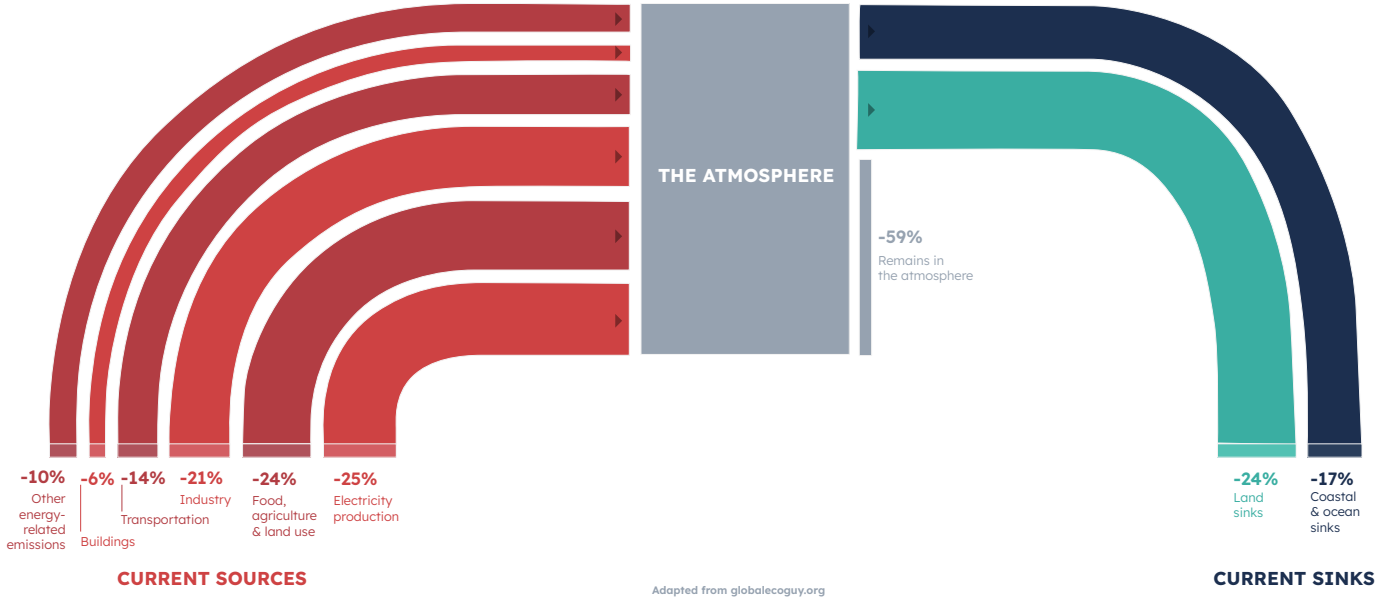
Respira

Why invest in forest conservation first

Forests are extraordinary. They house most of the world's biodiversity, regulate our rainfall, provide us with clean water and oxygen, provide food, fuel, income and shelter to over a billion people and are crucial in the fight to tackle climate change. **Forests absorb around a quarter of all CO_2e emissions from the atmosphere** – they are a natural carbon capture and storage technology.

Yet these critical ecosystems are under threat. 12 million hectares of forests (including over 4 million hectares of humid primary forests) were lost in 2020; much more were degraded. 10-15% of global annual CO_2e emissions (more than the world's entire transport sector) are attributable to deforestation and degradation. What is worse, the loss of trees further erodes the ability of forests to buffer atmospheric carbon. If current trends continue, we are in danger of tipping our forests from our greatest carbon sink into a net carbon source.

Investing in forest conservation is one of the most cost-effective tools we have to combat climate change and comes with huge co-benefits for people and nature.



Adapted from globalecoguy.org

The root causes of forest loss are highly complex but there are many successful approaches to tackling deforestation, and using carbon payments to value standing forests is one of the most promising tools. This approach, known as REDD+ (Reducing Emissions from Deforestation and forest Degradation) involves quantifying the amount of carbon which would have been lost from a forest had it been cut down. These 'avoided' emissions are then bought and sold as verified carbon credits.

REDD+ programs and projects have been running for more than 10 years and are a proven way to slow and even reverse forest loss. Highly skilled project developers, working with local stakeholders, have found solutions to the various on-the-ground challenges, and many projects have a successful track record. Recent advances in monitoring technologies and rigorous verification audits provide assurance that net carbon achievements can be reported. Done well, REDD+ has the potential to unlock huge amounts of inward investment for developing nations from the developed world, not only for climate action, but also helping to meet sustainability and biodiversity goals.

Recently, there has been much focus on tree planting as a way to meet net zero commitments. This is needed and should be encouraged, but the top priority must be protecting existing forests. Now is the moment to double up on investing in forest conservation.

Planting trees vs forest conservation

It doesn't make sense to be losing forests faster than we are planting them, in the same way as it makes no sense to leave the taps running when trying to drain a bath. A holistic approach is needed; prioritising the protection of existing mature forests to address immediate emissions, while promoting regeneration, restoration and planting where appropriate. Recent publications by The Nature Conservancy and Botanical Gardens Conservation International's 10 golden rules for reforestation also emphasise the need to prioritise protection strategies first and provide other useful frameworks for thinking about conservation and restoration strategies.[1]

Mature forests rejuvenate naturally and also continue to grow, storing more and more carbon. It is almost impossible to create a complete, integrated and complex natural ecosystem through manually planting. Only mature trees store significant amounts of carbon, and forests with a high diversity of tree and plant species provide habitat for wildlife within a cohesive ecosystem. Planted trees take many years to achieve the same carbon storage as existing forest. Some Amazonian trees are estimated to be hundreds of years old. Creating mature ecosystems will take many human generations.

Jurisdictional or project level?

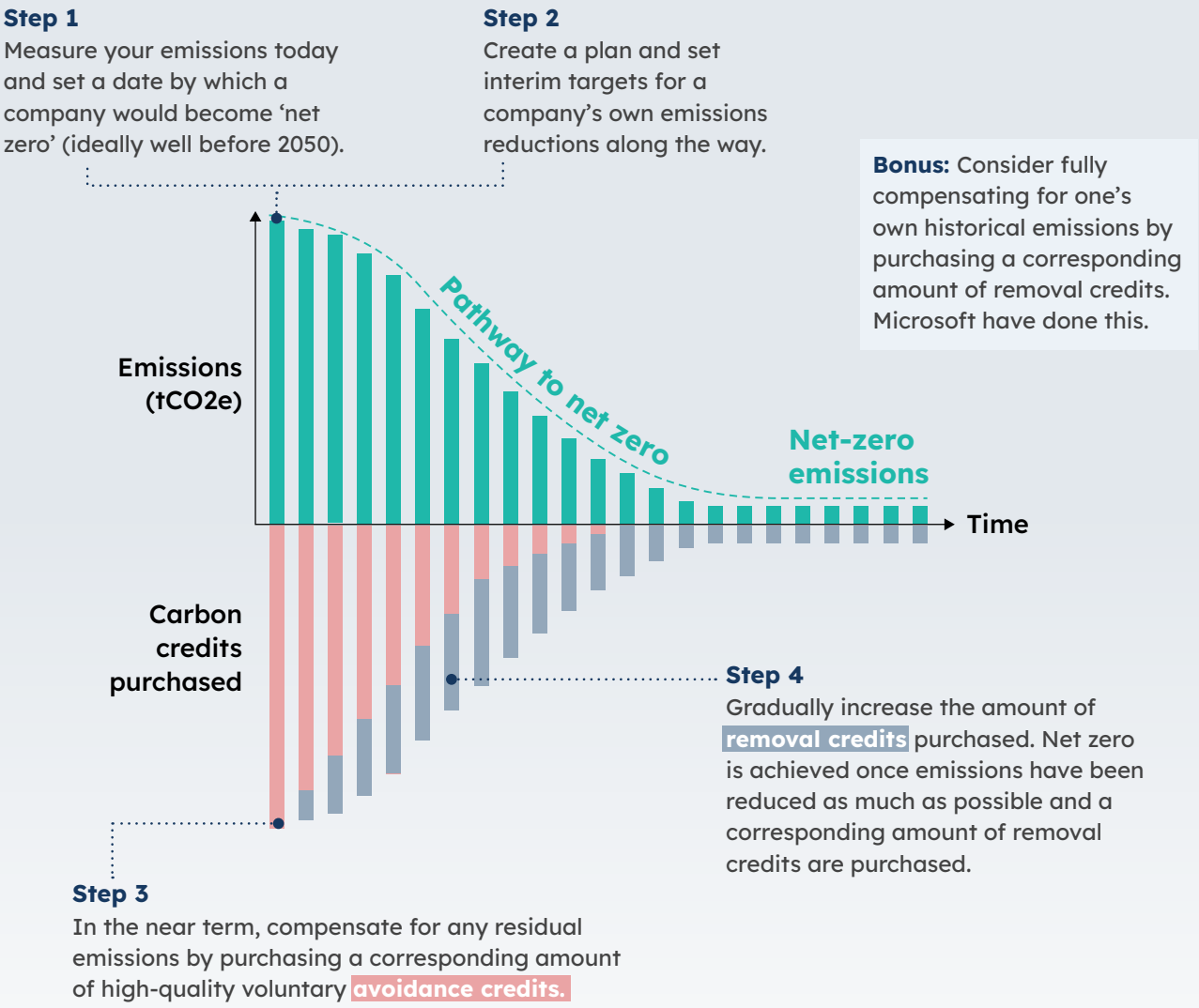
- REDD+ can either be implemented by governments (often referred to as 'jurisdictional approaches') or by private conservation or community organisations (often referred to as projects). Results can be paid for either by governments or private companies.
- Both are needed to meet global climate targets. In the near term there are many excellent 'projects' delivering verified emissions reductions - check for those using science-based methodologies and by highly-skilled developers. Many jurisdictional scale programs are still in their development stage. Once up and running, projects will need to 'nest' into these to ensure alignment of baseline deforestation rates and avoid double counting.

1 https://www.nature.com/articles/s41558-021-01198-0 by The Nature Conservancy, Conservation International and WWF

REDD+ as carbon credits

- The use of REDD+ (avoidance credits) in carbon 'offsetting' has caused much debate, but there are now formal structures and standards that include scientific methodologies, accurate surveillance and regular verification creating confidence and credibility for buyers.
- Projects certified by leading third-party agencies (e.g. Verra and Gold Standard) and following the principles of being real, measurable, additional, permanent, and conservative should be purchased by corporations on their pathway to net zero as a way to 'compensate' for unavoidable residual emissions on that pathway.

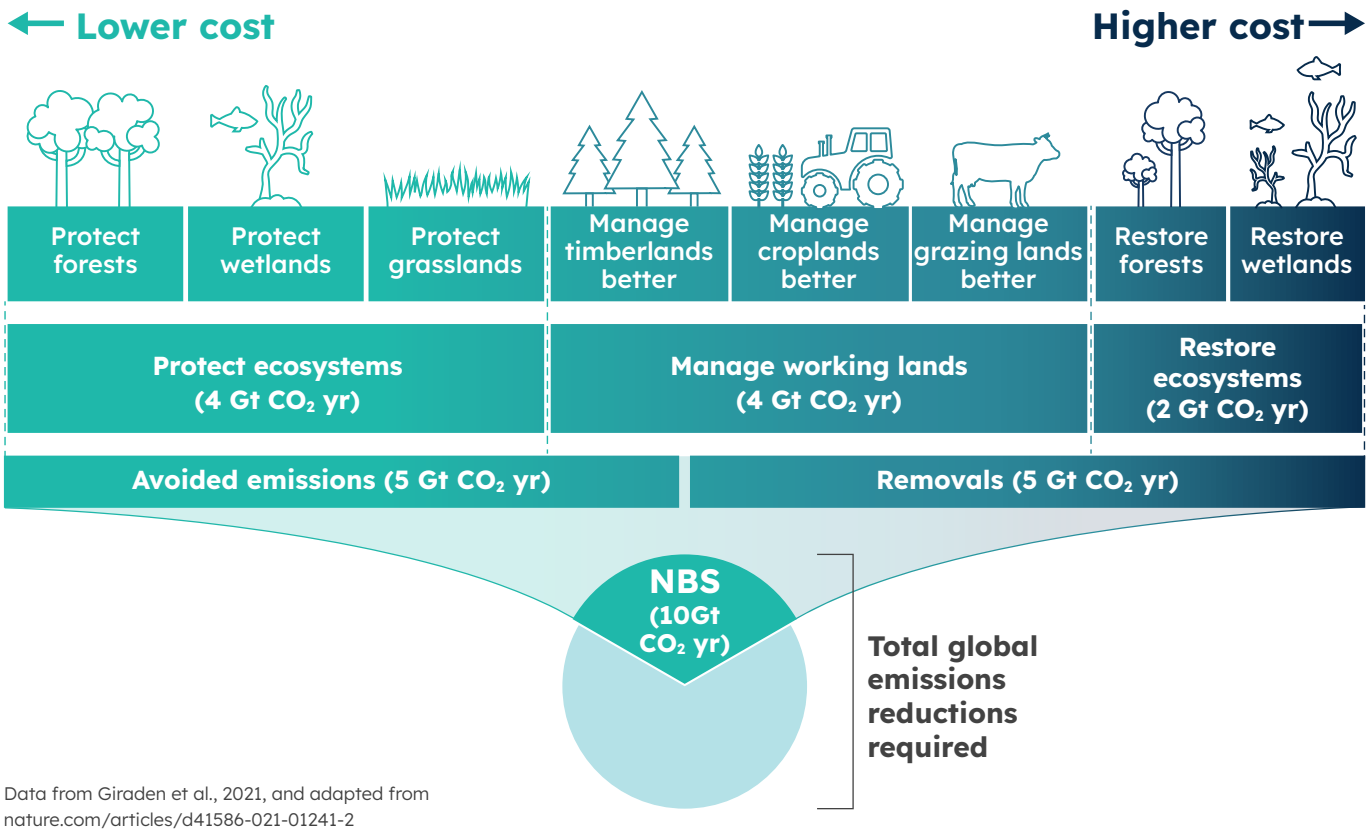
The role of high-quality carbon credits on the pathway to net zero



- High quality REDD+ projects typically withhold 10-20% of credits as a leakage and non-permanence 'buffer pool' – insurance – in case of fires, pests, or other potential factors that reduce net carbon storage.
- Any decarbonisation strategy must follow the mitigation hierarchy of avoid, reduce and offset.[2] Use of REDD+ carbon credits should never be an excuse to delay action on cutting direct emissions first.
- Avoidance credits cannot be used to meet net zero, but they can be used to compensate for residual emissions in the near term. Longer-term, a switch towards removals will be needed as deforestation slows and increasing amounts of removals are needed to achieve net zero by 2050 and then ultimately negative emissions. But we are not yet at that stage.

2 https://sciencebasedtargets.org/resources/files/foundations-for-net-zero-full-paper.pdf

Nature-based solutions to the climate crisis can provide up to one third of the emissions reductions required by 2030



Data from Giraden et al., 2021, and adapted from nature.com/articles/d41586-021-01241-2

Deforestation

The tropics lost
4.2m hectares
of humid primary forests in 2020, an area the size of the Netherlands[3]

Standing forests sequester
25% of carbon emissions.
Deforestation and degradation thus has a double negative climate impact – it allows more carbon to be released to the atmosphere and decreases nature's ability to remove it.[4]

Over half of the world's **GDP, $44 trillion** of economic value, is at moderate or severe risk due to nature loss.[5]

Forests cover **30%** of the Earth's land surface with over **1.3 billion** people directly depending on them for their livelihoods and well-being.[6]

3 https://www.theguardian.com/environment/2021/mar/31/destruction-of-worlds-forests-increased-sharply-in-2020-loss-tree-cover-tropical
4 https://globalecoguy.org/we-need-to-see-the-whole-board-to-stop-climate-change-98be66412281
5 https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf
6 https://www.worldbank.org/en/topic/forests/brief/enhance-livelihoods-of-forest-communities