End natural forest loss

February 2022

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Stop Forest Loss

Goal 1

End the loss and degradation of natural forests by 2030.

Protecting forests – particularly primary forests – is critical for addressing climate change and biodiversity loss.

Forests **play a vital role** in the global carbon cycle, hydrological regimes, biodiversity preservation, local community subsistence and human health.

Currently, **forests are a net sink of 7.3 gigatonnes of CO_2e per year**, or about 18% of anthropogenic emissions. This sink could be increased by reducing deforestation. Not only does halting deforestation avoid carbon emissions, but it also maintains and increases carbon sequestration.

Furthermore, carbon and biodiversity lost from deforestation is **irrecoverable through restoration** by the 2050 timeline for achieving net zero carbon emissions and nature-positive targets.

To assess progress on halting natural forest loss by 2030, we examine both net and gross forest loss since the New York Declaration on Forests (NYDF) was adopted in 2014.

The overarching Goal 1 of the NYDF aims to halt the loss of natural forests by 2030.* By specifying **"natural forests,"** it excludes monoculture tree plantations and other non-natural forest systems.

However, Goal 1 does not state whether the aim is to reduce and then end **gross loss** (all clearing) or **net loss** (balance of clearing and forest regeneration/reforestation) of natural forests.

Therefore, the annual progress assessment for Goal 1 assesses both gross and net loss.

* The updated text of Goal 1, adopted in 2021, also calls for the end of forest degradation. Degradation is not addressed in this update.

Overall, gross tree cover loss, net forest loss, and related CO_2 emissions are continuing at high rates, and the world is not on track to halt them by 2030.

While some countries have made progress, most indicators are the same as or higher than immediately following the signing of the declaration.
No indicators are on a trajectory to success.

Criteria	Indicators	Data source(s)	Early NYDF (FAO FRA/ 2015 GFW)	Recent NYDF (FAO FRA/ 2018-2020 GFW)	Trajectory
1. Rate of natural forest loss (million hectares per year)	**1.1. Global net natural forest loss**	FAO FRA 2020 (2010-2020)	7.8	7.8	**N/A**
	1.2. Global gross tree cover loss	GFW (Hansen et al. 2013)	19.6	24.9	**Wrong direction**
	1.3. Global gross deforestation	FAO FRA 2020 (2010-2015 and 2015-2020) and GFW (Hansen et al. 2013, Curtis et al. 2018)	FAO: **11.8** GFW low: **5.1** GFW high: **9.6**	FAO: **10.2** GFW low: **5.3** GFW high: **11.3**	**Mixed**
	1.4. Humid tropical primary forest loss	GFW (Hansen et al. 2013, Turubanova et al. 2018)	2.9	3.9	**Wrong direction**
2. Carbon dioxide emissions from forest loss (gigatonnes of CO2 per year)	**2.1. Gross emissions from global deforestation**	GFW (Harris et al. 2021, Curtis et al. 2018)	**Low: 2.9** **High: 5.3**	**Low: 2.9** **High: 6.3**	**Flat/ wrong direction**
	2.2. Gross emissions from humid tropical primary forest loss	GFW (Harris et al. 2021, Turubanova et al. 2018)	2.0	2.5	**Wrong direction**

FAO FRA = Forest Resource Assessment of the Food and Agriculture Organization; GFW = Global Forest Watch.
Not all indicators are covered in the following slides.

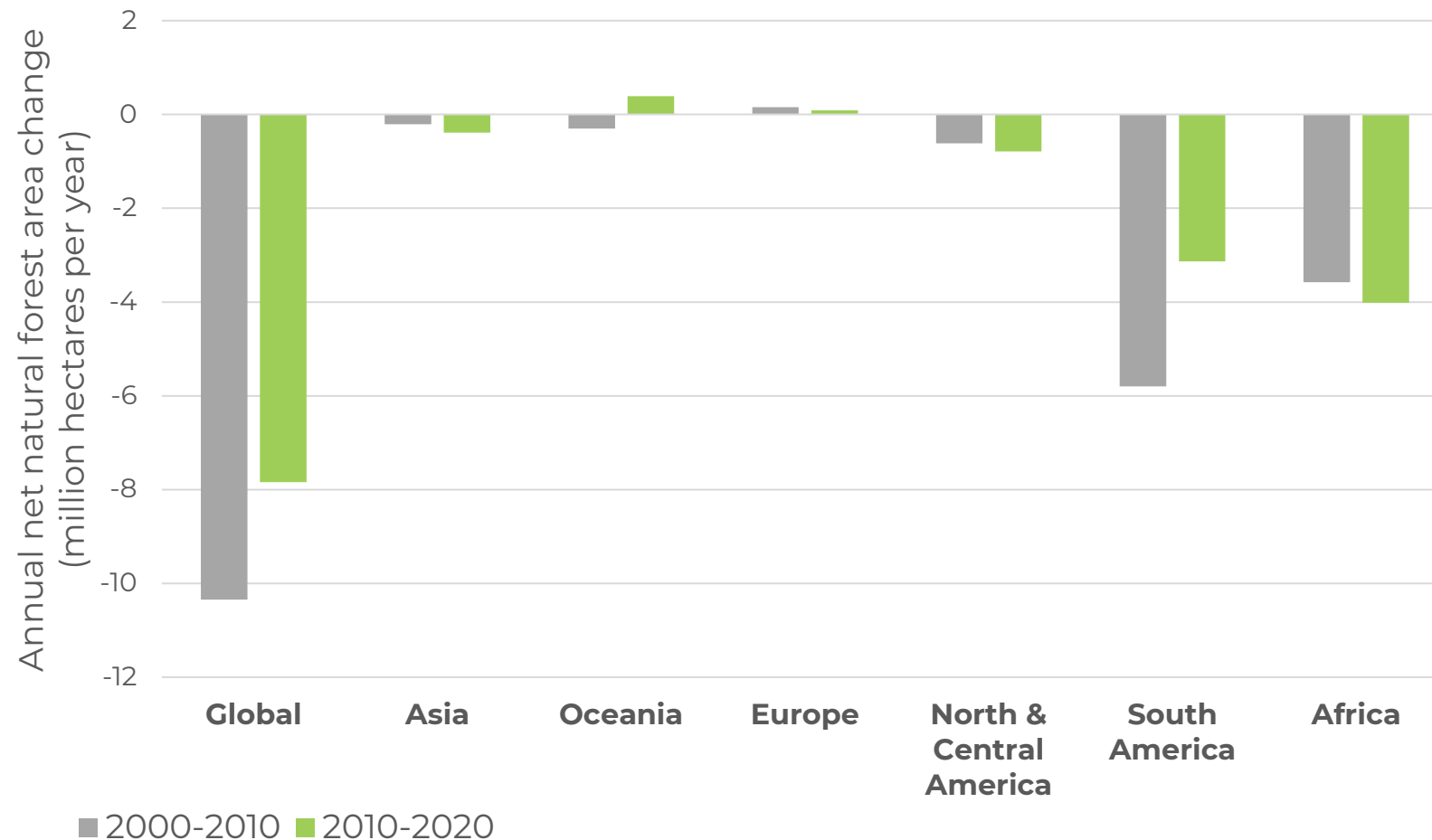According to multiple data sources, global deforestation is currently about 10 million hectares per year.

Achieving the 2030 target of halting forest loss would require deforestation to decrease by nearly 1 million hectares each year between 2020 and 2030.

The immediate and sustained reductions in forest loss needed to achieve the 2030 target of zero natural forest loss would be unprecedented.

Halting net natural forest loss by 2030 would require an annual decrease of about 0.8 million hectares.

Net natural forest loss by region and decade using FAO's Forest Resources Assessment (Indicator 1.1)

Y-axis: Annual net natural forest area change (million hectares per year)

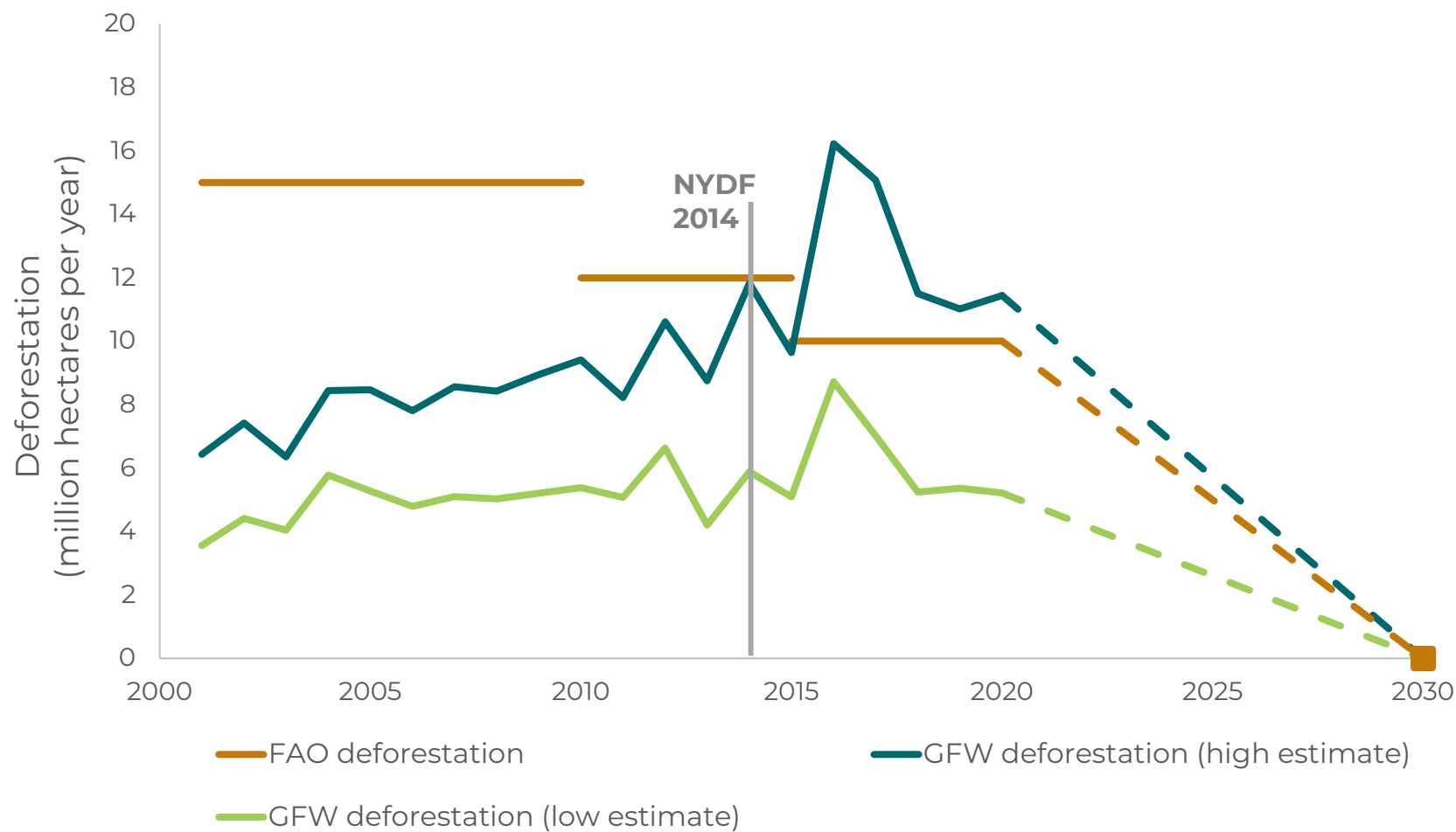Legend: ■ 2000-2010 ■ 2010-2020

Source: FRA 2020

According to FAO, **annual net natural forest loss has declined** from an average of 10.4 million hectares between 2000-2010, to an **average of 7.8 million hectares between 2010-2020**.

This rate of decline is **insufficient to halt deforestation by 2030**.

Different data sources give mixed signals about the trajectory of gross deforestation, but overall, the data shows inadequate progress.

Gross global deforestation (Indicator 1.3) using FAO's Forest Resources Assessment and Global Forest Watch annual data
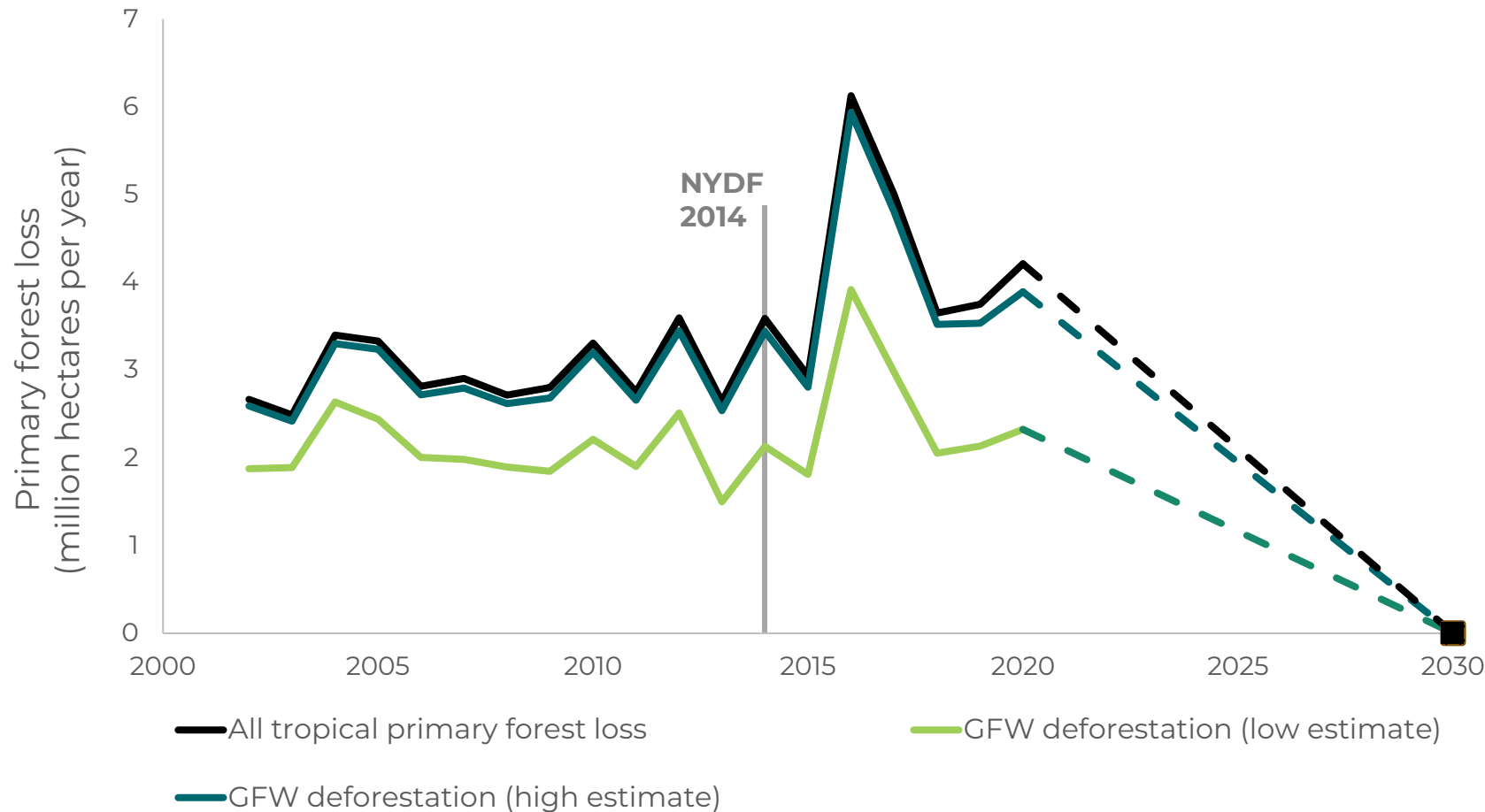

According to FAO, **annual gross deforestation declined** from an average of 12 million hectares between 2010 and 2015, to an average of 10 million hectares between 2015 and 2020. This is **not enough to halt deforestation** by 2030.

According to Global Forest Watch, **annual gross deforestation has increased slightly** since the NYDF was signed in 2014.

Of particular concern is the deforestation of tropical primary forests, the globe's most important storehouses of carbon and biodiversity.

Humid tropical primary forest loss (Indicator 1.4) using Global Forest Watch annual data
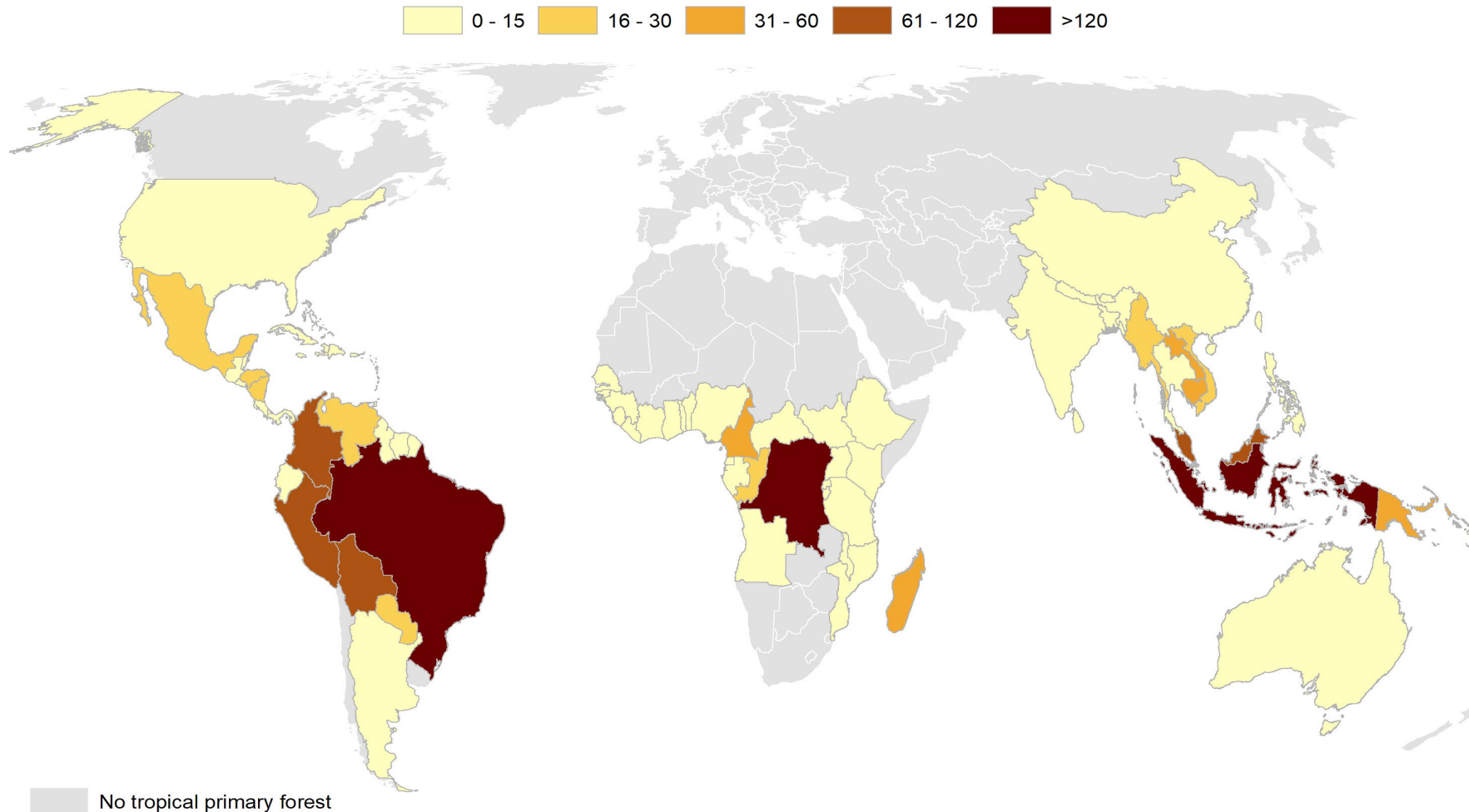

The main driver of primary forest loss is **commodity agriculture** (e.g., palm oil, soy, beef).

Shifting agriculture also plays a major role in some regions. Urbanization is also a minor contributor to deforestation globally.

Legend:
- All tropical primary forest loss
- GFW deforestation (low estimate)
- GFW deforestation (high estimate)

Source: GFW analysis of Hansen et al. 2013, Curtis et al. 2018, and Turubanova et al. 2018

Tropical primary forest loss emitted 2.5 billion tonnes of CO$_2$e per year between 2018 and 2020, equivalent to the annual emissions from Russia.

Average annual emissions from tropical primary forests (Indicator 2.2), 2018-2020 (million tonnes CO$_2$e per year)

0 - 15   16 - 30   31 - 60   61 - 120   >120

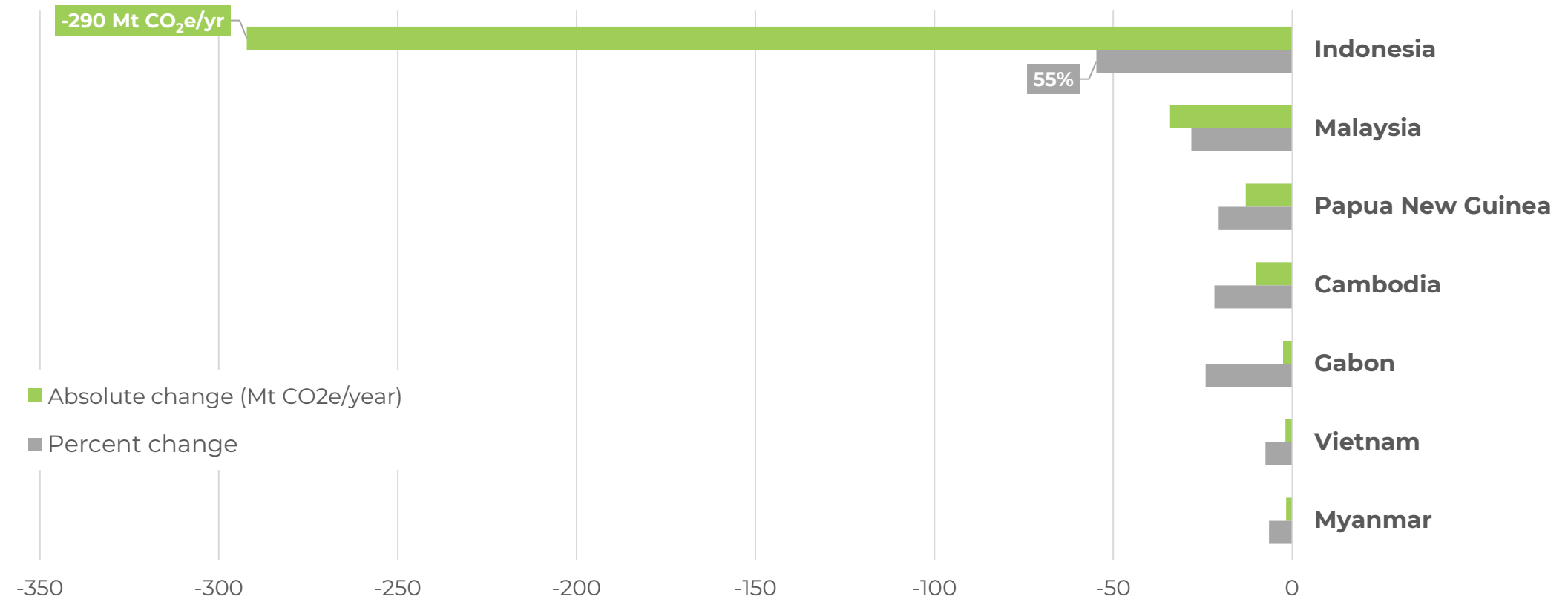

No tropical primary forest

Since the NYDF was adopted, **emissions from humid tropical primary forest loss have increased**.

Between 2018 and 2020, emissions from primary forest loss comprised **24% of global gross emissions from forest loss**.

Source: Forest emissions from Harris et al. 2021. Primary forest from Turubanova et al. 2018. Russia national emissions (excluding land use, land use change, and forestry) from Climate Watch.

Since 2015, some countries have made progress in reducing emissions from tropical primary forest loss.

-290 Mt CO$_2$e/yr

55%

Indonesia

Malaysia

Papua New Guinea

Cambodia

Gabon

Vietnam

Myanmar

■ Absolute change (Mt CO2e/year)

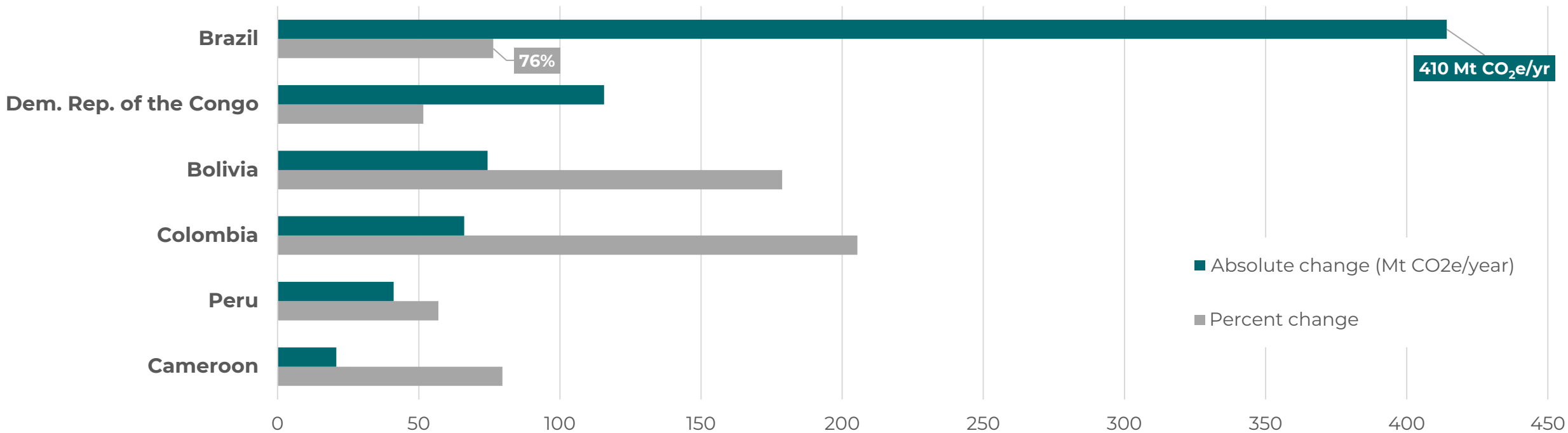■ Percent change

-350   -300   -250   -200   -150   -100   -50   0

Source: Harris et al. 2021 and Turubanova et al. 2018.

Nevertheless, emissions from tropical primary forest loss still increased substantially in many countries, overshadowing reductions in other countries.

Brazil — **410 Mt CO₂e/yr**, **76%**
Dem. Rep. of the Congo
Bolivia
Colombia
Peru
Cameroon

Legend:
- Absolute change (Mt CO2e/year)
- Percent change

X-axis: 0, 50, 100, 150, 200, 250, 300, 350, 400, 450

Source: Harris et al. 2021 and Turubanova et al. 2018

Meeting the 2030 target of halting natural forest loss requires urgent and comprehensive action.

Address the drivers of deforestation.

- Creating a forest-positive economy will require increased transparency and accountability of private companies in removing deforestation from their supply chains; strengthened collaboration across sectors; and realigned economic incentives to protect rather than clear forests.

Restore deforested areas to act as a buffer to primary forest loss.

- Restoration is not a substitute for halting deforestation, but ecological restoration can support secure livelihoods and enhance environmental services.

Enhance national and international climate ambition and action.

- Countries must ramp up their ambition and actions to realized the full potential of forest to contribute to sustainable development and climate change mitigation.

Increase funding for forests and shift financing from grey to green.

- It will take an estimated USD 45-460 billion per year to protect, restore, and enhance forests in line with the Paris Agreement's 1.5°C target, compared to USD 2.5 billion per year in green finance over the last decade.

Strengthen forest governance.

- Strong policies for forest conservation, restoration, and management, when aligned with other development and economic objectives and sufficiently enforced, are key for meeting the 2030 target. Empowering and recognizing the rights of Indigenous Peoples and local communities is an essential part of improving forest governance.