

KEY POINTS

- ✓ **THE ERADICATION OF** deforestation in the Amazon is part of a global commitment to control the planet's temperature. Brazil is the leader in achieving this goal and established as a Nationally Determined Contribution the reduction of illegal deforestation by 2030.
- ✓ **HOWEVER, NOT** only should illegal deforestation be controlled but also deforestation considered to be legal, through incentives that compensate producers.
- ✓ **IT IS ALSO** essential that this goal be achieved well before 2030.
- ✓ **IT IS IMPORTANT** to be aware that zero deforestation is beneficial to everybody; for both small traditional communities living in the forests and for final consumers, as well as for large producers, given the scientific evidence that shows that deforestation causes the increase of temperature at local and regional levels.
- ✓ **FINALLY, WORKING** to improve information and focusing on building an active society are fundamental to achieving the common goal of ending deforestation.

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INTRODUCTION

Drastically reducing greenhouse gas emissions as soon as possible has definitively become a goal to be achieved by humanity. Proof of this is the commitment made by more than 195 nations during the 21st Conference of the Parties (COP 21) held in Paris in 2015. The Paris Agreement established that signatory countries should make efforts to keep the temperature rise to below 2°C. Brazil rightly committed to the absolute reduction of its emissions by 2030, as put forth in its Nationally Determined Contribution (NDC). The Brazilian NDC also included a reduction goal for zero *illegal* deforestation¹ in the Amazon by 2030.

In regard to the reduction of Amazonian deforestation and its associated emissions, the established target must urgently be fulfilled much before 2030, and further to this: the end of legal removal of native vegetation of the region must be sought.

Reasons for this to happen as soon as possible go beyond climate change mitigation: they imply allowing Brazil to remain economically prosperous, and socially and environmentally just in a future of increasingly constant climatic extremes. There are many additional reasons for ending deforestation in the country. This newsletter lists the top ten reasons for putting an end to the destruction of the world's largest rainforest. They are:

1. Production and profit are possible without deforestation

There is a large deforested area that is underused or abandoned in the Amazon (Moutinho et al 2016). About 20% (78 million hectares) of the Amazon forest area has already been cleared and it is estimated that about 17.3 million ha (3% of the Amazonian biome) are underused, abandoned, or under conditions other than forest regeneration (Terra Class 2010), as shown in FIGURE 1.

Some of these areas, if recovered, can serve the expansion of Brazilian agriculture. Even in rural settlements, where food production depends on eventual new deforestation, it is estimated that the already cleared area is of 12.7 million ha (Alencar et al 2015).

¹ In this document, the term zero deforestation is taken as a synonym for zero gross deforestation, which can be defined as the loss of forest area due to deforestation (usually total conversion - clearcut - to grasslands or agricultural fields).

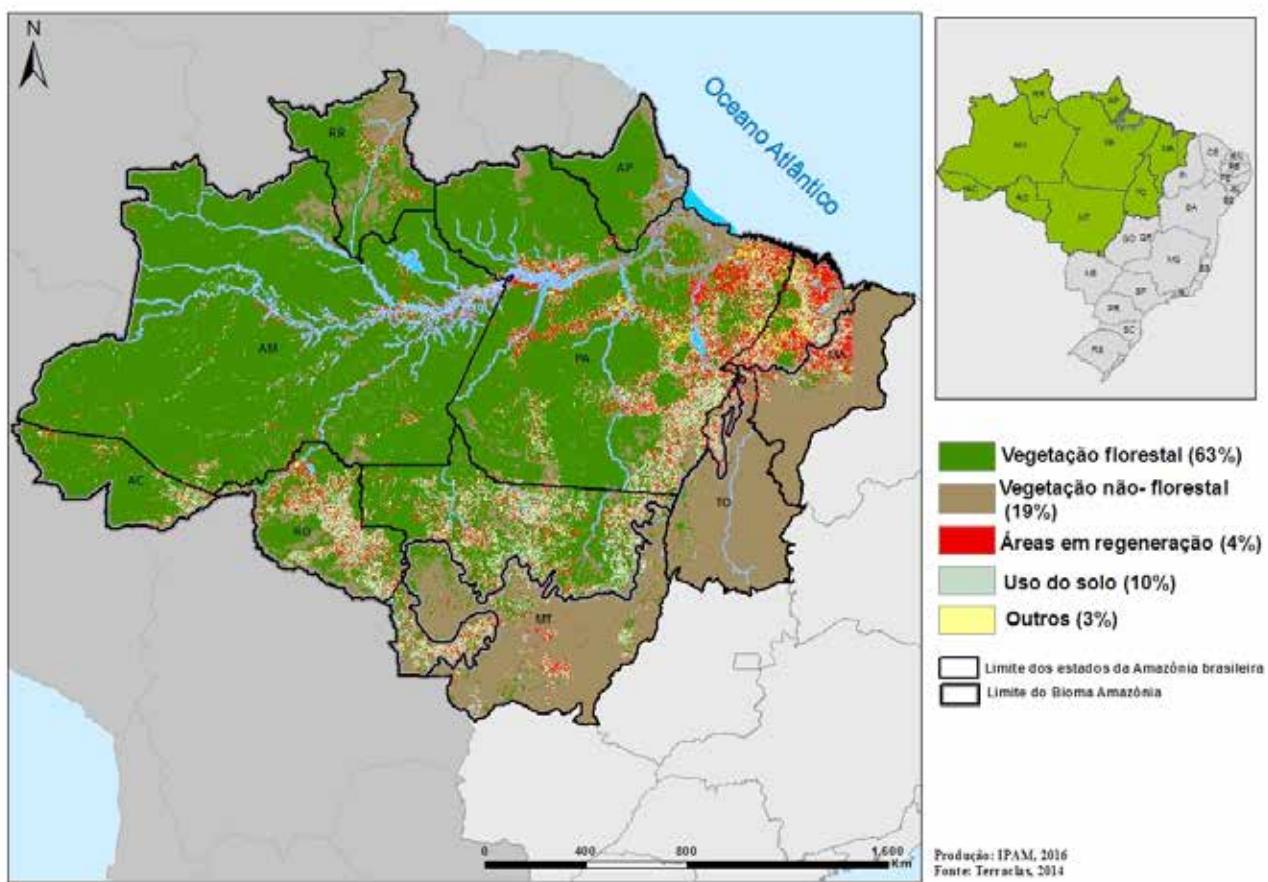
The recovery of these millions of deforested hectares and their availability for agriculture can contribute to the growth of sustainable and deforestation-free food production. Agricultural production can also grow without deforestation, by simply increasing productivity in these already cleared areas (Nepstad et al 2009, Nepstad et al 2014). For example, livestock production could be expanded without the need for further deforestation of native forests if livestock raising were to increase the density of grazing cattle from 1 head/ha to 1.5 head/ha. Such an intensification could release 40 million ha of arable land (Sparovek et al 2011).

In turn, for small family farmers, productivity could be increased with due technical assistance and an adequate credit line that would also compensate them for the maintenance of their forests. The fact is that the need for further deforestation, even the legal kind, must be carefully evaluated. Obviously, in specific cases, legal

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deforestation will need to be allowed, especially for populations whose livelihood depends on the clearing of small new areas.

FIGURE 1. AREAS UNDERGOING REGENERATION IN THE AMAZON



Source: TerraClass².

- 2 Survey of land use and land cover information in the Amazon. 1. **Regenerated areas:** Secondary vegetation: Areas that, after complete removal of forest vegetation, are in an advanced process of regeneration of shrub and/or tree vegetation, or that were used for the practice of silviculture or permanent agriculture with the use of native or exotic species. Regeneration with pasture: Areas which, after the clearcutting of natural vegetation and the development of agro-pastoral activity, are at the beginning of a process of regeneration of native vegetation, presenting a dominance of shrub and pioneer tree species. Areas characterised by a high diversity of plant species. 2. **Non-forest:** Areas of non-forest vegetation that have not had their use mapped by TerraClass Amazonia. 3. **Soil use:** Areas that no longer have forest cover (annual agriculture, clean pasture, rangeland, reforestation, pasture with exposed soil, area deforested in 2014, mining and mosaic of occupations). 4. **Others:** Area not observed, others, urban area, hydrography.

2. The market wants deforestation-free products

Buyers and consumers are increasingly demanding production chains free from deforestation and illegality. This is echoed by the Consumer Goods Forum³, a network of hundreds of companies around the world. Eliminating deforestation is an increasingly present market condition and a demand which the soy moratorium has already demonstrated is possible to be met by producers, both large and small (Gibbs et al 2015, Azevedo et al 2015). It is up to consumers to continue to demand agriculture that is increasingly free from deforestation and illegality, as well as being sustainable, and for producers to look at their own chains of custody in order to comply with this global trend.

3. Ending the legal removal of native vegetation may be an economically advantageous option

Despite being a difficult estimate to make due to land uncertainties, the area of forest that can still be legally deforested has been reduced in recent decades due to forest conversion. Such a condition creates the opportunity for those landowners who still have forest assets to be able to receive benefits if they choose to forego their right to convert the area for other uses. Obviously, the right to legal deforestation must be respected, but on the condition that private forests contribute to maintaining a balanced local climate.

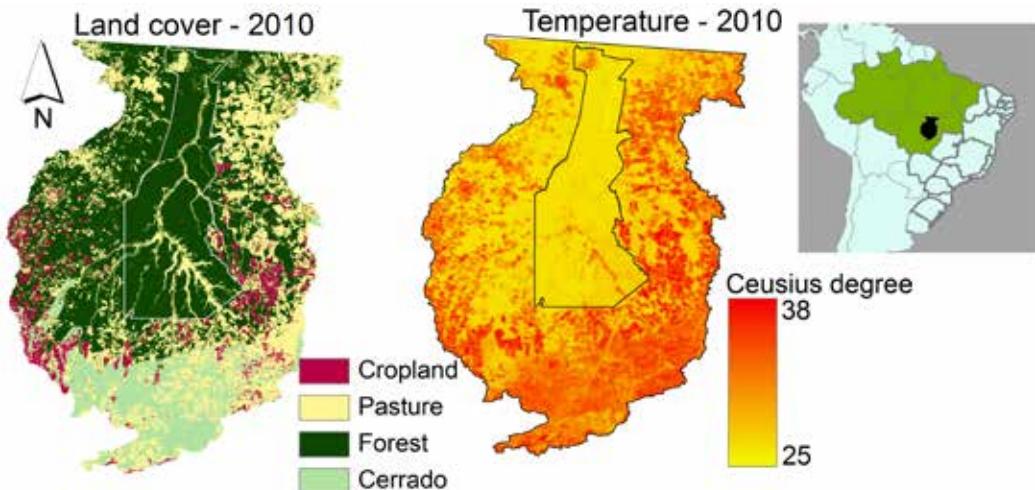
As shown by recent studies (Silvério et al 2015), landowners in possession of forest assets may receive compensation for the environmental services they provide, such as milder temperatures, abundant precipitation, and biodiversity conservation. This is something which the REDD + national strategy, or the regulation of Article 41 of the new Forest Code could, even partially, make feasible.

4. Agricultural production is dependent on the existence of forests

There is an apparent concern that the concept of zero deforestation may be incompatible with the future of agricultural production or family agriculture in the Amazon. However, precisely the opposite is true. There is mounting evidence that the climate, not only regionally or globally but above all locally, depends on the existence of a certain volume of conserved forest. In a grain-producing region, or in areas with large settlements, the existence of a number of forests (private or public) is necessary to dictate future directions for agricultural production.

A good example of forests as “irrigators” of agricultural production is the lower Xingu region in Mato Grosso. The removal in the last years of the forest around the Xingu Indigenous Park resulted in a local temperature increase of around 4°C (Silvério et al 2015), as shown in FIGURE 2. This may explain the severe droughts which have affected the region. Were it not for the existence of the Xingu Park, this increase in temperature and severe drought would be greater still. As such, to maintain a mosaic of forests is to maintain a functional watering system for agriculture.

FIGURE 2. IMPACT OF DEFORESTATION ON CLIMATE IN THE XINGU INDIGENOUS PARK AND SURROUNDINGS



Source: Silvério et al. 2015.

³ Available at <http://www.theconsumergoodsforum.com/sustainability-strategy-focus/sustainability-resolutions/deforestation-resolution>

5. Zero deforestation does not mean zero forest use

Zero deforestation does not imply isolating forests and protecting them from any kind of use. There is a dormant forest economy in the Amazon which, if used sustainably, will allow for significant progress in regional GDP and income distribution for families of small owners of lands and forests.

The sustainable exploitation of timber, environmental services, and the potential use of non-timber and tourism resources are important alternatives for maintaining the economic prosperity of a given forested region. In other words, preserved forest can be just as or more profitable than deforested areas, with the added advantage that their ecological functions and environmental services continue to be provided.

6. Zero deforestation is increasingly a global commitment

Due to the growing recognition of the many benefits forests provide to the climate and to food production, zero deforestation is a goal which forms part of several international agreements. For example, in September 2014, 179 entities, including governments, companies, movements, and NGOs (including IPAM) signed the New York Declaration calling for the eradication of tropical deforestation by 2030.

The United Nations then released the new Sustainable Development Objectives, a document signed by member countries in 2015, which established the goal of ending deforestation by 2020. On that occasion, the 197 countries which participated in the COP 21 approved the document. For the document to be validated, ratification by at least 55 countries was required. By September 2016, the agreement had already been ratified by 60 countries, including Brazil, making its implementation feasible. These countries account for 47.78% of climate emissions.

7. Zero deforestation and Brazil's role in the UNFCCC

In September 2015, Brazil ratified the Paris Agreement, in which, via its Nationally Determined Contribution (NDC), it committed to the goal of reducing illegal deforestation to zero in the Amazon by 2030. Considering that between 80 and 90% of deforestation in the region is illegal, reductions in deforestation will certainly contribute to compliance with the Brazilian NDC. However, deforestation (legal and illegal) must end well before this target, i.e. before 2030.

Current results on forest degradation in the Amazon indicate that forests may be turning into sources of emissions reinforcing the urgency of ending forest destruction. Without a healthy forest continuum covering a large area of the Amazon, the role of "water pump" exercised by the trees will always be compromised. The result will be increasingly severe droughts and frequent fires in several parts of the Amazon and the country.

8. Zero deforestation reinforces the Forest Code

Ending illegal and legal deforestation can reinforce the Forest Code for two basic reasons. First, a volume of forest assets liable to deforestation may form an advantageous 'forest market' which could make feasible the environmental reserve quotas (CRAs), as established by law, allowing for producers with forest liabilities to be legalised sooner. In Mato Grosso alone there is an estimated CRA market in the order of R\$ 5.8 billion, if compensation occurs within the state (Rajão & Soares Filho et al 2015).

Secondly, environmental reserve compensation can alleviate the pressure for the restoration of legal reserves, which is costly and can in itself create pressure for new changes in the code by those who will have to pay for restoration. The law rightly excludes small producers from this requirement. The requirements for the restoration of permanent preservation areas are also maintained.

In any case, the CRA may result in benefits to owners who offer their surplus forest to restore the environmental reserve of owners in deficit in this aspect of the law.

9. Zero deforestation is what Brazilians want

Zero deforestation is in line with what Brazilian society wants. Over 1.4 million Brazilians signed in favour of a draft law introduced in 2015 by Greenpeace calling for an end to the deforestation of Brazilian forests.⁴ The Climate Observatory, of which IPAM is a founder, also called for zero deforestation⁵. Recent manifestations have also made the same appeal⁶. Furthermore, a Datafolha⁷ survey carried

⁴ <http://www.greenpeace.org/brasil/pt/Noticias/Desmatamento-Zero--Aumentando-a-pressao/>

⁵ <http://www.observatoriodoclima.eco.br/em-carta-ongs-pedem-desmatamento-zero/>

⁶ <http://ipam.org.br/bibliotecas/policy-brief-desmatamento-zero/>

⁷ <http://oglobo.globo.com/politica/codigo-florestal-segundo-pesquisa-datafolha-79-dos-brasileiros-sao-contra-perdao-de-multas-quem-desmatou-ilegalmente-2876725>

Forests can be just as or more profitable than deforested areas, with ecological functions and environmental services continuing to be provided.

out a few years ago revealed that over 85% of interviewees responded that legislation must prioritise the protection of forests and rivers, even if it harms agricultural production. It appears that production will be harmed if forests are not definitively protected and deforestation made extinct.

10. Deforestation in the Amazon has been gradually increasing

The Brazilian government did a good job of reducing Amazon deforestation rates by 70% in the period 2005 - 2014. Despite this reduction, official deforestation rates increased in 2015, reaching 6,207 km², and in 2016 culminating in 7,890 km² (PRODES 2016). This is proof that the efforts made have not been effective in controlling deforestation. This figure may be even greater in 2017 due to the political and economic instability the country is going through and the governance difficulties of monitoring and control institutions. The reduction of deforestation rates is an urgent measure.

Emissions from deforestation account for almost 65% of Brazil's emissions. Zero deforestation is a fundamental part of achieving the NDC established by Brazil at the COP 21. In light of this commitment, it is necessary that society as a whole comprehend that it can very advantageous to maintain a biome which is fundamental to the planet, as is the Amazon, and to actively collaborate to this end. However, given the country's performance over the last two years in which rates far exceeded the stagnant average of 5,000 km², it has become increasingly difficult to think about achieving these goals.

⁸ <http://ipam.org.br/bibliotecas/policy-brief-desmatamento-zero/>

⁹ <http://oglobo.globo.com/politica/codigo-florestal-segundo-pesquisa-datafonte-79-dos-brasileiros-sao-contra-perdao-de-multas-quem-desmatou-illegalmente-2876725>

RECOMMENDATIONS

TO THE FEDERAL GOVERNMENT:

- Elaboration of public policy which encourages the reduction of deforestation and climate change without neglecting populations living in forest areas which need those areas for survival;
- Linking the aspirations of ruralist groups with zero deforestation policy, as development and preservation are both necessary conditions;
- Strengthening of production chains exempt from deforestation and control systems, and certified production monitoring.

TO THE PRODUCERS:

- Strengthening of production chains exempt from deforestation and integration of those products to national and international markets;
- To understand that a healthy environment which provides vital environmental services is necessary to a wealthy production.

TO BRAZILIAN SOCIETY:

- To understand that Brazil must meet its zero deforestation goal, which is a collective obligation;
- Social networks which pressure authorities to fulfil the objective of controlling deforestation.

TO THE INTERNATIONAL COMMUNITY:

- To neighbouring countries, the continuation of their efforts in fighting deforestation in the Amazon basin region in order to contain leakage, and to encourage sustainable productive activity;
- Strengthening of bilateral policies for the reduction and control of deforestation among countries of the Amazon basin;
- To signatory countries of the Paris Agreement, the fulfillment of the commitments assumed.

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About the authors

PAULO MOUTINHO has worked in the Brazilian Amazon for more than 20 years. With a PhD in Ecology, he studies the causes of the Amazon deforestation and its consequences. He is one of IPAM's founders, and he had contributed to the creation of REDD mechanism and the Amazon Fund.

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