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Can a Basic Income Stop the Illegal Wildlife
Trade?

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Abstract

There are currently a number of basic income experiments running or being considered in Africa. Yet none of these trials have been linked to conservation and wildlife protection. We are in the middle of the 6th global extinction, with accelerating rates of species loss and major threats to iconic species such as rhinos and elephants. Current conservation models have clearly failed, as they are fundamentally based on a sustainable use approach to wildlife protection (if it pays it stays). Programs that provide employment and revenue sharing at tourism or hunting conservancies have equally failed to stop poaching and illegal harvesting.

We believe that a basic income would significantly change the incentives and hence behaviour of communities living in and around protected wildlife areas. The Namibian basic income trial saw a great reduction in illegal hunting and it would stand to reason that this can be replicated at a larger scale in a primary conservation area. Financial security would mean less poaching for food, less illegal harvesting and less incentives to help wildlife trafficking syndicates. In addition, we would like to ascertain if communities feel they benefit from neighbouring protection areas through a basic income, they would be more likely to engage with conservation. This could be tested through using a tiered basic income model where activities in helping to rewild, revegetate or rehabilitate attract a higher level of income.

This document outlines the rationale for such a trial and considers the options for designing a trial starting in 2018. Such a trial might also help high-value conservation areas to rely less on hunting and instead convert to eco-tourism, which generates much higher revenue once tourism numbers increase.

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Basic Income Trial to Reduce Wildlife Poaching

Introduction

The illegal wildlife trade (IWT) is usually presumed to be the fourth largest transnational crime, after drugs, arms and human trafficking, and estimated to be worth around USD \$20bn per annum. Illegal transnational trafficking of species is done to fulfil a range of human desires, including exotic pets. Poaching is also an issue at the local level in range countries, either for wild meat consumption or due to beliefs in medical or spiritual properties of animals or animal parts. Combined with habitat loss, the threat to wildlife populations especially in Africa is immense, with many species facing the real possibility of extinction in the wild.



The current conservation paradigm has been unable to significantly halt the decimation of wildlife. Even though the establishment of protected areas has provided safe havens for populations, poaching still takes place in those areas especially for species that command high prices on the transnational illegal wildlife market. Currently rhino horn is worth more than gold, the industrial slaughter of 100 elephants a day is severely affecting many elephant populations and more than 1 million pangolins are taken from the wild each year. This situation cannot continue if we want to preserve viable wildlife populations and ecosystems.

In proposing a basic income trial to address wildlife poaching, we are working from the assumption that absolute poverty and lack of food security are major contributors to poaching both from an IWT perspective and for local wild meat consumption. Surveys conducted in several African range countries to understand poaching behaviour and patterns usually find that food security and the opportunity to make money quickly are the key factors driving illegal poaching. With no jobs on offer beyond for a handful of rangers and positions in tourism or hunting lodges, the hypothesis we would like to test with such a guaranteed basic income trial is that it will significantly effect poaching behaviour, including the willingness to supply intelligence for trafficking syndicates.



This document outlines how such a basic income trial could be structured and how the hypothesis that it will lead to a substantial reduction in poaching will be tested. Notwithstanding the benefits for wildlife, the basic income is also expected to deliver the usually observed benefits to health, education and family wellbeing already established in other trials. Given the proximity of the selected communities to private conservancies or National Parks, we are also looking for a substantial reduction in human-wildlife conflict.

What We Want to Address

Poaching and human-wildlife conflict are major issues in and around protected areas in African countries (and elsewhere). We want to verify that a basic income can address the following issues directly and within a 1-2 year time frame:

1. Poaching on behalf of traffickers who supply the transnational illegal wildlife trade (IWT)
2. Subsistence poaching for wild meat consumption
3. Human-wildlife conflict as a result of illegal harvesting and encroachment into protected areas



IWT related poaching is an opportunistic form of income generation by people who tend to be poor and are motivated to increase their income or improve their livelihood. The majority of poachers recruited by trafficking syndicates come from or are

sheltered by local communities bordering the protected area. The rewards on offer depend on the species being targeted, but poachers can expect to be paid a few hundred to a couple of thousand dollars for delivering high-value species such as rhino horn and elephant tusks.

There are also reports of traffickers coercing local community members into poaching through the threat of violence or death to them or their family. The main reason for needing to enlist people from the surrounding communities is that traffickers typically lack the required local knowledge about the security measures in the protected area and the likely locations of the animals. Given that poaching is predominantly undertaken at night and on foot, knowing where the patrols and the animals are is critical to successful poaching incursions. Traffickers can also typically offer a few hundred dollars to rangers employed in protected areas to divulge information about animal locations.



The main continental African species currently being exploited and trafficked are rhinos, elephants, pangolins and big cats. The scale of the problem is huge in relation to the remaining populations of these animals:

1. About 1,300 rhinos are killed a year in Africa out of a total population of 25,000
2. About 35,000 elephants are killed a year out of a total population of 350-400,000
3. The number of pangolins poached each year is estimated to be somewhere between 100,000 and 1 million, with total population numbers unknown

The current strategy of preventing poaching is to use military style protection measures. About 50% of the USD 1.3bn spent on tackling the IWT between 2010 and 2016 has gone into these measures. Yet this has significant downsides because of:

- High costs (estimated to be around USD \$1-2million per year for a typical small conservancy),
- Loss of human life for both poachers and rangers (which means loss of livelihood for the family and resentment towards conservation),
- Complete fencing of parks and conservancies can lead to overstocking, environmental degradation and impedes natural movement of migratory species,
- Potential impacts on social justice and human rights due to the extended presence of military or armed mercenaries

In addition to drastically reducing poaching for the IWT we also hope to demonstrate that paying a basic income will significantly reduce (or ideally eliminate) subsistence poaching in protected areas. Food



security is a major issue for most poor communities and having ‘access’ to local game via snaring is often seen as a basic survival strategy. It is also a relatively low risk activity for the poacher and extremely cheap (no rifle required, only a bit of wire). Whilst the poachers tend to target smaller antelope species, snaring is in fact completely indiscriminate and big cats or even rhinos can get caught in the snares, usually leading to the slow and painful death of the animal.

The extend of local subsistence poaching depends on a myriad of local factors that impact both food security and accessibility of the protected area. It is often very difficult to assess the degree of local subsistence poaching taking place. We will aim to make local subsistence poaching one of the selection criteria for choosing a trial location. The degree of poaching can be established through survey techniques that reveal illegal activity, such as the random response technique (see section on measurement).

Finally, we will also study the impact of a basic income on human-wildlife conflict. This conflict exists in two distinct forms – wildlife attacks on humans encroaching into protected areas for poaching or illegal



harvesting and wildlife encroachment into human settlements. Both forms of human-wildlife conflict are major issues for communities neighboring protected areas that are not fully fenced. Wildlife attacks on humans who enter conservancies to collect fire wood or animal feed are often fatal or lead to serious injuries. Elephants tend to be the main species associated with this type of conflict. Elephants are also the main species

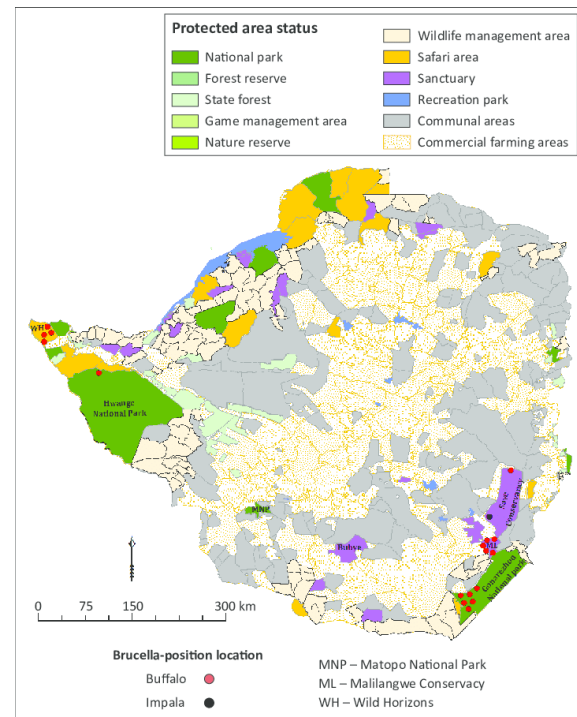
for encroachment into local communities and the destruction of crops. Big cats such as lions and leopards are the main issue in relation to attacks on local farm animals (goats, cattle).

Taken together, we will select communities that border protected areas which contain the key species associated with all 3 types of poaching and human-wildlife conflict: elephants, rhinos and big cats.

Location

We are proposing to run this basic income trial in Zimbabwe. There are a number of reasons for selecting Zimbabwe:

1. Zimbabwe has the highest unemployment rate in the world, at over 90%.
2. Zimbabwe is one of the poorest countries in the world, with a per capita GDP of USD \$1,000
3. Zimbabwe has a very high rate of absolute poverty (defined as less than USD \$1.90pp per day)
4. Zimbabwe has large and significant wildlife populations, including some 80,000 elephants, about 700 rhinos and many other species of high conservation value
5. Zimbabwe has a large poaching problem, both for international trafficking and for food consumption due to lack of food security. Some 6,000 elephants were killed between 2014 and 2016 and Zimbabwe had 2,200 rhinos before the current poaching wave started.
6. Zimbabwe does not have a compensation scheme for damage caused by wildlife to people or livestock
7. We have access to most conservation stakeholders and conservancy owners and managers in Zimbabwe through SAVE African Rhino Foundation, which has been active in Zimbabwe for 30 years
8. Zimbabwe has mobile phone networks and mobile payment systems - EcoCash, OneWallet, and Telecash, although adoption lags behind other African countries.



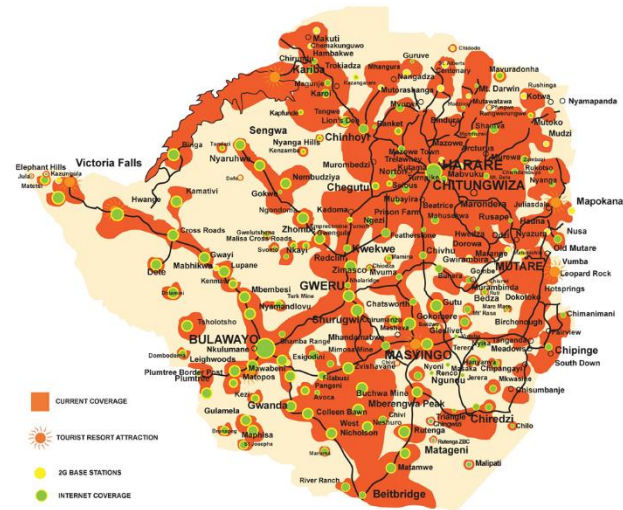
We will be undertaking a 10-day field trip in Zimbabwe facilitated by SAVE African Rhino Foundation in November 2017 to select the most suitable location for our basic income trial.

To establish viability of a basic income trial in Zimbabwe a number of key selection criteria will need to be examined for each possible location:

1. Presence of high-value IWT species and key species associated with human-wildlife conflict
2. Availability of baseline data for poaching going back at least 3 years
3. Size of the park, its borders and the number of people in the surrounding communities

4. Current knowledge about the poachers and where they come from and what community support they receive
5. Stability of the local context and community (e.g. no upcoming or recent disruption)
6. Level of anti-poaching protection measures and mandate of rangers (e.g. shoot to kill policy)
7. Prior experience in working with community through e.g. community programs, Campfire etc
8. Presence of other (e.g. humanitarian) NGOs in the area
9. Proximity to major roads/towns, e.g. Beitbridge (used by poachers)
10. Mobile coverage / mobile payment agent within walking distance to receive mobile payments
11. Local and regional power structure and potential crime/gang issues
12. Park or conservancy not fully fenced

A recent report to the Bill & Melinda Gates Foundation on mobile payments has highlighted that mobile payment use and penetration in Zimbabwe is lagging other African countries. In addition, mobile coverage in many rural and remote areas is very poor with overall network coverage reaching only 82% of the population (see map). These issues may impact location selection and will be studied in detail during our field trip in November 2017.



Scope & Design Considerations

Based on the literature and published research we propose a minimum scale of 1,500-2,000 adults for our basic income trial. The size enables segmenting the recipients into 3 different groups for 3 different ways of receiving payment (see below). It also fits with the size of communities in the areas surrounding the most likely locations. Population density in those areas is quite low (around 30 people/km²), so this trial will cover a large land area.

We further suggest to run the trial over a 2-year period. Poaching for international trafficking is usually quite seasonal and dependent on the weather and the moon (most such poaching is done at night). It will be easier to generalize the results from the basic income trial if it covers at least two years.

The trial is meant to examine a number of key questions in relation to poaching and human-wildlife conflict:



1. Does receiving a basic income sufficiently address food security to eliminate or at least drastically reduce subsistence poaching?
2. Does receiving a basic income eliminate or at least reduce the poaching of elephants, rhinos and similar species of high value to traffickers?
3. Does receiving a basic income reduce the incidence of human-wildlife conflict?

In setting the level of payment and frequency of disbursing the funds, we need to consider the current economics of poaching for wildlife traffickers. In most instances traffickers will recruit people from the local communities surrounding the park or conservancy to carry out the poaching. Poaching at night relies on local knowledge and knowledge about the likely location of target species; in some instances this comes from rangers working in the park. Traffickers are prepared to pay for both intelligence about animal locations and anti-poaching activities and also for carrying out the actual poaching. Payments can vary between a couple of hundred to a thousand or more USD. In Zimbabwe captured poachers typically report being offered up to USD \$10,000 for a pair of rhino horns.

We therefore propose to set the level of annual payments for the basic income at USD \$1,000 per adult. We further propose to segment the recipients into 3 groups who receive payments based on different disbursement schedules as follows:

1. Monthly payments of USD \$83
2. 4 quarterly payments of USD \$250, and
3. One upfront payment of USD \$250 and then 11 monthly payments of USD \$68

Note: Actual amounts paid out will be ~4% lower because of transaction costs

The aim in testing different schedules is to address the risk/benefit consideration an individual makes when agreeing to poach for rhino horn or elephant tusks. Because of the large amounts of money on offer relying on monthly payments may not be sufficient to eliminate the lure of ‘instant riches’ promised by the traffickers vs. the known risk of getting captured, injured or even killed.

We may further have to consider mobile payment agent cash availability and fees when setting the disbursement schedules and also the risk of extortion/assault by criminal gangs. A recent field research report to the Bill & Melinda Gates Foundation found that mobile agent payment fees can be quite high in Zimbabwe and mobile coverage is poor in many of the areas under consideration for our trial, so there may not be enough agents/enough cash on hand to handle the large transfers.



In addition to the basic income component of the trial we would also like to test establishing an ‘incentive pool’ for achieving conservation related outcomes in year 2 of the trial. Such a pool would be paid to the community as a whole and used for education purposes (e.g. local schools or higher education scholarships) should the community achieve its conservation target at the end of year 2.

In contrast to other basic income trials, we are not going to select the ‘poor’ who will receive the cash transfers. Our model is closer to the universal basic income ideal – we are proposing to enroll all adults (aged 16+ years) in a community who agree to participate, irrespective of their current income or ‘wealth’. We know that employment opportunities in the areas under consideration are extremely rare

and we want to encourage social collaboration, so we consider this a more suitable approach for testing our hypothesis in relation to poaching and human-wildlife conflict.

Budget

On top of the basic income payments, we will allocate 10% additional funds to cover overheads such as research, enrollment, monitoring, travel and project management. This is consistent with the level of overheads reported by GiveDirectly for their currently running basic income trial in Kenya.

The high-level budget in US Dollars for the full 2-year trial would be broken down as follows:

Budget Item	USD Amount based on 1,500 people	USD Amount based on 2,000 people
Basic income payments @ \$1,000pp per year	\$3.0 million	\$4.0 million
Overheads – Project Management, Local Monitoring, Research, Evaluation, Administration, Travel	\$350,000	\$400,000
Bonus Pool for communities where poaching has gone down at least 80% in year 2	\$75,000	\$100,000
TOTAL	\$3.4 million	\$4.5 million

The detailed budget will be worked out and verified after we have selected the location(s) and spoken about the exact nature of the research to our partners (see below).

What to Measure and How

Whilst the exact nature of the research will be defined during the design stage in collaboration with our research partners, a number of primary measures will definitely be included:

1. **Poaching Baseline Survey** – broken down into IWT related poaching and subsistence poaching. Poaching data for high-value species poached for the IWT is usually derived from carcass surveys in the protected areas. Poaching data for low-value species poached for the IWT (such as pangolins and reptiles) is very hard to come by and will be included in the community surveys. Subsistence poaching data can be revealed in community surveys using techniques specifically designed for surveying frequency of illegal activities (such as random response technique).
2. **Human-Wildlife Conflict Baseline Survey** – will also be included in the community survey to establish type and frequency of park encroachment and type and frequency of human-wildlife conflict. This also includes encroachment of wild animals into the community and type and magnitude of damage inflicted on humans, crops and livestock.
3. We will repeat the above surveys at the half-way mark to establish progress achieved during the trial and again at the end of the trial period.

4. We may include measures on **socio-economic and emotional wellbeing indicators** should the budget permit. The exact nature of this research will be agreed with the funders and the partners during the design stage.

We anticipate that all research conducted as part of the trial will be conducted by our research partners and registered with the appropriate organization prior to commencement of the trial. All research will be evaluated and submitted to a peer-reviewed academic journal for publication at the end of the trial.

At this stage, we do not believe that it is necessary to conduct a randomized controlled trial, as this would require to also survey communities sharing the same characteristics according to the selection criteria, but not receiving a basic income. The final approach in this respect will be agreed with the funders and the research partners during the design stage.

In addition to the formal surveys and research the on-the-ground monitoring will include information collection through informal interviews and conversations during the entire duration of the trial. This will allow us to get early indications of behaviour change (or the lack thereof) and it may inform any potential changes to the trial methodology / suspension of the trial should the nature of the insights gained warrant such a change (e.g. if poaching goes up instead of down).

Who We Are

Nature Needs More (www.natureneedsmore.org) is a non-profit company incorporated and registered as a charity in Australia. Lynn Johnson and Peter Lanius are directors of the company and Lynn is also the CEO. For brief biographies of Lynn and Peter please see below.

Lynn and Peter are partners in life and in business and have started 6 companies over the last 16 years. Our primary business is Leadership Mastery Pty Ltd, which provides executive and business coaching and strategy consulting to CEOs and senior managers of large and medium sized private, NGO and public sector clients. Our core business expertise is in coaching, strategy, behaviour change and project management. Lynn and Peter are both physicists by training and both hold PhDs in particle physics.

Lynn and Peter have actively worked on the illegal wildlife trade since 2013, through Breaking The Brand (www.breakingthebrand.org). This project was dedicated to designing and delivering demand reduction campaigns to the primary consumers of rhino horn in Viet Nam. It has also been influential in the wider conservation sector in terms of educating the sector about demand reduction and behaviour change campaigns. We raised over USD \$250K for campaigns in Viet Nam during this period. Breaking The Brand has now been incorporated into Nature Needs More.

We have a strong relationship with SAVE African Rhino Foundation (SARF) based in Perth, Australia, which is the second-oldest NGO dedicated to rhino conservation in the world. SARF is almost exclusively focused on Zimbabwe and has raised and distributed over AUD \$8 million since its inception. We also have good relationships within the main NGOs working in the IWT part of conservation.

Lynn Johnson, CEO

Lynn originates from the UK and immigrated to Australia in 1996. She holds a PhD in particle physics and worked as a research physicist for ICI in the UK before embarking on a journey that led her from a career

in management consulting before setting up Leadership Mastery in 2001 and Breaking The Brand in 2013.

Lynn has extensive experience in designing & delivering behaviour change interventions and business strategy development. She has delivered such interventions to more than 3,000 clients in the private and public sector. She has further designed and delivered behaviour change programs for at-risk young adults and indigenous Australians.

In her conservation work Lynn's focus have been demand reduction campaigns targeting the primary users of rhino horn in Viet Nam. She has conducted the research into the users and designed and delivered the campaigns, raising over USD \$250K since 2014. She has also acquired broader knowledge of the illegal wildlife trade and trafficking chain.

Lynn has a long-standing interest in wildlife conservation and is a member of the SARF sub-committee. She has travelled to a number of African countries in recent years as part of our conservation efforts.

Peter Lanius, Director

Peter originates from Berlin, Germany and immigrated to Australia in 1996. He holds a PhD in particle physics. Peter spent the first ten years of his career as a consultant and project manager in the IT&T industry. He held senior project management positions in blue-chip companies including Hewlett-Packard, Telstra and Texas Instruments.

In early 2003 Peter joined Lynn and became a director of Leadership Mastery where his focus has been executive coaching, business strategy development and business coaching. He has also been the primary finance manager for all our business ventures.

Peter has assisted Lynn's work in Breaking The Brand and has recently joined her in becoming a director of Nature Needs More. He has been researching the basic income model since 2015.

Partnerships

We will partner with a number of organisations to deliver the basic income trial. Our primary role will be overall design, fundraising and project management.

For the baseline measurement and final evaluation of the primary measures around wildlife poaching and human-wildlife conflict we plan to partner with a university that have current research programs in the area of IWT and poaching. We have a number of existing contacts to researchers in the field and will finalise this after the BIEN Congress (see Next Steps).

To support the on-the-ground set-up and monitoring of the trial we will partner with a NGO with a current presence in Zimbabwe, an example being Oxfam.

We have an existing strong relationship with SAVE African Rhino Foundation (SARF) based in Perth, Australia, which is the second-oldest NGO dedicated to rhino conservation in the world. SARF is almost exclusively focused on Zimbabwe and has excellent relationships with all conservation stakeholders in the country.

In terms of enrolments and mobile payments, the aim would be to partner with GiveDirectly and/or their outsourcing provider for mobile payments and verification (Segovia). Again, we will approach prospective partners to discuss this possible collaboration after the BIEN Congress.

We will decide at a later stage if the budgets permits setting up monitoring and measurement of socio-economic and emotional wellbeing indicators as part of this trial. If budget permits, we will again partner with a local NGO and a research institution to carry out this work.

Implementation

The aim would be to partner with the likes of GiveDirectly/Segovia and a locally based partner-NGO for the practical aspects of conducting the trial (again approaches to prospective partners will be made only after the BIEN Congress). This covers final selection of communities, enrolment, dispersion of funds, monitoring and on-the-ground support. It also covers all aspects of risk mitigation in relation to theft, fraud, cash-out of mobile payments and handling adverse events.

Final selection of communities will be kept secret until enrolment is complete and the first payment has been received and successfully cashed out to prevent non-locals from trying to ‘gate-crash’ the trial. The baseline surveys outlined in the measurement section will take place before enrolment starts.

Our current plan is to enroll only adults, those with a National Registration Card as ID, which is required for all people over 16 years of age in Zimbabwe. This will be done with the help of locally recruited support staff and in our presence. Enrolments will be voluntary, but we expect similar up-take rates as in other recent trials in Kenya (95%).

Participants will be provided with mobile phones and receive instructions in relation to mobile payments and where to go to cash out their payments. We will work with mobile payment agents to ensure that cash will be available on payment days and that no fraud/theft takes place when participants cash out their payments. This includes being present at payment agents’ locations, verifying participants have received the full amount in cash and calling on recipients to ensure no adverse events have taken place after receiving their cash (such as theft, extortion or requests for bribes). We believe that because of the economic and cash situation in Zimbabwe we will need to actively manage this aspect of the basic income trial.

Our local partner NGO will maintain a support and monitoring presence in the selected communities throughout the trial. This presence will allow us to learn about any potential issues quickly and devise strategies to prevent adverse events for the future. It will also allow us to use the trial for media and social media coverage, as someone will always be present to assist should media organisations wish to visit.

Beyond managing risks and support on the ground the exact aspects of the execution phase will be defined during the design stage in collaboration with our funders and partners.

Risks & Mitigation

The risks and mitigation strategies will be refined over time as we get closer to implementation of the trial. Apart from the obvious funding risk, there are going to be risks which are common with other basic income trials in Africa and we have also identified a number of location specific risks already.

Risk	Severity	Probability	Mitigation
Insufficient Funding for trial	High	Medium	Only commit to run trial once we have secured 80% of total funds required.
Political Instability	Low	High	Zimbabwe is not politically stable at present, but we do not foresee this impacting the trial. We will make this part of our location selection criteria.
Local Politics	Medium	High	Many communities have existing experience with CAMPFIRE programs and the appropriation of funds by local politicians. This might cause issues with fraud/collusion or outright rejection of the trial and has to be investigated as part of the location selection.
Local Disruption	High	Low	In some of the areas under consideration there could/will be severe disruption due to infrastructure projects. This needs to be taken into account during location selection.
Lack of Mobile Coverage	High	Medium	Mobile coverage in many areas under consideration is patchy or non-existent. This will need to inform location selection.
Lack of cash at mobile payment agents	High	High	Zimbabwe has a chronic cash shortage and we will need to investigate if mobile payment agents can actually pay out the amounts based on the payment schedule.
Fraud by mobile payment agents	High	Medium	Local monitors will be present on payment days and we will also call select recipients in real-time to check they have been paid the full amount received via mobile payment. Senior staff will oversee the first few payment cycles.
Increase in Poaching	High	Low	Should an increase in poaching be observed the trial will be suspended and the bonus pool funds will be used to fund additional security and anti-poaching measures

Summary & Next Steps

We are proposing a 2-year basic income trial to test the hypothesis that paying a basic income to communities bordering protected areas in Africa will reduce poaching both for the IWT and subsistence

poaching. We also wish to test the hypothesis that such a basic income is going to reduce the incidence of human-wildlife conflict. We are proposing to run such a trial in Zimbabwe with 1,500-2,000 recipients and in partnership with academic institutions and NGOs which will conduct the research and provide the on-the-ground support.

This proposal will be presented at the BIEN Congress in Lisbon in late September. Based on the feedback received from the initial reviewers and the BIEN Congress we will prepare a final project proposal after our field trip to Zimbabwe in early November.

We would anticipate initiating meetings with potential funders and partners in late 2017/early 2018 for an anticipated start time in late 2018.