 2, our results show that the predominant reason for agreeing with the use of cash giving for conservation within our sample is the idea that reducing poverty addresses the cause of environmental degradation. The selection of this choice is aligned with much of the literature which suggests poverty can be a major contributor to environmental damage (Aggrey et al., 2010; Masron and Subramaniam, 2019; Baloch et al., 2020). However, others in the literature suggest that simply reducing poverty does not guarantee improved ecological outcomes (Howard et al., 2019). The suggestion also contrasts to some extent the idea behind Cool Earth's programmes, in which poverty itself is not held to be the driving force of environmental degradation. Rather, the interviews suggest that the main problem is the inability of local communities to remain on their land once under pressure from external forces to sell it. We suggest that the poverty faced by the indigenous communities potentially plays a role in environmental degradation, however, as it could reduce the choices available to the local community, and may force their hand to accept offers to sell their land to destructive forces.

This relates to another reason given in the questionnaire (and selected by 14 respondents) for using cash giving for conservation – that local people know how best to manage their own environments, with cash giving able to facilitate this. This is supported in the interviews. For example, CESM6 suggests we should "give the funds to the community as directly as possible and trust the community are the ones that can manage and can use the funds at their convenience and in doing so, they can protect the forests". We argue that this indicates that giving agency to local people is seen as a major positive of CTPs in conservation.

Thirteen of our respondents, in line with arguments made in the literature (Fletcher and Büscher, 2017; Allen, 2018), are of the opinion that MBIs such as REDD+ and PES do not work well enough, and that other forms of conservation are needed. Several of the interviewees also highlight problems with MBIs, though their association with markets and neoliberalism was not reported as the main problem. Instead, the impacts of MBIs on local people, the concept of offsetting, and an inefficient allocation of resources were much more prominent in the interviews. As CESM6 says, "A lot of the money goes on building all the bureaucracy in the middle [...] so very few goes straight into the community." This supposed inefficiency of MBIs is supported by the literature, with REDD+ and PES often seen as inefficient in achieving their relative aims (Fosci, 2012; Samii et al., 2014; Loft et al., 2016), whereas the opposite is generally found of cash giving (Bailey and Pongracz, 2015; Doocy and Tappis, 2017).

One of the key reasons survey respondents do not support cash giving for conservation is that it is seen to be ineffective at alleviating poverty. While only three respondents strongly disagree with cash giving for

#### Text Box 1

##### - Definition of interview themes

The two themes that were decided following the thematic analysis of the interviews were:

- The control of people and nature within conservation and development. This theme can be split into two main sub-themes: Applying Control and Relinquishing Control. The theme covers the requirement for control of people, situations, and nature, both by other people and inherent within current practices and systems. This is contrasted with the desire within CBI and unconditional giving to relinquish control to others.
- Understanding variability across geographical and temporal contexts. This theme covers the heterogeneity in characteristics that currently exist between individuals, communities, and geographies, as well as the variations that can occur over time. It includes the importance of recognising how things change from place to place and time to time, the impacts seen because of these changes, and how they can be acknowledged.

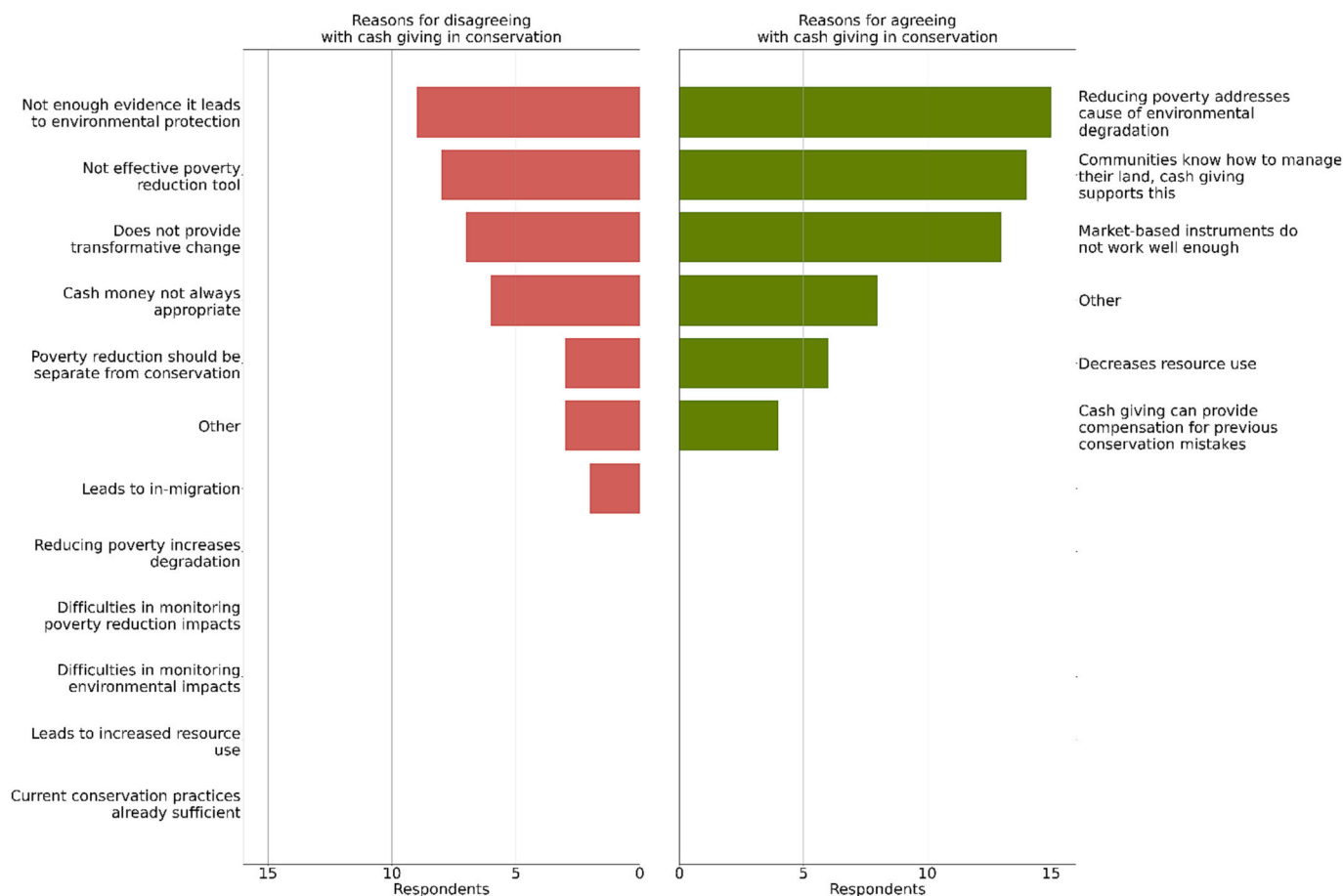


Fig. 2. Frequency of the reasons given in the online questionnaire for agreeing and disagreeing with the use of cash giving for conservation. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

conservation, the strength of feeling amongst them is notable. One questionnaire respondent left a comment that cash giving should be left “in the dark ages”. This is despite many thorough studies demonstrating widespread benefits related to poverty reduction (e.g., Bastagli et al., 2016; Bastagli et al., 2019). We suggest that this demonstrates that cash giving is still subject to certain myths. This is so much so that on the ‘about’ page for the cash giving charity *GiveDirectly*’s website, they state in bold “And no, people don’t just blow it on booze.” (*GiveDirectly*, n.d.), referencing the common belief that cash transfers will lead to increases in alcohol consumption and the purchase of other ‘temptation goods’ (Evans and Popova, 2017). One could argue that this strengthens the need for greater discourse on the use of cash giving in both conservation and poverty reduction circles, potentially along with further papers such as that of Handa et al. (2018) aimed at addressing common concerns. While cash giving’s role in conservation is yet to be determined, the evidence does not seem to align with the statement of it belonging “in the dark ages”.

However, according to the questionnaire results, cash giving is not seen as flawless, and the idea that it does not provide transformative change is seen as another reason not to support it for conservation. This is supported by Jones (2016) who finds that conditional CTPs do not account for the complexity of transitioning out of poverty in the long term. The questionnaire results also suggest that the lack of evidence to show that cash giving leads to environmental protection is another key reason for disagreeing with its use in conservation. Our respondents’ perspectives perhaps reflect the limited literature demonstrating the effectiveness of CTPs for environmental protection (MacNeill and Vibert, 2019). As a new practice for conservation, it is unsurprising that there is a lack of evidence to prove cash giving’s effectiveness in

environmental protection. The Cool Earth staff participating in the interviews agree that more research is needed to show a link between cash giving and conservation, with many of the staff directly calling for more research to be done in this area (as discussed in Section 4.3).

#### 4.2. Risks of cash giving for conservation

Cool Earth staff openly acknowledge that cash giving comes with risks. CESM3 says, “there are a whole bunch [of risks], it’s not easy to do well. Putting cash into a community has lots of consequences”. Fig. 3 provides an overview of the risks highlighted in the questionnaire.

Eighteen of the respondents report that the possibility of increased local resource use is a risk of using cash giving for conservation. There is scant empirical evidence to assess this risk, with the few studies there are finding opposing results (Wilebore et al., 2019; Ferraro and Simorangkir, 2020). The interviewed Cool Earth staff equally acknowledge that it is not possible to know for sure whether cash giving has increased the use of natural resources amongst the communities they work with. However, we suggest that an increase in direct resource use by communities may not necessarily be incongruous with conservation. If the increase is a modest one that allows the community to remain in the forest rather than selling their land to outside influences, then this would still be of benefit to conservation in the area. For example, CESM1 says “The forest has remained standing. That’s been wonderful to see. There are definitely cases where trees are lost, but [...] I can’t think of any cases where loggers have come in.” Cool Earth states that this is backed up by their internal remote sensing data, which shows deforestation rates are much lower on lands under indigenous occupancy compared with neighbouring lands that are not. We argue that concerns regarding

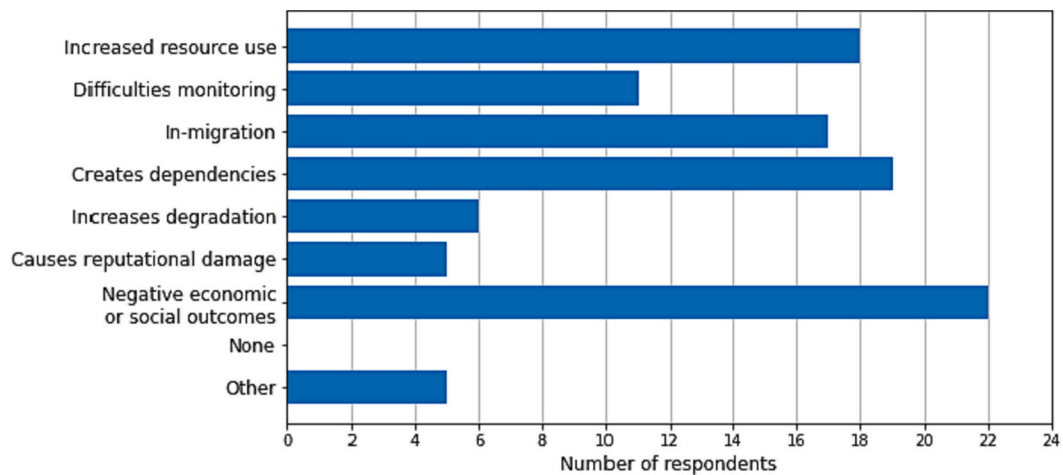


Fig. 3. Perceived risks involved in using cash giving for conservation purposes. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

increases in community resource use align with the idea of a human-nature dichotomy. This would therefore be at odds with the arguments of convivial conservation (Büscher and Fletcher, 2020), amongst others (Caillon et al., 2017; Rai et al., 2021), that suggest the human-nature dichotomy is a false one, and resource use from indigenous communities should be accepted as part of how an ecosystem functions.

Another risk outlined in the survey is the potential for communities to become dependent on the funds from cash giving, changing their behaviour in some way that leaves them vulnerable if the source of funding ceases. However, the literature suggests that many forms of dependency – such as becoming reliant on the income from the CTP in place of incomes from work (Banerjee et al., 2017) – do not materialise in practice. Yet the interviews highlight that other forms can develop amongst communities that might increase their exposure to certain risks if the source of funding ceases either temporarily or permanently. For example, one illustration in the interviews is of recipients using cash from a CTP to buy vegetables and other foods from the market rather than growing them themselves, as had previously been the case. Due to restrictions brought in during the Covid-19 pandemic, the market became inaccessible, causing difficulties and potential food security worries. We suggest this highlights how some dependencies may indeed be a risk of cash giving.

The possibility of creating negative economic or social impacts is frequently reported by the questionnaire respondents as a risk of implementing cash giving programmes as a conservation tool. While much of the literature shows that cash giving does not tend to create negative economic or social impacts (Bastagli et al., 2019), this is not a universal finding (MacAuslan and Riemenschneider, 2011). The interviews with Cool Earth suggest that these impacts can be limited through project design, stressing that involving the community in designing the cash giving programmes is essential to ensure it is appropriate for their context and will not cause community conflicts or other problems. Yet Cool Earth staff acknowledge that even with community input in design, implementing cash giving programmes may still create other social or economic issues. For example, one interviewee highlights the risks of inflation or of elite capture, where cash “doesn’t go to people fairly and you empower, further empower the elite” (CESM3), or may in fact disempower the elite, “which you might regard as a great thing, but it completely starts to screw up the existing social structures,” (CESM3). These findings may suggest that cash giving can in fact have some similar impacts to MBIs such as PES, where social disempowerment has reportedly occurred (Fletcher, 2012; Holmes and Cavanagh, 2016). However, Bastagli et al. (2016) find that while some negative impacts of cash transfers can be found related to empowerment, impacts are much more often positive. All six of the Cool Earth staff members

interviewed are also still supportive of cash giving despite these risks. As CESM6 states: “When I started working for Cool Earth, I wasn’t very convinced about this cash giving programme because I heard in the past there have been problems in the communities [...] I have seen some progress since, and the funds have really helped the communities”.

#### 4.3. Barriers to using cash giving for conservation

According to our results, the main perceived barrier to using cash giving for conservation is that there is not enough evidence to prove it is effective at protecting the environment. We find that a lack of evidence on this front is certainly noticeable within the current literature body (MacNeill and Vibert, 2019). Furthermore, it seems that robust evidence of how cash giving impacts the environment may also be difficult to obtain; another barrier recognised in the questionnaire is the complexities in monitoring the environmental impacts of cash giving programmes. This is acknowledged as a problem area by Cool Earth staff. As CESM1 says of cash giving programmes: “Trying to measure it is so complicated [...] actually testing it and getting clear answers we’re finding is really difficult because comparing different communities, there’s always differences. The rainforest might be standing because of other factors.” It is also reflected in the literature on PES, with Daniels et al. (2010) highlighting the difficulties in finding causal impacts of PES programmes.

Cool Earth report that their own internal monitoring is promising, though this data is currently not publicly available. They report that the communities receiving cash have lower deforestation rates than their neighbours and deforestation rates are higher still on land that is not owned by any community. However, this data is only based on Cool Earth’s cash giving programmes in four communities, highlighting how there is little data available across different contexts. To determine whether cash giving is really beneficial on this front, further research should seek to learn whether cash giving does provide support for communities to keep their land while under pressure from external sources to sell, and potentially even how much the transfers would need to be to achieve this aim. Coupling this with further studies on forest cover could indicate whether there is a relationship between cash giving and forest protection.

#### 4.4. Variations of cash giving for conservation

Of the four forms of cash giving detailed in the questionnaire (conditional, unconditional, UBI, and CBI), conditional cash giving is the clear favourite for use in conservation by our sample, with 20 respondents selecting this option as the most applicable. This is followed



by CBI (with 15 responses), “All” and “None” (with seven responses each), unconditional (four), and UBI (two). The main reason given in the questionnaire for the support of conditional cash giving is that it is perceived to increase the likelihood of achieving environmental outcomes. This is partially supported by the literature, that finds conditionality aids in achieving specific outcomes (Baird et al., 2011; Akresh et al., 2013; Akresh et al., 2016; Banerjee et al., 2019), but as discussed, these findings are not related to environmental aims. However, as much literature has shown that schemes such as PES and REDD+ do not in reality function on a market basis, in many ways they can be seen as forms of conditional cash giving for conservation. The suggestions of Börner et al. (2017) that there is limited evidence these schemes achieve environmental aims can therefore call into question the perception of conditionality increasing the likelihood of achieving effective conservation.

Unconditional programmes are also supported within their own right, with respondents appreciative of the agency given to recipients, the ability to create transformative change, along with the lack of moral or colonial implications it carries, which some in the literature have found to be problematic (Freeland, 2007; Jenson and Nagels, 2016). As they are less certain to achieve environmental outcomes though, our results show that general unconditional CTPs are seen as less applicable to conservation. Similarly, respondents see universal basic income as something that the field of conservation should support for its own sake, but that is the least applicable option to the field of conservation.

Participants seemingly agree with the premise put forward by Fletcher and Büscher (2020) that CBI can provide many of the benefits of unconditional programmes, such as increased agency and transformative change (17 responses), whilst also reducing pressures on the environment (16 responses). The potential costs involved in implementing CBI was not seen as a reason against its use, with only three respondents citing this argument. This might be seen as surprising, as de Lange et al. (2022) have shown that (while estimates vary enormously) the cost of implementing CBI globally could be many times greater than what is currently spent on conservation worldwide. While de Lange et al. (2022) argue that the social and environmental benefits of implementing CBI at this scale are well worth the costs involved, this may not have yet captured the attention of conservationists. This might simply be due to the concept of CBI still being in a very early stage of development, with so far little discussion focussed on the costs. It could also be argued that it makes understanding the opinions of conservation professionals more important when comparing them to new evidence, as the combination can highlight areas that need more exploration.

We argue that as CBI achieved a good level of support amongst the sample surveyed, there is potential for further exploration of this concept within research and practice. However, something highlighted in the interviews is just how context dependent successful CTPs are. For example, Cool Earth staff found previous CTP designs used in Peru were inappropriate for the social hierarchies in Papua New Guinea, or at even smaller spatial scales. As CESM1 says, “I’m very aware from work I’ve done at Cool Earth, how different communities are. Just so many different contexts, and so one thing might work really well in one village even, and then the next village just next door, it might just not work and actually conditionality might.” We contend that this highlights the importance of involving the communities in designing the cash giving programmes, just as other development or conservation programmes should be designed with and for specific communities (Dyer et al., 2014; Schiavo, 2021). It draws attention to the point that “how CBI, or variations upon it, are designed and implemented will require sustained attention to the particularities of local contexts as well as active collaboration with intended recipients” (Fletcher and Büscher, 2020, p. 6). Arguably, though, it may suggest CBI needs to go further than this. We suggest that rather than always being both universal and basic, CBI could potentially be framed as a set of principles, a framework within which specific cash transfer programmes could be designed with a community, to ensure that it is an appropriate means of supporting

them. This may not be that controversial for proponents of CBI, as it has been suggested that even in the form proposed by the authors, CBI would not be truly universal or unconditional anyway (Fletcher and Büscher, 2020; Mumbunan et al., 2021), and so there may already be some flexibility in transferring the ideals into designs. Exactly what the set of principles could be, however, would need to be subject to further discussion, particularly given how the pillars of basicness and universality may not always be applicable.

Within the interviews, Cool Earth staff also discuss the use of implementing cash giving with parallel initiatives aimed at empowering local people, including education or training initiatives, business income generation, water projects, and increasing tenure rights. In part, these allow for services or knowledge to be put in place that the communities would otherwise be unable to obtain solely through cash giving programmes. As CESM4 puts it, “In places where people’s biggest need, to stay on their land, is like an education for their kids or healthcare for their kids, giving them cash, if there’s no healthcare system in place, isn’t going to help them stay in their forest lands. They’re still going to go to the city because they’ll be healthier there. So, I think there’s a really strong argument for parallel development programs or working within or with local government structures to get those things in place for people”. We would suggest that this brings into question how effective a solitary cash giving mechanism could realistically be, without further support from governments or NGOs. Arguably, CBI and other forms of cash giving may be conservation tools that work best, or potentially maybe even *only* work, alongside other mechanisms, with the literature suggesting that cash giving’s impacts are amplified when used in combination with other programmes (Roelen et al., 2017; Arriagada et al., 2018; Stoner et al., 2021) and others suggesting that programmes would require supplemental policies to achieve ecological goals (Gilliland et al., 2019; Howard et al., 2019). While it is acknowledged that CBI “must be complemented by attention to the effectiveness of social services and infrastructure in target communities” (Fletcher and Büscher, 2020, p. 6), again it would arguably need to go much further. Rather than simply paying attention to social services and infrastructure, an organisation looking to implement a CBI programme could engage with them directly, and look to fill the gaps identified by the community with parallel development programmes. Any such intervention should of course be wary of reverting to the controlling instruments CBI aims to avoid (Fletcher and Büscher, 2020), and be implemented only insofar as it is beneficial and tailored to the specific context and community (Dyer et al., 2014; Schiavo, 2021), but combining CBI with parallel programmes in this way could potentially provide the greatest chance to maximise both developmental and conservation outcomes.

#### 4.5. Study limitations

When interpreting the results of this study, it is important to remember that as a scoping study, it is subject to limitations. Firstly, views of conservationists from low-income countries are under-represented in our study. While conservationists from high-income countries represent a wide diversity of opinions and perspectives (Sandbrook et al., 2019), this should still be considered during interpretation. Some of the opinions and suggestions put forward may unfortunately be influenced by ‘white saviour’ or environmentally colonial ideas, something conservation still struggles with (Wall and McClanahan, 2015; Mumby, 2018; Rudd et al., 2021; Tan, 2021). Specifically, some of the responses may channel ideas of ‘pristine wilderness’ borne out of colonial ideals (Wall and McClanahan, 2015; Rudd et al., 2021) that forms a main narrative thread within western conservation education and thus is carried into practice (Rudd et al., 2021). This agenda suggests that natural environments are separate to and under threat from local people and thus need to be saved from them to be kept in ‘pristine’ condition (Wall and McClanahan, 2015). This can have dire consequences for local people, with their local knowledge relegated to a level of lower importance and their local customs ‘regulated’ to align

with western ideals (Wall and McClanahan, 2015; Rudd et al., 2021). In relation to our study specifically, it is possible, for example, that the use of conditions within cash giving could be more desirable from a western, high-income country perspective than from a low-income country, or perhaps that more emphasis is placed on the risks of increased resource use amongst western conservationists. Receiving responses from a more diverse base of conservationists could go some way to countering any colonial narratives by likely diversifying the perspectives received, an important step towards building an inclusive conservation space (Rudd et al., 2021).

A lack of conservationists based in less economically developed countries may have other consequences for the study, as it may be missing some more 'on the ground' informed insights. As the interviews with Cool Earth suggest, the impacts of CBI are likely to be highly context dependent. Therefore, the perspectives of conservationists living in these contexts might also provide further insights, along with possibly better dealing with the moral implications. While western conservationists are not precluded from providing informed insights into certain contexts of which they have in-depth knowledge, using local voices can create superior conservation outcomes (Rudd et al., 2021) and would likely add extra reassurance that the insights are context appropriate.

A further limitation of this study is the likely self-selection bias resulting from the sampling approach used that could result in the participation of those with stronger opinions (Pienkowski et al., 2022) either in favour of, or opposing, the use of cash giving for conservation. Neutral language was used in promoting the survey to limit this risk, though the unequal probability conservationists had of participating may also impact it (Pienkowski et al., 2022). Use of the staff of Cool Earth for the interviews provide valuable, practical insight into the use of cash giving for conservation. However, while their responses were largely nuanced, they may have interests in presenting cash giving for conservation favourably. Interviews with staff from organisations who promote PES or REDD+ over cash giving for conservation could have brought in alternate perspectives, and would be an interesting area to explore in a follow-up study.

## 5. Conclusions

The alleged weaknesses in both the conceptualisation and impacts of market-based conservation instruments have led to calls for new forms of conservation. Conservation basic income is a form of cash giving proposed as a means of combining the environmental focus of MBIs, such as REDD+ and PES, with the social impacts of cash transfer programmes. However, the practicalities of implementing CBI have received little attention, with the debate focused on its theoretical foundations, and very little empirical work undertaken.

Through exploring the perceptions of conservation professionals, we observe with a scoping study that there is potential support for CBI and other forms of cash giving to be used for conservation. This is despite the risks that cash transfer programmes are seen to carry, such as creating dependencies, inequalities, and increased resource use, many of which can be found in practice. However, while there is support for the concept, cash giving is not exempt from controversy, and there are likely to be some who strongly resist the use of CTPs. Altogether, though, the findings suggest that CTPs could have potential application to conservation. Conditional cash giving is seen as the most applicable form, but CBI is still favoured as a concept.

There are seemingly important issues that must be further addressed to formulate CBI in actuality, however. Firstly, the appropriate use and model of cash giving is reported to be hugely context dependent and to be successful must be designed with the communities that will receive the funds. Therefore, it may not be possible for CBI to always be both universal and basic. Instead, CBI could be developed as a set of principles, providing the framework for bespoke programmes to be developed with individual communities. What those principles may be, and how strictly individual programmes should adhere to them, could be the

subject of future discussion. Secondly, CTPs are also believed by some to work best in combination with other conservation or development programmes. The ambition for CBI to work as an independent instrument may therefore need to be readdressed, and attention instead given to how it could work in tandem with parallel development programmes to better address a community's needs.

Furthermore, future research should focus on the link between cash giving and its environmental impacts. This appears to be a key area of concern for the conservation professionals involved in this study that has not been sufficiently addressed by the existing literature. Perhaps more importantly, research should also determine under which conditions cash giving enables communities to remain on their land, and how much the cash transfers would need to be to ensure this. Building upon this study, further research could conduct interviews with professionals that actively oppose the use of CBI to provide more depth of understanding of that side of the debate. Similarly, garnering the opinions of conservationists from low-income countries would strengthen this study and highlight potentially alternative views.

Finally, to develop CBI further, undertaking pilot studies could provide the greatest insights into its effectiveness and potential impacts. A multi-case study approach with in-depth interviews, focus groups and surveys could provide insights into the opinions and impacts felt by community members receiving the payments, and whether any behaviour changes take place. Experimental approaches - varying the terms of the pilot studies in relation to size, frequency, and method of payment - could provide greater insight still into whether and how variations could be applied.

Ultimately, this scoping study has shown that CBI has some support for use in attaining both development and conservation outcomes. Exactly what form it could take, and the impacts of such decisions should become the subject of future research.

## CRedit authorship contribution statement

**Callum Sheehan:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Visualization, Project administration. **Julia Martin-Ortega:** Conceptualization, Methodology, Writing – review & editing, Supervision.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

The survey results are available in the appendices. Full interview transcripts are not available.

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## Appendix 1. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.biocon.2023.109914>.

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