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Towards Transformative Justice in Conservation Finance: The Case for Basic Income for Nature and Climate (BINC)

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Introduction

This article outlines the case for a Basic Income for Nature and Climate (BINC): a novel mechanism for funding biodiversity conservation and climate change mitigation activities. Over the past 150 years, the international conservation movement has successfully protected endangered species in many places throughout the world (Langhammer et al. 2024). Yet it currently struggles to confront rapidly accelerating global biodiversity loss, which some have labelled the sixth extinction crisis (WWF 2024). This biodiversity crisis is compounded by the growing impacts of anthropogenic climate change. Conservation and climate policy have thus become increasingly conjoined (Locke et al. 2021). At the same time, however, there is growing recognition that dominant conservation approaches, centred mainly on creation and enforcement of protected areas (PAs) and other area-based measures, have produced a range of social injustices, including widespread displacement or marginalization of those living in or near conservation-critical spaces (Dowie 2011; Tauli-Corpuz et al 2020). Growing economic inequality throughout the world is a documented threat to biodiversity (Mikkelson et al. 2007). Yet rather than redressing this inequality, conservation has unfortunately often contributed to it by further marginalizing the rural poor who most directly rely on biodiversity for their livelihoods and who are most negatively impacted by climate change (Turner et al. 2012).

As a result of all this, conservationists increasingly call for transformative change in policy and practice to address biodiversity loss, climate change, and social injustice together (Díaz et al. 2019; Massarella et al. 2021). One key area of concern in such calls is how conservation and climate action are financed, both globally and locally. Of the hundreds of billions of dollars spent annually to address these issues, the majority remains captured by already wealthy and powerful organizations and actors in the Global North rather than reaching the poorest of the poor in the Global South who need it most. And even these funds are considered woefully inadequate to effectively confront the scale of the problems to be addressed (UNEP 2021; Lee et al. 2023).

To address this shortfall, a suite of so-called “market-based instruments” (MBIs) have been developed over the past several decades to deliver conservation and climate finance by harnessing the economic value of conserved resources via “non-consumptive” use to generate conservation-friendly livelihood opportunities for local people. Prominent MBIs include ecotourism and payment for ecosystem services (PES) programmes. Other offshoots include the Reduced Emissions through avoided Deforestation and forest Degradation (REDD+) initiative, biodiversity and wetlands offsets, and so

forth. Yet as we describe further below, thirty years of development and experimentation with MBIs have thus far produced few success stories and a range of criticisms (Fletcher 2023).

New funding mechanisms are therefore urgently needed to redress inequality by redistributing existing resources to deliver maximum benefits to those on the front lines of conservation and climate mitigation efforts. In this article, we advance the idea of a Basic Income for Nature and Climate (BINC) as a complement or alternative to MBIs that aims to address many of their shortcomings. BINC is inspired by the growing popularity of cash transfer programmes (CTPs) and (universal) basic income ((U)BI) initiatives. These seek to offer an alternative to conventional economic development approaches that focus on delivering predefined benefits to local people. Instead, the cash transfer approach provides direct financial resources that can be used in the ways recipients deem most important (with the possibility of some restrictions included for conditional CTPs). The widespread success of CTPs in alleviating poverty while promoting empowerment and self-determination has also inspired a proliferation of even more substantial BI pilot projects as well as growing calls to scale up UBI on a society-wide (or even global) basis (see e.g. Hanlon et al. 2012; Standing 2017).

However, neither CTPs nor (U)BI projects usually include direct attention to environmental issues alongside social ones. Available empirical evidence concerning the environmental impacts of existing CTPs that are not explicitly linked to conservation aims (i.e. do not have conditionality with respect to environmental behaviours or outcomes) is mixed. Some studies evaluating such programs indicate positive environmental impacts. For example, Indonesia's 'Family Hope' program, a CTP targeted at the poorest families conditional on attendance at schools and health centers, resulted in 30% reductions in deforestation where the program was implemented (Ferraro & Simorangkir 2020). Positive environmental outcomes have also been documented for CTPs in Colombia (Malerba 2020) and Brazil (Dyngeland et al. 2020; Ronningstad et al 2020). Yet, the opposite effect has been documented by studies of similar programs in Mexico (Alix-Garcia et al. 2013) and Sierra Leone (Wilebore et al. 2019). This signals the need to better understand which contextual factors and/or design considerations influence the impacts of CTPs on surrounding ecosystems, in order to inform the design of CTPs that are effective at achieving positive environmental outcomes.

Here, we bring social and environmental considerations together in our BINC proposal as a promising new means to address biodiversity loss, climate change, and social development in concert within a rights-based framework. We begin by briefly describing the rise of MBIs as an understandable but ultimately limited effort to address this same constellation of issues. We outline the reasons why MBIs have often failed to achieve their aims and hence why another approach is needed. We then explain how a BINC could potentially compensate for these various deficiencies. We outline the BINC mechanism based on comparison with findings from cash transfer and basic income studies. Then we anticipate the likely challenges of implementing BINC and the variations that may be possible given contextual and design considerations. Like any single mechanism, of course, BINC could never be a silver bullet. We therefore describe the key constraints and enabling conditions for promoting BINC success. To illustrate the practicality of our proposal, we then briefly outline a first effort to put BINC into practice via a new initiative in the Peruvian Amazon. We finish by calling for the global conservation community to reflect on the potential of BINC and invest in BINC as a key component of the transformative justice needed going forward.

MBIs and their Discontents

MBIs were introduced in the 1990s as part of a broader strategy to integrate social concerns into conservation planning, often called the Integrated Conservation and Development Project (ICDP) approach. They have proven quite popular. In addition to countless ecotourism enterprises, there are currently more than 500 PES programmes in operation worldwide and a similar number of REDD+ projects (Fletcher and Büscher 2020). There are a wide variety of different MBIs with diverse forms and modes of functioning (Pirard 2012). Nonetheless, MBIs share a common aim to incentivize conservation by ascribing sufficient monetary value to protected resources to cover the opportunity costs of alternative land uses and so make conservation more profitable than resource extraction (see Dempsey 2016). In a number of cases, local groups have been able to leverage MBIs for significant socio-economic benefits (Shapiro-Garza et al. 2020). Overall, however, over the decades of their existence, MBIs' performance has been disappointing, as has the broader ICDP approach of which they are part (Fletcher 2023).

MBIs' relatively poor performance is due to a variety of factors. First and foremost, it has proven extremely difficult for MBIs to generate sufficient revenue to allow conservation to outcompete resource extraction (Koh et al. 2024). This is partly because within global markets, extraction is usually far more profitable than conservation. Consequently, the revenues delivered to local resource users for conservation are generally far too low to cover the opportunity costs of alternate land uses. As a result, national governments or other entities are commonly forced to intervene either to supplement payments, or to enforce restrictions or land use, or both, in order to make MBIs function (Fletcher and Büscher 2017). Many MBIs therefore function much like the government subsidy schemes they were usually introduced to replace (Fletcher and Breitling 2012). This stands in direct contradiction to the market-based logic of the instruments themselves (Fletcher 2023). In addition, the design costs and bureaucracy needed to develop and govern MBIs, in particular to account for the monitoring, reporting and verification (MRV) of environmental outcomes, means that the instruments are usually top-heavy, with a large portion of invested resources going to institutional overhead or technical consultants rather than the local resources users on whom the initiatives are ostensibly focused. Moreover, tying finances to volatile global markets means that funding for MBIs is generally unpredictable and unsustainable over the long term (consider, for instance, the dramatic fluctuations in prices on the global carbon market in recent years) (Haya et al. 2023).

Compounding such practical considerations, other problems have been identified in the MBI approach. Critics worry that emphasizing the instrumental economic value of natural resources promotes a capitalist logic in relating to nature (Sullivan 2013). This potentially crowds out cultural, spiritual, or other ways of valuing and relating to nature, as well as intrinsic motivation for conservation in favour of external motivation (Akers & Yasué 2019; Lliso et al. 2020). Additionally, tying conservation finance to specific outcomes in this way subjects local people to strict external oversight and control, limiting their freedom, agency and self-determination. On a deeper level critics point out that the MBI approach is grounded in a rather pessimistic view of human nature and behavior, assuming that people are selfish and competitive, and consequently must be incentivized with financial rewards to act in the common good (Fletcher 2023).

Finally, Indigenous Peoples and local communities (IPLCs) involved in MBIs have raised concerns regarding their social impacts. As Osborne et al. (2024: 128) summarize, common complaints include MBIs inducing: displacement and dispossession (Sarmiento-Barletti and Larson 2017), the undermining of local governance structures, and community conflict (Alusiola et al. 2021).

Many REDD+ projects have provided minimal livelihood support (Sunderlin et al. 2017), yielding only

temporary benefits for some community members (Duchelle et al. 2017; Kapos et al. 2022) while others lose out (Duchelle et al. 2018). In this way, REDD+ projects have been shown to replicate past harms against Indigenous Peoples, particularly around issues of territorial self-determination (Hein et al. 2020), while undercompensating them for lost access to forest resources. REDD+ has received widespread criticism from Indigenous organizations for its failures to support Indigenous self-determination and territorial defense (Cifuentes 2021).

At the same time, some IPLCs point out that there are currently few alternative financing mechanisms available to support stewardship of their lands.[1] Our BINC proposal aims to address this and the other concerns discussed above.

The Case for BINC

Cash transfer programmes (CTPs)

A finance mechanism grounded in a cash transfer or basic income model potentially avoids many of the issues outlined in the previous section. Indeed, CTPs were originally developed precisely to address and overcome problems created by conventional market-led development policies. Rather than pre-defining development projects then training local people on how to implement them as the basis for income generation, CTPs instead provide cash payments directly to programme participants to spend (mostly) as they choose. Many CTPs also include complementary services or training programs – a so-called "cash+" approach. Since their introduction in the 1990s, CTPs have expanded dramatically to now encompass at least 720 million people in more than 130 countries worldwide (World Bank 2018). Practitioners generally categorize CTPs as *unconditional* (allowing recipients to spend their transfers freely) or *conditional* (where certain behaviors, like receiving vaccinations or school attendance, are preconditions for the receipt of a transfer). Some CTPs also include *restrictions*, where transfers themselves can only be spent on a limited set of goods and/or services.

In reality, however, the spectrum of programming is more fluid. Notwithstanding the nuances distinguishing programs that are conditional versus those that are restricted (which has more to do with how those who design the programs understand them and less to do with how cash transfer recipients experience them), there is significant variation in how programs are delivered. Some unconditional programs contain so-called "nudges" or are framed in ways that can significantly influence how participants spend their money. For example, an unconditional transfer may nudge investment in education by being communicated to recipients as an educational stipend, or recipients might be nudged to invest in agricultural inputs by delivering large transfers right before the planting season. Providing complementary services or "plus" components, like trainings, can also influence how recipients behave.

On the other hand, some nominally conditional programs have monitoring that is so lax as to present no real barrier to recipients spending their transfers how they choose. Still, around the world, there are far more formally conditional CTPs than unconditional ones, as many authorities are distrustful of recipients' ability to spend money responsibly (Peck and Theodore 2015). Consequently, conditionality remains a hot topic of contention within the cash transfer world, despite the fact that empirical research concerning CTP outcomes largely supports the claim that unconditional programmes

[1] https://www.fscindigenousfoundation.org/global-south-voices-in-support-of-redd/

produce as much positive benefit as conditional ones for a wide range of outcomes (Bagstagli et al. 2016; Standing 2017).

Basic Income (BI) approaches

Basic income (BI) builds on the CTP experience to propose an even more ambitious programme for poverty alleviation (variants of this concept have also been called 'unconditional basic income,' 'basic income grant,' 'citizen's income,' 'social dividend,' a 'negative income tax,' a 'capital grant' and 'participation income'). Like CTPs, BI proposes direct cash payments to recipients. However, while CTPs generally provide modest payments, BI proposes a level of payment covering an individual's total basic needs (how this is defined remains debated), allowing them to survive on the payments alone. Additionally, while CTPs usually target only a subsection of the population (i.e., the very poor, elderly or disabled), BI is intended for everyone, rich and poor alike (the rationale being that payments to the wealthy will be returned back via taxation). Finally, BI follows the unconditional CTP model in proposing a fully no-strings-attached payment scheme.

In sum, proponents assert that a genuine BI must embody the following five principles (as defined by the Basic Income Earth Network, a global network of BI practitioners)[2]:

1. **Periodic**: it is paid at regular intervals (for example every month), not as a one-off grant.
2. **Cash payment**: it is paid in an appropriate medium of exchange, allowing those who receive it to decide what they spend it on. It is not, therefore, paid either in kind (such as food or services) or in vouchers dedicated to a specific use.
3. **Individual**: it is paid on an individual basis—and not, for instance, to households.
4. **Universal**: it is paid to all (within the boundaries of the given jurisdiction or project).
5. **Unconditional**: it is paid without means testing and without a requirement to work or to demonstrate willingness-to-work.

The difficulty of fulfilling all of these conditions means that a true society-wide UBI has never yet existed in reality. However, a proliferating array of projects and programmes have implemented BI to varying degrees (the principle of universality is usually the hardest to replicate given limited project funding). In recent years, BI pilot studies have been implemented in a number of high-income countries including Canada, Finland and the Netherlands, as well as lower income countries such as Kenya, India and Namibia (Standing, 2017). The closest approximation to an UBI currently is the Alaska Permanent Fund (APF). Initiated in 1976, the APF provides every official resident of the state with a direct yearly dividend from oil production revenues within the territory (the amount fluctuates but is often around US $2000/year). While this payment is not enough to support recipients' total basic needs, the APF "has long appealed to advocates of basic income. . .and can be regarded as a nascent fund for payment of either basic capital grants or basic incomes" (Standing 2017: 151).

All of this implementation has produced a growing body of robust research. Overwhelmingly, this literature demonstrates that BI experiments deliver significant benefits to participants while some anticipated negative outcomes, such as freeloading, are not observed (e.g., Bagstagli et al. 2016; Standing 2017; Banerjee et al. 2019). This constitutes compelling evidence that an expanded and

[2] https://basicincome.org/about-basic-income/

extended BI programme could potentially eliminate poverty to a substantial degree. Moreover, BI has potential to change the very nature of the relationship between workers and owners within a capitalist economy, in that the mechanism essentially "reunites workers with the means of subsistence, even though they remain separated from the means of production; it thus directly modifies the basic class relations of capitalism" (Wright 2019: 109).

Basic Income for Nature and Climate

Our Basic Income for Nature and Climate (BINC) proposal aims to integrate these core BI principles into a composite instrument that pursues environmental protection alongside poverty alleviation in areas of high biodiversity and climate value. A previous version of this proposal was advanced as a "conservation basic income" (CBI; Fletcher and Büscher 2020). Here, building on Mumbunan et al. (2021), we expand the concept to centralize climate mitigation alongside biodiversity protection. The result would be *a regular payment to members of communities living in or near areas considered critical for conservation and/or climate mitigation in order to subsidize livelihoods based on sustainable resource use*.

BINC thus offers an alternative approach to conservation finance that may compensate for the various deficiencies associated with MBIs. It explicitly centers local people's rights and building trust between donors and recipients as a first step to achieving justice (Saif et al 2022). By tying payments to basic needs rather than any specific valuation of "ecosystem services", BINC would help **reverse the commodification of natural resources** that MBIs encourage. They could provide an **income floor**, allowing more sustainable forms of livelihood generation to become sufficient for recipients to depend on, even if the payments are lower than the profits from alternative extractive activities. Providing unconditional payments would give recipients the **freedom and autonomy** to decide how best to spend the money they receive. Eliminating the need for oversight to enforce conditionality and delivering cash payments directly into the hands of programme participants would **reduce bureaucratic overhead** and the amount of project funding going to intermediaries. This could also help empower the local agents charged with disbursing the BINC payments. Delinking from offset financing would also avoid difficulties commonly encountered by MBIs in addressing key issues of additionality, permanence and leakage. Instead, BINC could develop a more sustainable and dependable funding stream source that is able to shield programme participants from financial fluctuations.

Rather than a payment for provision of a specific ecosystem service or resource, BINC, like BI more broadly, can instead be understood as an instrument of social justice. In other words, BINC should be framed not as a handout or gift but rather as the return of a rightful "share" of the global commons that has been largely enclosed for private gain (Ferguson 2015), including through exclusionary conservation actions. For people who have previously been displaced from or denied access to spaces from which they once derived livelihoods as a result of conservation efforts, BINC can also be framed as a form of compensation or reparations (see Büscher and Fletcher 2020). Further, BINC can be understood as compensation for the unpaid labour many rural peoples devote to conservation activities in spaces under their control (RRI 2019; Neimark et al. 2020).

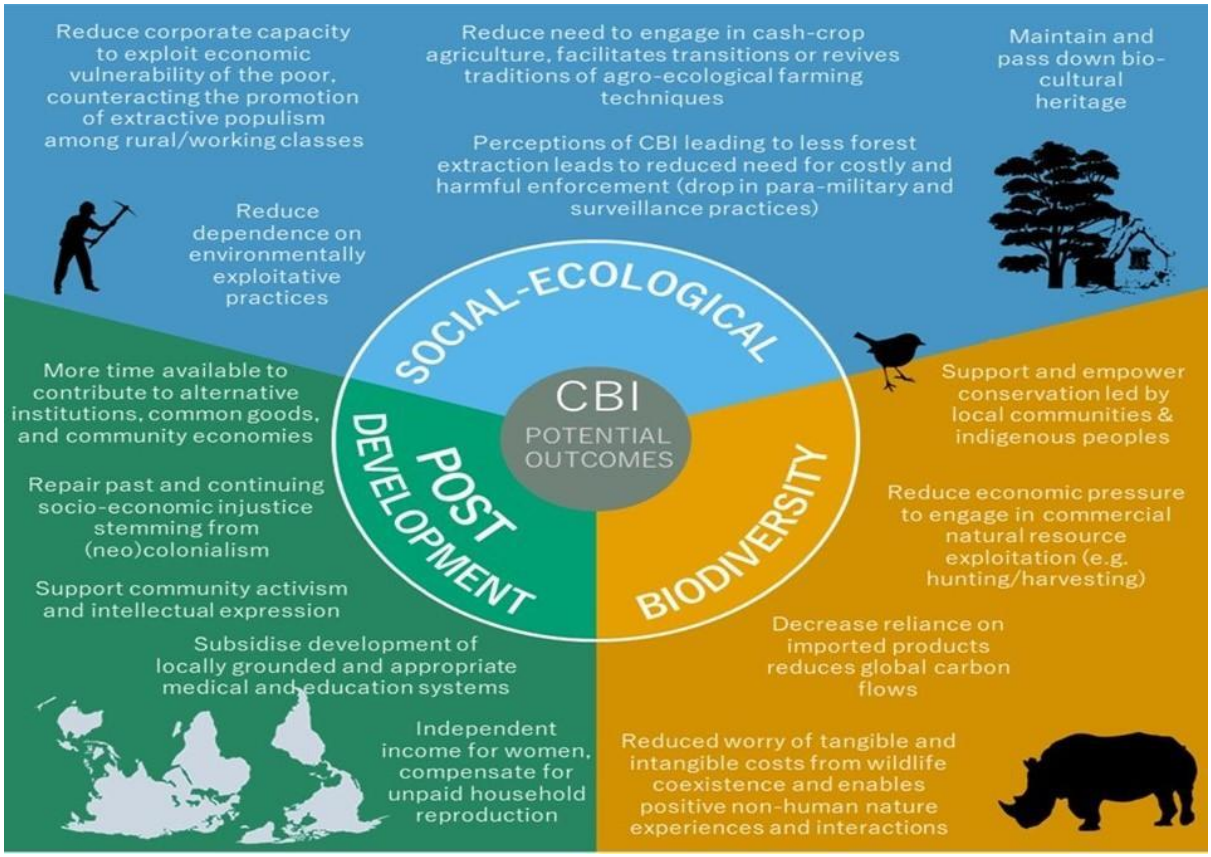

Figure 1. Potential BINC benefits (Source: de Lange et al. 2023)

BINC's potential is grounded in a particular theory of change as well as a view of human nature and behaviour largely antithetical to those informing the MBI model. Copious research in the interdisciplinary field of political economy (Robbins 2010) demonstrates that in many cases, rural people are forced to exploit resources unsustainably due to lack of alternatives, rather than because of inherent selfishness or greed (Painter & Durham 1995; Vandermeer & Perfecto 2003). Consequently, provision of an unconditional basic income can potentially afford people the security to reduce their reliance on unsustainable natural resource uses and pursue more sustainable livelihood options. This theory of change, in turn, is grounded in a more optimistic view of human nature asserting that most people act altruistically and cooperatively much of the time (Bregman 2020); that they are selfish and competitive mainly when forced to act so by scarcity; and hence, that eliminating this scarcity should encourage people to instead work together collectively for the common good, a potential that has been repeatedly demonstrated by research concerning common pool resource management (Agrawal 2003).

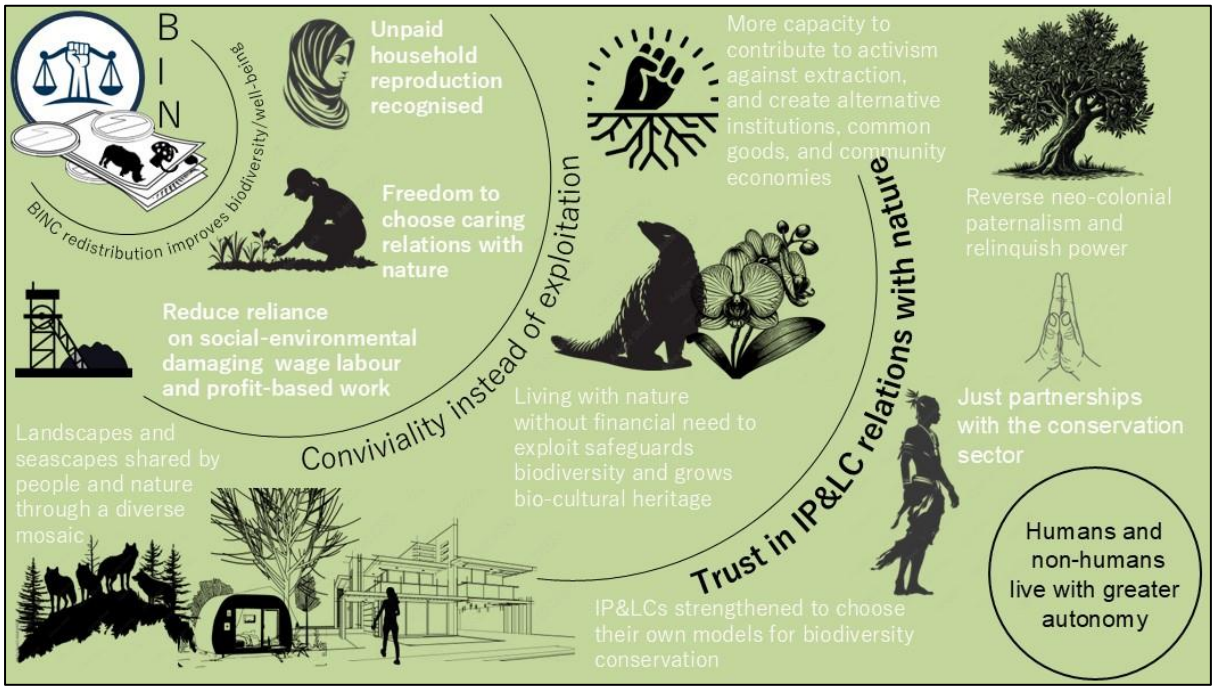

Figure 2: BINC Theory of Change

The Fine Print

In practice, of course, it will be difficult to realize all of the core principles of the BI model in BINC implementation. And indeed, there remain questions concerning which core principles are in fact needed or appropriate within a given context. In the following, we consider these questions in relation to each core BI principle:

Periodic Payments

While a periodic payment that provides a regular income stream around which people can plan is probably the best option in most cases, in some cases CTPs instead provide one bulk payment up front, or a combination of regular payments and a one-time lump sum (e.g. at the outset to help pay off accumulated debts) (Bagstagli et al. 2016; Banerjee et al. 2019). The appropriate payment scheme should therefore be tailored to the context and the express needs of project participants.

Universality

Universality in the context of BINC is understood as payments directed to those living in defined conservation-critical spaces. The conservation-critical space would be defined in an open and transparent process and could constitute, for instance, the population living within a national park, within its designated buffer zone, or in a Indigenous or Community Conservation Area (ICCA). Various scientifically based approaches exist to inform a transparent system to identify eligible populations and jurisdictions (e.g. High Integrity Forests, (HIF) High Carbon Stock assessments (HCS), Intact Forest landscapes (IFL) Conservation International Biodiversity hotspots etc.) of global significance (see de Lange et al. 2023). Ideally all people living within a designated jurisdiction would receive a BINC. However, it is important to acknowledge that communities such as pastoralists and others may occupy and use conservation areas seasonally. Therefore, it is important that BINC works towards

meaningfully incorporating people with diverse ways of relating to ecosystems, land and waters. The actual payment arrangement would be a political decision resulting from a transparent negotiation process. Moreover, whether payments should go to everyone living in these spaces or just to a specific subset (i.e. those most in need) will depend on context-specific factors such as the level of available funding, local social structures, and political processes.

Individuality

BI advocates individual-level payments for several reasons. Foremost among these is the potential for elite capture and hoarding of resources if payments are made at the group level, or for gender-based inequality and conflict if made at the household level. Yet there is also the danger of encouraging individuality, undermining social cohesion, and accelerating cultural change in (particularly some Indigenous) communities where these qualities are not the norm. So here again, the appropriate form of payment will need to be decided on a case-by-case basis depending on local conditions and in consultation with the proponents of the BINC initiative.

Cash

Distribution of BINC funds could also occur via e-money in addition to physical currency (Eichhorn & Rahmadani 2023). This could include local currencies as well as national ones. Beyond this, however, there is ongoing debate within BI discussions concerning whether the aim should be to provide income or instead (universal) basic *services* (Coote & Yazici 2019). The case for a focus on income relies in part on the fact that it is precisely the inability of many national (or local) governments to provide basic services that requires most development intervention in the first place. Yet even if income is emphasized, there must be service markets available for payments to lead to enhanced well-being. Where state provision of services is absent or inadequate, the pooling of BINC funds could help build capacity for local delivery of needed services (e.g., basic/immediate medical care, education, water provision, waste disposal, etc.). Yet in communities not as deeply integrated into global markets, where money remains marginal, introducing cash payments also has the potential to undermine local cultural institutions and incite conflict. So the appropriate medium of payments must be decided via context-specific deliberation.

Unconditionality

Finally, we arrive at likely the most controversial principle, the BI emphasis on unconditionality. As with BI generally, there are many good reasons, outlined above, to advocate for unconditionality in BINC. Yet there may also be contexts in which this is not appropriate. And indeed, it is possible that BINC can never be considered truly unconditional given that by definition it is associated, even if indirectly, with pursuit of conservation aims (Mumbunan & Maitri, 2022). That is, even if programme administrators do not tie payments to environmental outcomes, participants may make this connection themselves. And of course, if payments do not lead to conservation gains they are likely not to be sustainable over time in any event.

Mumbunan and Maitri (2022) introduce the term “implicit conditionality” to describe such a dynamics, as well as related situations such as where BINC recipients are, for example, living within protected areas where their economic activities are already restricted through national or local conservation regulations. Such implicit conditionality is likely to be present in any BINC scheme to some degree. However, there may be also situations where it is necessary to make BINC explicitly conditional as well. Here it is useful to distinguish again between *conditions* and *restrictions,* where conditions refer to actions required to receive payment*,* while restrictions are imposed on how payments can be spent.

Within this distinction, BINC should never entail restrictions but may sometimes require conditions, especially if this is demanded by funders more concerned with conservation outcomes than social development aims. So when and which forms of conditionality are appropriate for a given context is another important area of deliberation in implementation.

From this perspective, it is clear that a key tension in developing BINC is the balance between supporting the self-determination of programme participants and achieving (as well as evidencing) conservation and climate mitigation benefits. How to best address and resolve this tension is an important consideration in any future implementation effort.

Financing BINC

Another key consideration concerns how to sustainably finance a BINC not directly linked to global environmental markets. After all, one argument in support of MBIs is that they are in fact able to generate finance directly through carbon markets and other offset mechanisms. Yet as we have shown, this comes with its own set of problems, and at any rate, remains a small proportion of what is actually needed to effectively finance conservation efforts globally.

BINC will entail significant financial costs. A previous proposal near a protected area in Zimbabwe projected a cost of USD 7.2 million per year to provide BINC to 4000 recipients (NNH 2018). De Lange and colleagues (2023) estimate that funding BINC globally would likely cost between USD 351 billion and 6.73 trillion annually depending on the number of recipients and level of payment. Yet while these are no small sums, they are well within the scope of what is projected to be needed to scale up global conservation and climate action anyway in the future by whatever means (UNEP 2021).

The money needed to finance BINC exists; it is merely a question of how it is distributed. It is estimated that between 1/3 and 1/4 of the world's total wealth is hidden in offshore tax havens (Campling & Colás 2021). Global subsidies for environmentally harmful activities such as fossil fuel and conventional agricultural production are estimated at USD 2.6 trillion per year.[3] If even a small portion of these funds were directed to BINC, it could easily fund implementation of a substantial international programme.

More concretely, several potential funding sources for BINC at different scales have already been proposed:

Forest Carbon Dividend

To finance a potential BINC initiative in Tanah Papua, Indonesia, Mumbunan and colleagues (2022) propose developing what they call a Forest Carbon Dividend (FCD). This would be funded from the earnings generated from a portion of the forest carbon stock valuation revenue in the region managed as a permanent fund, termed Tanah Papua Forest Carbon Fund. The dividend model is similar to the Alaska Permanent Fund previously mentioned, although financed through sustainable forest management rather than fossil fuel production. The Fund would be managed to create real returns for distribution while preserving the principal revenues for reinvestment. Revenue would be collected from the valuation of forest carbon stock. This entails calculating the stock, pricing it, and determining the source of payment for the quantified and valued stocks. The proposed fund would be linked to the value of the forest carbon stock, meaning a fluctuating dividend depending on the amount of forests

[3] https://www.businessfornature.org/reformingehs

present at the time of the valuation. If forests are declining, less revenue would be provided, and vice versa. (For more explanation of the model see Mumbanan et al. 2022.) Such a model has potential to be scaled for other BINC initiatives too.

Cap and Share

More ambitiously, Equal Right (www.equalright.org) propose a global "cap and share" mechanism to fund UBI, a model that could easily be adapted for BINC in particular (Brown 2024). The idea is to replace the "cap and trade" mechanism underlying carbon markets with an alternative whereby a limit and tax imposed on fossil fuel production generate revenue distributed in the form of a BI. This carbon tax could be supplemented by levies on extreme wealth that have also been recently proposed (Partington 2024). The resulting revenue would be quite substantial. As Brown describes,

> „a charge of $135 per tonne on the global extraction of fossil fuels could raise as much as $5 trillion a year and fund a global UBI of at least $30 a month. A progressive wealth tax ranging between 1 and 8 percent on the world's richest multi-millionaires and billionaires could yield another $22 for every person in the world, and a financial transactions tax of just 0.1 percent could raise another $16 each."[4]

No Silver Bullet

It is important to emphasize that neither BINC nor any other particular mechanism should be understood as a stand-alone silver bullet capable of achieving conservation or livelihood benefits in isolation. Nor should local residents of conservation-critical spaces be made wholly (or even primarily) responsible for achieving conservation results. No community exists in a vacuum, and the broader political-economic forces at play fundamentally influence the extent to which local people are able to effectively manage the resources around them (Berkes 2007; Fletcher et al. 2023). Consequently, BINC must be part of a broader, more comprehensive programme for transformative change that includes attention to other dynamics, including directly confronting powerful extractive industries encroaching on local conservation spaces (Büscher and Fletcher 2020) and establishing a broader governance framework entailing enabling conditions. This must include, in particular, the formalization of land and tenure rights for IPLCs (RRI 2019). As previously noted, in BI projects it is common that cash payments are complemented by other forms of intervention ("Cash+") that are instrumental in influencing what payments can achieve (activities like financial training and establishing community savings and loan associations for pooling resources are common elements of such Cash+ programming). This is likely true of BINC as well.

In this sense, it is useful to think of BINC as shaped by a set of conditions that can be either enabling or constraining. These conditions include among others the following factors:

- To what extent do local people have territorial control over the spaces slated for conservation?
- What are people's current relations with external market forces? How has this developed historically?

[4] https://www.aljazeera.com/opinions/2024/10/15/a-sustainable-global-universal-basic-income-can-be-done-here-is-how

- What is the history of relations between local people and outside interests, including previous conservation interventions?
- How is the context (local, regional and national) situated within larger geopolitics?
- What are the enabling conditions within the context, and how do governance processes across scales (local, regional, national, etc) interrelate and influence local politics?
- What is the status of the current provision of basic services (education, infrastructure, medical care, clean water, etc.) within the target area?

Spotlight on Peru

Thus far, discussion of BINC has remained primarily conceptual. Since the advancement of the original BINC proposal, subsequent research has investigated the extent to which conservation professionals are sympathetic to the idea (Sheehan & Martin-Ortega 2023) and what it might cost to implement it as a concerted global strategy (de Lange et al. 2022). A modelling study found that BINC could effectively reduce wildlife hunting based on observed links between hunting and low income (Kader 2023). A concrete proposal for a BINC intervention in Zimbabwe has also been developed but never implemented (Nature Needs More 2018). Another has been outlined but not yet operationalized for Indonesia (Mumbunan et al. 2021). Over the past year, however, a first BIINC pilot has in fact been implemented by Cool Earth (www.coolearth.org) in the Peruvian Amazon in collaboration with the National Organisation of Andean and Amazonian Indigenous Women in Peru (ONAMIAP) and their grassroots base OMIAASEC. Preliminary results of this initiative offer important insights into the BINC mechanism's potential (and potential scaling).

In November 2023, 211 people in three Indigenous communities began to receive USD 272 (PEN 1032) every four months. The pilot will last for two years, with the possibility to extend for another two years. The communities, comprising both Asháninka and Yanesha peoples, are situated in the Selva Central of Peru, within the tropical rainforest of the UNESCO Biosphere Reserve Avireri-Vraem, a region renowned for its rich biodiversity. Spanning an area of 513 hectares, the territory harbours a variety of plant and animal species. It is also home to 163,000 trees and hence serves as a significant carbon sink, with carbon stocks estimated at 300,000 tonnes, highlighting its vital role in global climate regulation. For Asháninka and Yanesha families, the forest plays a crucial role beyond carbon; it is inherent to their cultural identity and worldviews and vital to fulfilling their basic needs, such as provision of food, water, and medicine. Yet the communities are under continual pressure from extractive industries, particularly logging companies, to sell rights to harvest resources from their territories. Without alternative income sources, high levels of poverty would likely compel them to succumb. While there is no explicit conditionality attached to BINC payments, they are intended to afford recipients the financial security to resist this pressure.

Baseline information was collected between October and November 2023, before the first disbursement. Subsequently, the first monitoring was carried out in February 2024 in one of the recipient communities (hereafter community 1), with a second round following in in May 2024. The monitoring sessions have identified several positive trends. Improved diets were reported by community members, with greater variety and quantity of food being produced. Some families were able to create subsistence gardens and improve the production of existing crops to ensure greater food sovereignty. Participants reported that they now have more time to enjoy recreational activities, strengthening social ties and reducing time poverty. People stated that an increase in financial stability has contributed to reducing stress and conflict. A decrease in long and exhausting day labour, mainly working on farms owned by non-Indigenous communities, was also reported, allowing participants

more time to be spent on family farming. Community cohesion remained strong, with members able to fulfil their communal duties and actively participate in conservation efforts like reforestation or the protection and management of important watering holes.

Conclusion

This article has made the case for developing BINC as an instrument of transformative justice in conservation and climate finance. We have described how the case for BINC emerges from the growing urgency to combine conservation and climate action with social justice and support of human rights. We explained how current efforts to address this constellation of issues through MBIs have often fallen short of their aims. Rather than encouraging further economic growth through market integration, we have argued that environmental finance should focus on effectively redistributing existing wealth and resources to those on the front lines of the conservation and climate crises. BINC is one potential means to achieve this. We have shown how a first BINC project ongoing in Peru offers promising evidence of the mechanism's potential to reconcile poverty reduction with environmental protection. But we have also highlighted the complexity of putting BINC into practice, and the various considerations that will need to be taken into account to mould the mechanism to diverse local contexts.

The next step, to which our growing international network is committed, is to develop new BINC pilot projects in other sites in which we work, in partnership with local civil society organizations and resource users. These projects should be embedded within a rigorous transdisciplinary research framework that integrates economic, ecological and sociological methods in pursuit of a holistic understanding of BINC processes and outcomes. Such research should yield comparable findings that can be used to cross-fertilize insights from different sites to inform adaptive management as projects progress. This linking and learning should also assist in developing a general model and set of best practices to guide implementation of more projects in the future. In this way, we hope to scale up potential for BINC to contribute to transforming how conservation and climate action are financed throughout the world. We invite other conservationists to join us in this effort in pursuit of a more just and sustainable future.

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