

Social Protection and Climate Change

Can Brazil pursue twin social and environmental objectives together?

Brazil's invaluable rainforests have dwindled in recent decades, as agriculture and other development have moved in. Development opportunities are crucial for many rural populations who continue to live in poverty. Now, the Government is attempting to address poverty and threats to the environment together through a new social protection programme.

1

Brazil is home to one of the largest stretches of tropical rainforest.

The Amazonian rainforest represents a renewable, productive resource critical for reducing greenhouse gas in the atmosphere responsible for climate change. But only 80 per cent of the forest that existed in 1970 remains today, and is under threat from development.

2

Persistent poverty in Brazil makes unsustainable economic opportunities attractive for many.

Brazil has made considerable strides against extreme deprivation. But poverty persists, particularly in many rural areas. Since 2003, the conditional cash transfer programme *Bolsa Família* has attempted to address the worst forms of poverty.

3

In 2011, Brazil redoubled assistance efforts and helped the poor engage in the sustainable economy.

Additional cash is now provided to extremely poor families in exchange for ecological services performed by household members. The programme provides business and training opportunities for households to engage in sustainable enterprises development, including latex extraction, artisanal fishing, and handicraft production from natural resources.

4

The program has reached tens of thousands, but little is known about its impacts on poverty and the environment.

Over 51,000 extreme poor families in Brazil have received the additional benefits. But the programme's net welfare effects, when combined with land use restrictions faced by beneficiaries, and its ultimate impact on the environment are less clear.

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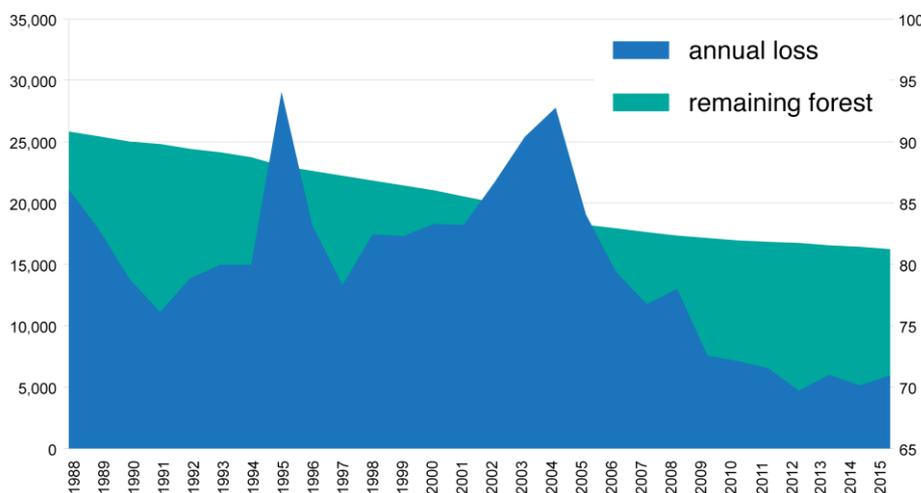
Brazil's forests under threat.

Forests play a vital role in stabilizing the environment and rolling back the causes of global climate change by absorbing carbon and reducing the presence of greenhouse gasses in the atmosphere. For its part, the Amazon rainforest in Latin America is one of the world's largest swaths of natural forest, stretching from Peru in the west and to the coasts of French Guyana and Brazil in the east, and is estimated to store between 80 and 120 billion metric tons of carbon. The area of the Amazon makes up more than half of all the Earth's remaining rainforests, and roughly 60 per cent of the Amazon rainforest is located inside the country of Brazil.

expense of the natural flora. Between 1970 and 2015, nearly 770,000 km² of the Brazilian Amazon rainforest was lost to deforestation, primarily due to livestock, logging, and plantation-scale agricultural activities. According to several reports, roughly 80 per cent of lost rainforest lands are now occupied by cattle ranching, a sector dominated by medium and larger ranchers who possess almost 90 per cent of the land in the nine states that make up the Amazon basin. The Government has actively nurtured and subsidized cattle ranching activities for many years, and the sector is predicted to continue growing to satisfy an increasing global demand for beef. However, the most acute deforestation of the Amazon appears to be in the past, and, since 2004, the annual deforestation rate in the Brazilian Amazonia was reduced from years prior by 82 per cent, between 2004 and 2014.

Brazil's forests have suffered protracted, although recently slowed, losses.

Annual forest loss (in km²) and forest cover remaining (per cent of 1970 cover).



Source: Butler, R. Calculating Deforestation Figures for the Amazon (2016). Available at: http://rainforests.mongabay.com/amazon/deforestation_calculations.html

For the world, the Amazon represents an important tool in the fight against climate change. It is estimated that if destroyed, some fifty times the annual GHG emissions of the United States could be released from former carbon sinks. For Brazil, the Amazon represents a huge ecological—but also economic—asset. And while its value as a powerful carbon sequestration instrument is widely recognized, economic pressures have led to the development of Amazonian land, often at the

Brazil has often sought to clarify its role and that of other countries as custodians of ecological assets with implications for the wider global community. Brazil led the charge on incorporating environmental considerations into international development discussions in recent decades. In 1992, Brazil hosted the UN Conference on Environment and Development (UNCED), or Earth Summit, and the Rio+20 summit two decades later. It was a participant at the 2015 UN Climate Change Conference (COP 21) in Paris and in the discussions that led to the adoption of the Paris Agreement. In fact, Brazil cited its progress in rolling back deforestation and related greenhouse gas emissions

as one of its primary commitments to combat climate change in its Intended Nationally Determined Contributions (INDCs) submitted to the COP 21.

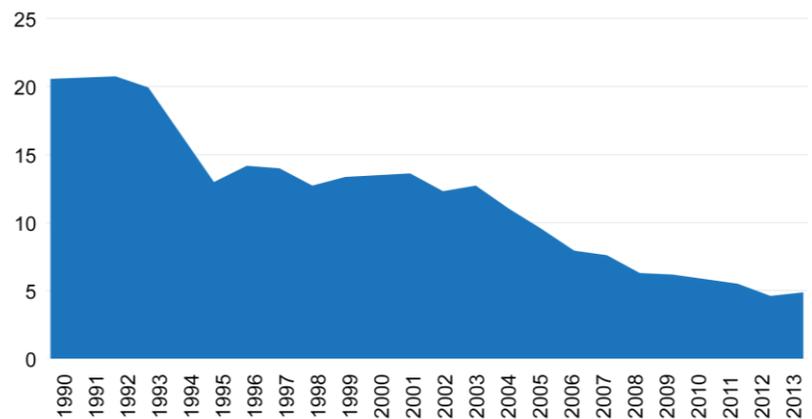
2

Strides to combat extreme poverty.

Brazil is the world's fifth most populous country, with more than 205 million people living within its

Extreme poverty in Brazil has fallen dramatically in recent decades.

Poverty headcount ratio at \$1.25 a day (PPP) (per cent of population)



Source: World Development Indicators Database Archives (beta)

borders. Historically, large swaths of Brazilian society have experienced chronic poverty, although the country's ascension to an upper-middle-income country and an expansion of anti-poverty programs have helped to lift millions from poverty in recent decades. The extreme poverty rate (measured internationally as those living on less than US\$ 1.25 per day) in Brazil has dropped from nearly 21 per cent in 1990 to under 5 per cent of the population in 2013.

One of the most widely known and studied anti-poverty programs is a conditional cash transfer introduced in 2003 called *Bolsa Família*, which aims to lift people out of extreme poverty by combining cash transfers and increased access to public social services, including health and education. *Bolsa Família* reaches nearly 14 million participating households—equivalent to roughly a quarter of the entire Brazilian population. The program is income-tested, and targets extremely poor households who report monthly incomes of less than BRL 77 (US\$ 21) per person. As of January 2014, these households receive a monthly basic payment of BRL 70 (US\$ 20), known as the “basic benefit,” and are paid BRL 32 (US\$ 9) per month for each child under 15 years and for each pregnant or breastfeeding mother. They also receive BRL 38 (US\$ 10) per month for each adolescent between 16 and 17 years for a maximum of five children (or four children plus one mother) and two adolescents. *Bolsa Família* also targets households who are poor, but not extremely poor, who report living on less than BRL 140 (US\$ 38) per person per month and who have children under the age of 18. These households receive the transfers for children, adolescents, and mothers, but do not receive the basic benefit.

Participation in the program is conditional, however. In order to receive the transfers, participating families must satisfy “co-responsibilities” seen as ways in which to develop the future earnings potential of participating households and ultimately supplying an exit strategy for families to graduate from *Bolsa Família* assistance over the long term. These responsibilities include pre- and post-natal health and nutrition monitoring, child immunizations and mandatory, minimum school attendance by children.

Bolsa Família is jointly implemented at the federal and local levels. The federal bank, *Caixa Econômica Federal*, is in charge of central data administration and benefit payments.

Approximately 5,500 municipalities implement *Bolsa Família* at the local level who are responsible for registering families and supplying information to monitor beneficiaries' fulfilment of the co-responsibilities. The program uses a centralized, social registry called *Cadastro Único*, which, since its creation in 2001, has been the Government's main tool to identify poor populations and target them in anti-poverty initiatives. In 2013, *Cadastro Único* contained information on approximately 25 million Brazilian families.

According to the Government's own calculations, *Bolsa Família* can be credited for approximately 28 per cent of the total poverty reduction in Brazil since 2002, bringing the proportion of Brazilian society living on less than BRL 70 (US\$ 20) down from 8.8 per cent to just 3.6 per cent in 2012.

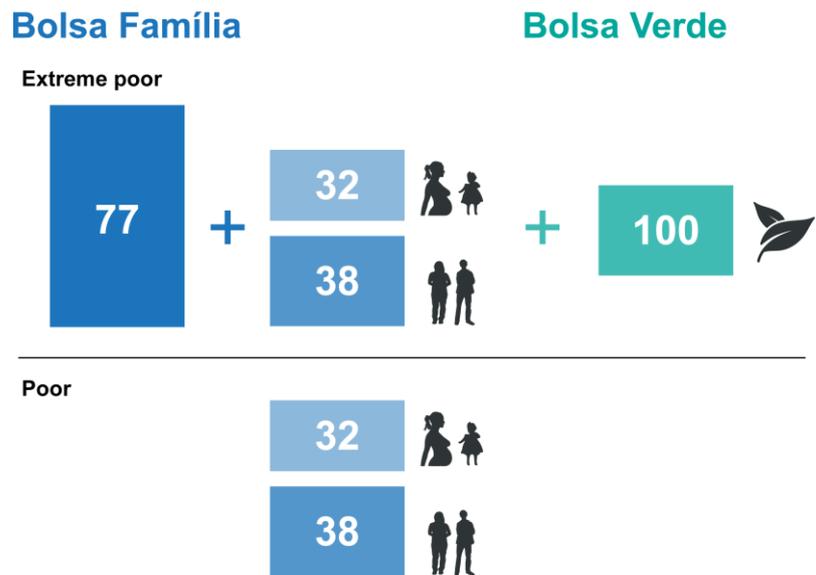
WHAT YOU NEED TO KNOW

- *Brazil's Amazon rainforest is crucial for reducing greenhouse gases that contribute to climate change.*
- *But nearly 770,000 km² of the Brazilian Amazon rainforest was lost to deforestation between 1970 and 2015.*
- *Brazil has had considerable success in addressing poverty through the use of cash transfers.*
- *In 2011, it launched an additional transfer programme, Bolsa Verde, to pursue social and environmental objectives together.*

Other studies, such as those led by Brasilia-based International Poverty Centre (IPC), suggest the program has been more effective at reducing the severity of poverty in which many program participants live, while having only limited success at reducing the number of those who live in extreme or even more moderate forms of poverty. These reports go on to state that to more effectively address the percentage of Brazilian families living below the poverty line, higher benefit levels are needed.

Both *Bolsa Família* and *Bolsa Verde* provide benefits to extremely poor households in Brazil.

Monthly transfer values by income group (in Brazilian Reals)



Note: *Bolsa Verde* payments are made quarterly (three times the monthly benefit)
 Source: ILO, 2016, "Protecting people and the environment: Lessons learnt from Brazil's *Bolsa Verde*, China, Costa Rica, Ecuador, Mexico, South Africa and 56 other experiences."

3 Addressing social and environmental needs, together.

Building upon the successes of the *Bolsa Família* programme, the Government launched an additional cash grant in 2011 that sought to combine the anti-poverty function of Brazil's social protection system with the pressing need to protect the country's forests and combat the effects of climate change.

Brazil's new programme, *Bolsa Verde* or "green grant," provides top-up transfers to extremely poor households already participating in *Bolsa Família*, almost half of whom live in rural areas. *Bolsa Verde* conditions benefit payments upon the sustainable use practices of beneficiaries. What exactly constitutes the sustainable use of natural resources and environmental conservation is established and described in land management or regulation publications, which differ according to the area in question. But generally, beneficiaries are encouraged to gather fruits, extract latex, conduct artisanal fishing, and produce crafts from natural resources. Their efforts are monitored using surrounding forest cover as a proxy indicator. Satellite images and radar hotspots are used to alert authorities to deforestation within programme areas. Where deforestation is recorded, programme representatives visit to check reasons for deforestation and provide necessary assistance to beneficiary households to remove obstacles to fulfilling the ecological conditions for payment. Data on both social and environmental monitoring,

as well as on the payment status of each family, is collected in a geo-referenced database called *SiSVerde*. *Bolsa Verde* participation is also to include training for beneficiaries that offers assistance on production processes and marketing of ecologically-friendly products. As of January 2014, however, there was no information available on whether trainings had begun.

As the only explicitly pro-poor programme, *Bolsa Verde* uses a means test for eligibility, the same test used by *Bolsa Família* for targeting households living in extreme poverty (defined as those living on less than BRL 77, or US\$ 21, monthly per person). To be eligible, households must already receive the "basic benefit" from *Bolsa Família* and be registered with the *Cadastro Único*. *Bolsa Verde* participants must live in certain priority rural areas, many of which already have varying degrees of restrictions to limit the scope or type of economic activity that can be conducted within them.

Participating households receive a flat top-up payment of BRL 300 (US\$ 83) in addition to their regular *Bolsa Família* transfer every three months, irrespective of family size. Currently, targeted households are eligible to participate for a period of up to two years. Contracts can be renewed, although the law does not state for how long.

The first phase of the programme was implemented in the nine Brazilian states in the Amazônia Legal (Legal Amazon), making up 61 per cent of the entire national territory. During a second stage starting in 2012, *Bolsa Verde* was expanded to the rest of the country. Of the more than 51 thousand target households participating in the *Bolsa Verde* program in 2014, 93 per cent lived in environmentally-protected areas, while the remaining 7 per cent lived in territories occupied by indigenous peoples. The large majority, if not all, of *Bolsa Verde* participants live in federally or otherwise protected areas with restrictions on land use. While the exact nature of the restrictions and the degree to which they limit the earnings potential of residents are so far unclear, the *Bolsa Verde* programme may serve to offset a portion of those anticipated losses at the same time that it provides tools and incentives for more residents to carry out more ecologically-friendly economic activities. A sample monitoring of beneficiary families is to be conducted periodically from 2014 onwards. However, indications of the poverty impacts or of the environmental performance of the program have not yet been published.

Bolsa Verde joins a host of payment-for-ecosystem services (PES) operated in Brazil, although it is one of only two that effectively target marginalized populations. *Bolsa Floresta* is another conditioned payment made to “traditional and rural” residents across a number of geographic areas. In both programs, participants are encouraged to develop sustainable economic activities, to maintain vegetation and conserve natural resources in the communities where they live.

4 Untested performance.

The relationship between poverty and climate change susceptibility includes both direct and indirect links. Direct links include climate vulnerabilities experienced by the poor in greater proportions than other segments of society. For example, favelas housing much of the country’s urban poor feature only informal rainwater drainage systems. During heavy rains, they often mix with wastewater, and flood homes and neighbourhoods damaging property and increasing the risk of infectious diseases. Meanwhile, the

indirect links are defined by more structural vulnerabilities related to poverty that are then exacerbated by the impacts of climate change. For example, because of limited savings and modest incomes, Brazil’s poor will find it more difficult than other segments of the population to recover from harvest losses, increased food prices, or destruction of homes and other assets brought about by extreme weather. This makes addressing climate change a key imperative for advocates of the world’s poor, and is among the justifications for the creation of a pro-poor and pro-conservation social protection scheme like *Bolsa Verde*.

As of January 2014, the *Bolsa Verde* programme had reached more than 51,000 families with cash, a welcomed infusion of income for many of the country’s ultra-poor. Undoubtedly, the additional cash for recipients of the modest *Bolsa Família* transfer is useful in addressing the depth of Brazil’s most extreme instances of poverty. However, no ex post evaluation of *Bolsa Verde*’s additional effect on poverty has been conducted to provide more concrete figures on its impact. Monitoring of environmental upgrading or of reforestation in target areas since the introduction of the *Bolsa Verde* programme also has yet to begin. When it does, it will be important for evaluators to distinguish the incentivizing effects of *Bolsa Verde* from the punitive effects of the restrictions on land use in the areas where beneficiaries must live in order to participate in the programme.

Bolsa Verde and other schemes tied to the performance of ecological services are just one of a myriad of anti-deforestation measures taken by the Brazilian government since the early 2000s, including the clarification of land tenure, stepping up enforcement and compliance in protected areas, and the development of “green” supply chains

WHAT YOU NEED TO KNOW

- *By 2014, Bolsa Verde had reached over 51,000 extremely poor households in Brazil with additional cash payments.*
- *Bolsa Verde is one of a myriad of environmental policies pursued by Brazil to combat deforestation.*
- *Assessments are needed to evaluate the impacts of the additional cash transfers both on poverty and forest management.*

through, for example, the revision of government procurement rules to favour ecologically sourced products. The role that cash transfers to ultra-poor households play within the wider climate policy mix is likely marginal, although clearly further study is necessary.

The transfers, means-tested and geographically targeted, could represent important offsetting measures for residents in restricted-use areas whose livelihood potential is somewhat limited by pro-climate policies. As part of the “just transition” framework, *Bolsa Verde* appears to provide at least some compensation, directed to low-income households in these areas, to help them cope with the Government’s climate adaptation policies and provide protection in the country’s structural economic transition to more sustainable practices.

An increased focus on the development of tools could serve to provide the necessary framework and indicators to adequately and credibly measure the net welfare effects of the collection of environmental policies that affect rural residents in Brazil. Some limit earnings potential through land use restrictions while others provide new earnings opportunities for conservation activities. To assess the relevance and application of the ILO’s own guidelines for a “just transition” and the provisions for offsetting social impacts of climate policies and climate change effects alluded to in the COP 21’s outcome document, it will be necessary to evaluate the overall impact of positive and negative incentives used to engender a “greener” use of Brazil’s forests, and examine the distribution of conservation responsibilities across the country’s social strata.

ILO Guidelines for a “just transition”

In October 2015, a tripartite meeting of experts adopted a series of guidelines to ensure a just—or socially and economically equitable—transition towards greener economies and societies. Among the key policy areas covered in the guidelines is social protection. In particular, they suggest, “promot[ing] innovative social protection mechanisms that contribute to offsetting the impacts of climate change and the challenges of the transition on livelihoods, incomes and jobs.”

These guidelines were adopted by the ILO’s Governing Body in November 2015. The case of Brazil documented in this brief provides an example to illustrate how the ILO guidelines can be applied and social protection policies used to ensure a “just transition.”

SOURCES

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