

Drivers of deforestation in Tanzania

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Key Messages

- Most deforestation in Tanzania is caused by small-scale agriculture, particularly maize cultivation.
- Charcoal production, pole cutting and timber harvesting often take place during the process of deforesting an area for agriculture but are primarily drivers of forest degradation, rather than deforestation.
- More deforestation occurs on village land than in forest reserves and other protected areas.
- Scaling-up community-based forest management, the main policy tool designed to protect forests on village land, could contribute to reducing deforestation.

Forests and deforestation in Tanzania

Forests are vital to Tanzania's economic and social development. Forests provide:

- environmental services including protection of water sources, soil, biodiversity and climate; and
- forest products including wood fuel, timber, medicinal plants and forest foods.

Tanzania is undergoing a period of rapid deforestation. Every year, more than half a million hectares of forest are cleared¹.

Deforestation involves the conversion of forest land to non-forest land. Deforestation threatens the supply of forest ecosystem services and products.

In order to reduce deforestation, it is important to understand the drivers of deforestation. Drivers of deforestation are the human activities that cause forest loss. To be effective in reducing deforestation, policies need to tackle the activities that cause the most forest loss.

In 2017, Tanzania had approximately 37.7 million hectares of forest. Of this, 41% is protected in areas such as forest reserves while 45% is on village land, managed by communities.² The forests on village land are the most threatened.

Putting a figure on how much deforestation is caused by different drivers

In order to generate policy-relevant information on how to reduce deforestation, a study was carried out in 2018/19 to measure the relative importance of different deforestation drivers¹.

The study mapped the area of land that was deforested between 2010 to 2017, across Tanzania and then surveyed 120 random sampling points from the deforested area. Each sampling point was assessed in order to identify the activities that had contributed to the clearance of the forest. All activities were measured including both drivers of deforestation and drivers of forest degradation. The surveys used a combination of satellite images, field visits and interviews with local people.

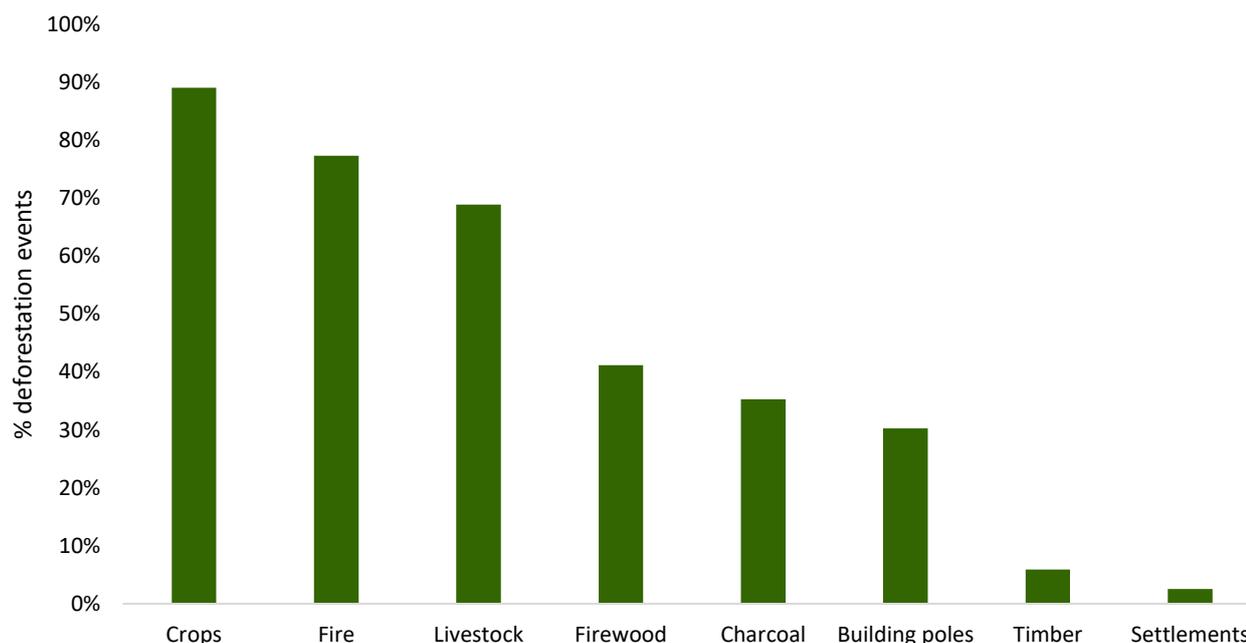
Deforestation driver: an activity that causes the conversion of forest land to non-forest land e.g. agriculture.

Forest degradation driver: an activity that causes loss of forest quality, such as reduced tree density, in areas that remain forest e.g. charcoal production, firewood collection.

¹ Doggart *et al.* 2020 doi.org/10.1088/1748-9326/ab6b35

² Source: MNRT, 2015 National Forest Resources Monitoring and Assessment of Mainland Tanzania: main report.

Figure 1. Percentage of deforestation events where drivers of deforestation and forest degradation were present.



Source: Doggart et al. 2020

Which activities cause most deforestation?

Key findings of the survey

1. Small-scale agriculture is the main driver of deforestation in Tanzania and was recorded in 89% of the deforested areas (Figure 1).
2. Over half of all deforestation events (57%) involve maize cultivation. Sesame is also associated with deforestation (20% of events).
3. Most deforestation events involve multiple drivers, most frequently a combination of crops and livestock.
4. Firewood collection, charcoal production and pole-cutting contributed to 30% - 40% of deforestation events, always in combination with either crops, or livestock grazing.
5. Charcoal was never found to drive deforestation separately from crops or livestock.
6. Fire is frequently used to clear forest, with signs of fire evident in 77% of deforested areas.

Recommendations

Given that most deforestation is caused by agriculture, there is a need to focus on changing the relationship between farmers and forests.

In the agriculture sector, change is needed to:

- reduce farmers' dependence on expanding farms into intact forest areas;
- avoid policies that incentivise or encourage farmers to clear natural forest;
- provide support and incentives to forest managers and forest owners to retain natural forest, rather than converting land to agriculture.

In forestry, community-based forest management (CBFM) is the main policy tool to protect forests on village land. CBFM empowers communities to establish and manage village forest reserves. With <10% of village land forests under CBFM currently, the opportunity exists to expand CBFM.

Given that most deforestation involves more than one activity, reducing deforestation requires strong inter-sectoral coordination between the land, agriculture, livestock and forest sectors.

This policy note is based on: Doggart, N., Morgan-Brown, T., Lyimo, E., Mbilinyi, B., Meshack, C.K., Sallu, S.M., Spracklen, D.V., 2020. Agriculture is the main driver of deforestation in Tanzania. *Environmental Research Letters* **15** Available for free download at: <https://iopscience.iop.org/article/10.1088/1748-9326/ab6b35>

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