## Drivers of deforestation

**Cattle ranching**
Cattle herds of about 5 million heads (18% of the total cattle herd in the country) are located in the Amazon region, with a higher concentration in Meta and Guaviare[11]. Cattle ranching expands through low-production extensive systems associated with land speculation and concentration[4, 12].

**Smallholder farming**
Mainly linked to the expansion of coca cultivation, which increased from the mid-2010s but shrank in 2018. About 27% of coca production is located in the arc of deforestation (Meta, Guaviare, Caquetá and Putumayo) [7]. New areas tend to be established in small patches non-contiguous with previously cleared areas[7].

**Road expansion**
Deforestation used to occur mainly along rivers[7], but more recently about 76% of deforestation took place in areas closer to roads[7]. More recent deforestation was associated with the expansion of the “Marginal de la Selva” road that connects the deforestation expansion areas of southern Meta and northern Guaviare[7].

**Timber extraction**
Timber extraction places pressures on forests, following the opening of local roads[7]. There are no consistent estimates about the magnitude of timber extraction in the Amazon, particularly informal extraction, but it may be increasing as frontiers expand.

**Mining operations**
Linked to mainly alluvial gold mining that attracts people from outside and within the region, in particular along the Caquetá, Orteguaza and Vaupés rivers[7]. Gold mining tends to oscillate depending on the market dynamics, and has decreased since 2017[15].

### Responses

<table>
<thead>
<tr>
<th>Protected areas</th>
<th>There are 18 protected areas in the Colombian Amazon comprising 9.4Mha[14], and no major pressure was observed in these protected areas, which are still distant from the frontier areas[7]. The “Heritage Colombia” programme has been established to support the management of protected areas[14].</th>
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</thead>
<tbody>
<tr>
<td>Recognition of IPLCs</td>
<td>Some 206 indigenous reserves (resguardos indígenas) were recognized in the Amazon over 26Mha[15]. Only 9.3% of total deforestation took place within indigenous lands in 2018[7].</td>
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<tr>
<td>Land-use zoning</td>
<td>A law for territorial zoning was issued in 2011, which included a goal to zone the forestry reserves in the Amazon region, and specified the competences of different levels of government, granting more responsibilities to subnational governments[17].</td>
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<td>Payments for ecosystem services</td>
<td>Payment for ecosystem services (PES) mechanisms, including the Forestry Incentive (Certificado de Incentivo Forestal), issued in 1994, originally targeted reforestation actions but has also embraced conservation targets since 1997[18].</td>
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<td>REDD+ projects</td>
<td>Under the REDD+ programme, the government formulated a strategy to control deforestation and support forest management (EIICGDB)[7]. US$366 million was secured from donors (Norway, Germany, UK) to reduce deforestation to 150,000 ha by 2022 and less than 100,000 by 2025[19]. These resources will be managed by the recently set up “Sustainable Fund.”</td>
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### Underlying causes

Global demand for commodities produced in the region, such as gold and coca, tends to stimulate production, as does domestic demand for beef and investments in the expansion of secondary roads. These factors are accompanied by the expansion of informal and illicit economies, and the lack of more aggressive policies and budgets to support environmental protection and contain deforestation[7]. The armed conflict had different impacts on forests in different places, depending on local conditions[10-12] – deforestation in conflict zones increased after the 2016 peace process[14].

**Deere et al.**
Main outcomes

The government has embraced different responses to halt deforestation targeting not only the Amazon but also other regions. The most important is the EICDGB strategy to control deforestation and support forest management. This has attracted some external finance under a results-based mechanism to avoid carbon emissions, and has led to the establishment of a fund to support actions on the ground along with conservation agreements in value chains. However, several challenges must be addressed to prove the effectiveness of this strategy: these include the outcomes from the peace agreements on deforestation[14, 22].

Recommended future actions

- Strengthen monitoring and control systems for deforestation.
- Enhance transparency in land registration and tenure rights.
- End encroachment of protected areas and indigenous territories.
- Embrace more actively actions to close the agricultural frontier.
- Facilitate incentives to local farmers to comply with territorial planning while improving their production practices and building alternative livelihoods.
- Support indigenous people to manage their forests according to their cultural values.
- Support new conservation agreements linked to the peace process to enhance local governance of land and forest resources, while increasing benefits for local people.

References

1. IDEAM. 2019. Resultados monitoreo de la deforestación 2018. Available from: pidamazonia.com/content/resultados-monitoreo-de-la-deforestacion/2018