

Nature for Net Zero:

consultation document on the need to raise corporate ambition towards naturebased net-zero emissions



December 2020

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Executive Summary



Executive Summary (1 of 5)

Limiting warming to 1.5°C requires the halving of global emissions by 2030 and reaching net-zero emissions by 2050. This depends, in turn, on decarbonising the energy system and protecting and restoring nature, tropical forests in particular. But while progress on decarbonising the energy system is promising, progress on nature is limited. Deforestation rates remain stubbornly high and are trending upwards. Resources available to boost progress on nature are minuscule relative to the scale of the challenge.

This report focuses on the need to increase corporate action on climate and nature. It sets out actions that governments, corporates, investors, NGOs and the COP26 Presidency should take now to secure a nature-based net-zero future.

The finance gap

The forest and land use sector can deliver 30% of the mitigation required to reach net-zero, some 15 GtCO₂e a year, through activities to reduce emissions and remove carbon. These activities also have important co-benefits in terms of building resilience to climate shocks, safeguarding biodiversity and enhancing rural livelihoods and public health. 5 GtCO₂e of the sector's mitigation potential lies in protecting tropical forests. Interventions to restore forests, wetlands and peatlands have the potential to remove a further 4 GtCO₂ from the atmosphere with considerable advantages compared to other negative emission technologies (NETs), such as direct air carbon capture and storage (DACCS). Such advantages include co-benefits, speed of deployment at scale and substantially lower costs.

Yet finance committed to forest protection and restoration makes up a tiny percentage of overall climate mitigation finance promised so far. Between 2010 and 2017, just \$2.8 billion of public and private finance was committed each year to forests. Public finance for renewables in 2018 alone was 100 times greater (\$280 billion).

FOLU estimates that the amount of finance for forest protection and restoration needs to be increased by \$65 billion a year. Most of this money should be directed at helping forest country governments to deliver the changes in policy, regulation and fiscal incentives that address the root causes of deforestation, and to support businesses and communities in building "forest positive" value chains that enhance local livelihoods.

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This investment requirement is a fraction of the value at risk if we fail to act on climate change by protecting and restoring forests. The economic losses associated with temperature rises of 4°C above pre-industrial levels over the next 80 years could mount to \$23 trillion per year and more than half of global GDP (\$44 trillion) is generated in industries that depend moderately to highly on nature and its services. Moreover, it is estimated that the cost of preventing further pandemics over the next decade by protecting wildlife and forests would equate to just 2% of the estimated financial damage caused by COVID-19. The stakes and the leverage from investment in protecting and restoring nature could not be higher.

Public finance – domestic and international – will play a key role in forest protection and restoration. But fiscal constraints, including those related to COVID-19, mean governments can provide only part of the total finance needed. Governments therefore need to focus on creating conditions that incentivise private sector investment. With corporates making up two-thirds of the richest 100 entities on the planet, raising their ambition to invest in nature is key to providing finance at scale. Corporates in food, agriculture and forest sectors can directly invest in nature-based climate mitigation solutions within their value chains, while corporates in other sectors can invest by purchasing offsets on the voluntary carbon market.

Understanding existing corporate ambition

To understand the likely impact of the current level of corporate ambition for climate and nature, FOLU has estimated demand for forest and land use sector offsets over the next 30 years given existing corporate net-zero commitments. This is based on the 1,230 companies (of whom less than 70 are in the Global 500) that have set a net zero target as of December 2020 (see technical annex for methodology). Based on this sample, we estimate total corporate demand for offsets equal to just 50 million tCO_2e per year or \$500 million of financing at an illustrative carbon price of $10/tCO_2e$. While recognising markets are just one of the mechanisms to close the financing gap, clearly this volume falls short of the 15 GtCO₂e of potential forest and land use mitigation or estimated \$65 billion annual forest finance gap.

Estimated corporate demand for offsets is low because only 67 of the Global 500 companies have set net-zero emissions targets; 60% of the 1,230 companies committed to net-zero are B-corps, typically small companies with small emissions footprints; and, with the exception of the B-corps, only 64 companies in the sample have set net-zero targets ahead of mid-century, meaning there will be minimal demand for compensation or neutralisation from the sample as a whole.

5 Source: Kompas et al, 2019; World Economic Forum, 2020; Global Justice Now, 2018; Dobson et al, 2010; Race-to-Zero, 2020



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Making the Business Case for a nature-based net-zero future

Raising the missing finance depends on all corporates – particularly large corporates – increasing their ambition by aligning with "naturebased net-zero" strategies. Specifically, that means:

- 1. aligning corporate strategy with global goals to limit warming to 1.5°C of warming, implying (on average) a halving of their value chain emissions every decade and full abatement by mid-century.
- 2. contributing to the protection and restoration of nature by compensating for unabated emissions, starting now and continuing through (and potentially beyond) achieving net zero emissions across their value chains.

Corporates need to see a clear business case if they are to raise their nature and climate ambition in this way. Such a case is not hard to make, though it varies from one sector to the next. In some sectors (most obviously food and agriculture), companies are directly exposed to losses caused by the ongoing destruction of nature, weather-related shocks, increasing pest risks and damage to crop pollinators. Similarly, sectors such as mining are affected when loss of natural capital makes hydrological flows more uncertain. The electricity sector is affected, as seen most recently in California, when periods of extreme drought undermine the physical integrity of grid networks, sparking forest fires that lead to major outages.

Other sectors, perhaps not as directly exposed to nature, also have a strong business case for financing nature now. Airlines, for example, have good reason to enable their passengers to travel on a "zero emissions" basis to avoid the risk of "flight shame". This risk has likely grown since COVID-19 has forced changes in flying behaviours. Oil and gas companies have similarly strong motives to compensate for emissions which they cannot rapidly eliminate on the basis of their historic (and continuing) role as a major source of greenhouse gas emissions. Even as they transition to clean energy, their licence to operate depends on demonstrating the "polluter pays" principle. Highly profitable sectors whose direct emissions are more limited, such as tech, also have a commercial interest in demonstrating to consumers and regulators that their privileged economic position is balanced by tangible social responsibility.

As well as seeing a clear business case, corporates will look for robust, science-based standards and ratings to ensure they are recognised for stepping up their ambition for nature in this way. Companies that are combining ambitious abatement pathways with upfront, sustained financing for nature are a key part of the solution to our climate challenge.



Executive Summary (4 of 5)

The potential impact of large-scale corporate investment in nature is massive. If the Global 500 companies committed to compensating 100% of their unabated Scope 1 and 2 emissions by 2025, demand in the voluntary carbon market would soar to 5 GtCO2e in that year alone. If 50% of that demand were channelled through REDD+ (i.e. avoided deforestation and degradation), it would deliver the majority of potential mitigation available from protecting standing forests in 2025 in scenarios where zero gross deforestation is achieved globally by or before 2030. At an illustrative price of $10/tCO_2e$, this would cost the Global 500 \$25 billion – less than 0.1% of their total revenues and less than 1.5% of total profits. In other words, a 1.5% tax on the world's 500 corporations would be enough to save the forests upon which all life on earth depends.

Action over the 12 months to COP26

Action is urgently needed to align the interests of private (and public) sector actors who want to invest in high-quality natural capital with those of the rainforest nations, who need reliable, long-term financial support if they are to effect the massive "people and nature positive" transformation of their rural economies.

Below are the top three actions that NGOs and standard setters; corporates and investors; governments; and Parties to the Paris Agreement, guided by the COP26 presidency, should take now.



NGOs and standard setters such as the Science Based Target initiative should:

- a) Define a gold standard for nature-based net-zero corporate climate leadership that incentivizes and supports companies to adopt maximum ambition in setting aggressive emission reduction pathways consistent with 1.5°C (i.e., net-zero by mid-century) and compensating for their unabated emissions along the pathway by investing in nature-based climate solutions. Standards must also ensure high-integrity on the supply side by requiring compensation and neutralisation measures to (a) apply robust baselines, (b) ensure additionality, (c) have measures to ensure permanence, (d) minimise and account for leakage, (e) avoid double-counting and (f) ensure social safeguards.
- b) Develop clear methodologies for corporates to set science-based targets for nature. This should be linked to the promotion of sector-specific business cases for corporate action on nature.
- c) Facilitate aggregation or "clubbing" of corporate demand in the voluntary carbon market to help drive systemic change.



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Corporates and investors should:

- a) Commit to and enforce deforestation-free supply chains and financing by 2025 at the latest.
- b) Commit to the gold standard for corporate climate leadership described under 1a) above.
- c) Commit to paying a minimum carbon price of \$10/tCO₂e for high quality post-2020 REDD+ emissions reductions. Where possible they should publicly signal their estimated demand for offsets into the future.

Tropical forest countries should:

- a) Communicate clear plans and strategies around reaching zero deforestation and large-scale restoration activities to signal near term supply of jurisdictional REDD+ emissions reductions.
- b) Adopt the highest standards for independent accreditation and verification of forest emission reductions, for example, the Architecture for REDD+ Transactions (ART).
- c) Establish high-integrity investment frameworks and credible funding mechanisms to direct finance received by emission reduction sales transparently and in line with international standards. Investment should benefit local and indigenous communities who play critical roles in forest stewardship, and both enforce and incentivize forest protection and restoration.

Non-tropical forest countries should:

- a) Commit to paying a minimum carbon price of \$10/tCO₂e for high quality post-2020 REDD+ emission reductions. Where possible they should publicly signal their estimated demand for offsets into the future.
- b) Provide Official Development Assistance (ODA) for lower income countries to develop policies, capacity, and enforcement so they can reduce tropical deforestation, increase restoration, and also support investments to address drivers of deforestation.
- c) Promote deforestation-free supply chains through demand-side measures, public procurement and market access.

Parties to the Paris Agreement, guided by the COP26 presidency

- a) Support and give a platform to the actions described above.
- b) Encourage and support a coalition of ambitious countries and companies to launch 4–6 jurisdictional REDD+ deals at COP26 to be implemented over the next five years by channelling at least \$2.5 billion of private sector finance towards such deals, delivering at least 250 million tCO₂e of mitigation.
- c) Ensure that there are clear monitoring and reporting protocols that allow a transparent assessment of non-state actors' contributions to country Nationally Determined Contributions (NDCs).



Nature for Net-Zero: raising corporate ambition towards nature-based net-zero emissions

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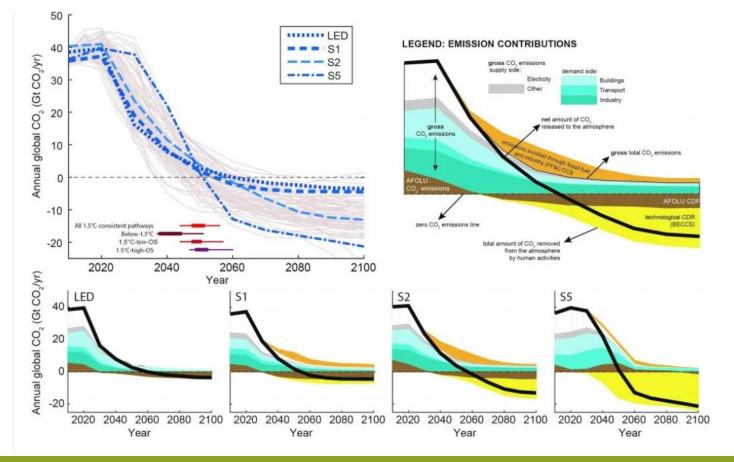
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The role of forests and land use in mitigation for net-zero emissions



We must reach net-zero globally by 2050 to keep within 1.5°C of warming

Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development



LED is a scenario with particularly low energy demand, S1 is a sustainability-oriented scenario, S2 is a middle-of-theroad scenario, S5 is a fossil-fuel intensive and high energy demand scenario. 1.5°C-consistent pathways are characterised by a rapid phase out of CO₂ emissions and deep emissions reductions in other GHGs and climate forcers.

In pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO₂ emissions decline by about 45% from 2010 levels by 2030, reaching net-zero around 2050.

Net-zero emissions are reached when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period.

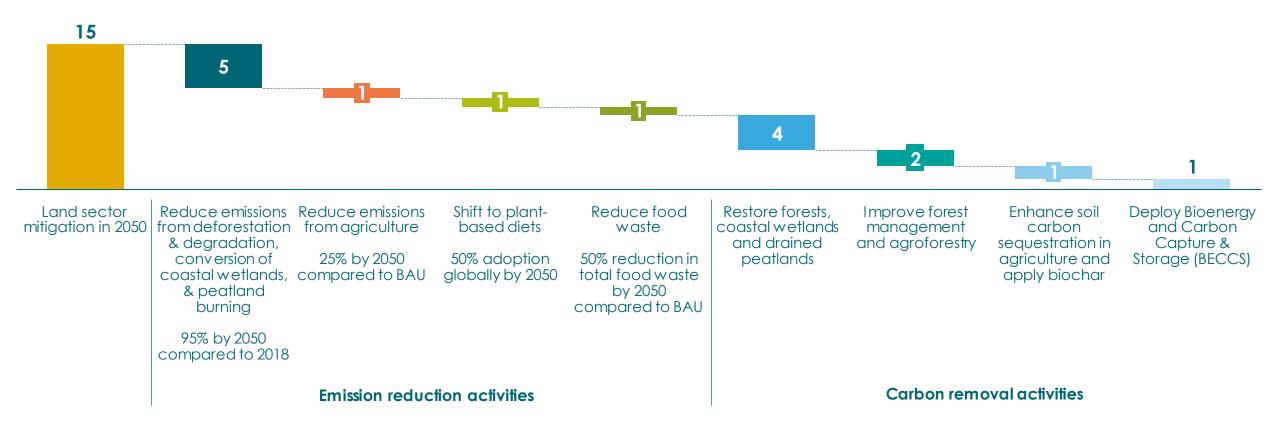
All analysed pathways that limit warming to 1.5°C with no or limited overshoot, use carbon dioxide removals (CDR) – such as afforestation/reforestation or direct air capture and storage – to help neutralise emissions from sources that are difficult, impossible or take more time to eliminate.



There is no pathway to 1.5°C without a near immediate halt to deforestation and significant restoration of land

The forest and land use sector can deliver 30% of mitigation (~15 GtCO₂e a year) through emission reduction and carbon removal activities...

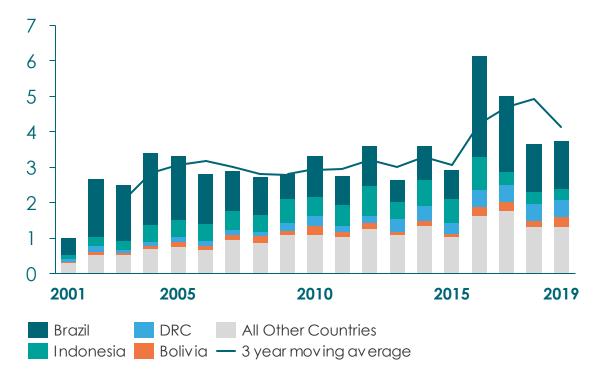
GtCO₂e per year of the global mitigation needed in 2050 to deliver on the 1.5°C target





Ending deforestation and degradation is a priority since this is where the largest and most cost-effective mitigation potential lies (5 GtCO $_2$ e)

Deforestation rates remain high and trending upwards, particularly across the carbon rich tropical belt



Tropical primary forest loss, million hectares, 2001–2019

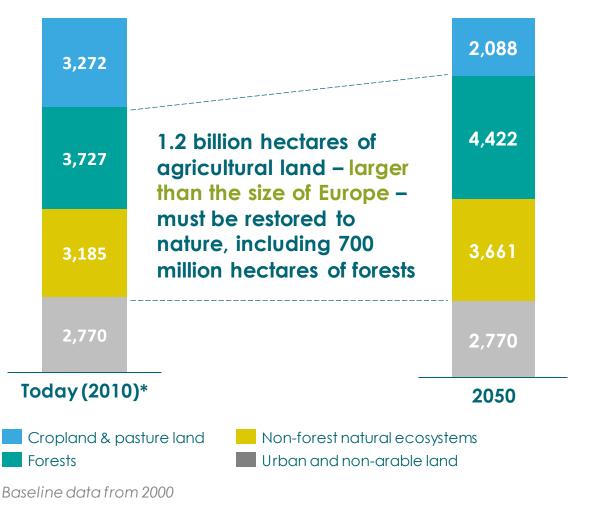
Avoided deforestation has greater sequestration potential than restoration per hectare of land and is twice as cost effective

- Preventing the loss of one hectare of mature forests will typically avoid emissions of about 100 tonnes of carbon, while tropical reforestation typically sequesters about 3% of that. Therefore, in a given year, 30 times more land is needed for reforestation to generate the same climate mitigation outcome as avoided deforestation.
- Forest protection can be done at a cost of \$30 per hectare a year on average substantially less than forest restoration when you include upfront investment.
- The IPCC Climate Change and Land report emphasises that "reducing deforestation and forest degradation rates represents one of the most effective and robust options for climate change mitigation, with large mitigation benefits globally."



But this also needs to be combined with restoration of approximately 1.2 billion hectares of forests and other natural ecosystems

Total surface area of land, million hectares



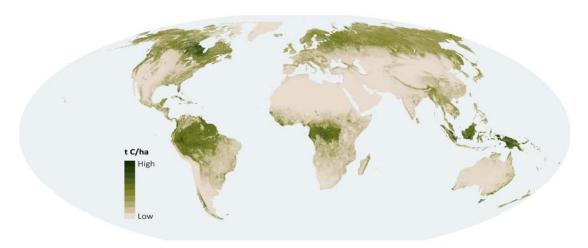
Modelling by the Food and Land Use Coalition set out in *Growing Better* demonstrates that this can be achieved at the same time as:

- Halting biodiversity loss and restoring ocean fish stocks
- Eliminating under-nutrition and halving the disease burden associated with consuming too many calories and unhealthy food
- ✓ Increasing food security
- Boosting income growth for the bottom 20% of the rural population

The freeing up of agricultural land for restoration is made possible due to a shift away from land-intensive protein diets, combined with faster productivity growth, lower food loss and waste and more efficient livestock management.



Tropical forests and peatlands are a priority for protection and restoration over the next decade as they are critical carbon sinks

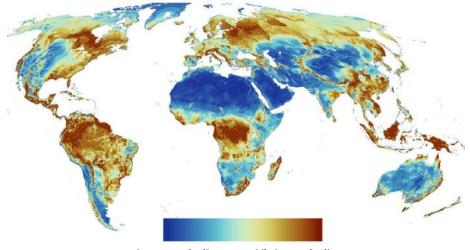


... as well as biodiversity and clean water supply

- Nature Map Earth developed an integrated global map of biodiversity, carbon storage, and clean water supply to support countries to integrate nature and climate in decision making.
- The tropical belt should be prioritised for urgent protection and restoration measures but there are clearly other important non-tropical areas as well.

The tropical belt is a high priority region in terms of carbon storage...

- By combining data on global biomass carbon and distributions of soil carbon stocks vulnerable to land-use change, Nature Map Earth produced an integrated map of carbon stocks (biomass and soils) that are vulnerable to human impact.
- The tropical belt is a region with high carbon stocks that are particularly vulnerable to human impact.



Lower priority

Higher priority



Action within the decade is essential

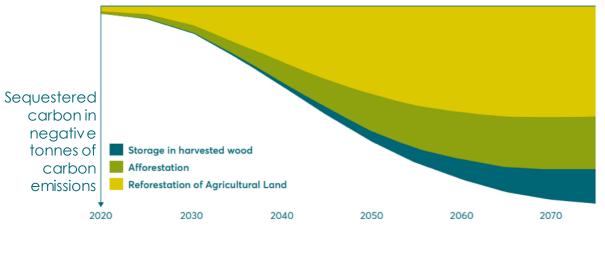
The Amazon rainforest is close to a tipping point where climate change, deforestation and fires could cause it to dry out and turn to savannah

Carbon sequestration potential of forested land follows an S-curve – we plant now to get maximum gains later



As much as 40% of the existing Amazon rainforest is now at a point where it could exist as a sav annahinstead of as rainforest – this is known as "Amazon forest dieback".

This process will take decades to take effect, but the process is hard, if not impossible, to reverse.



Storage in harvested wood Afforestation Reforestation of agricultural land

The gains produced from forests planted today take several decades to reach full fruition. Carbon sequestration follows an S-curve that sees a slow start followed by rapid gains, emphasising that the best time to restore forests is now.



The forest finance gap



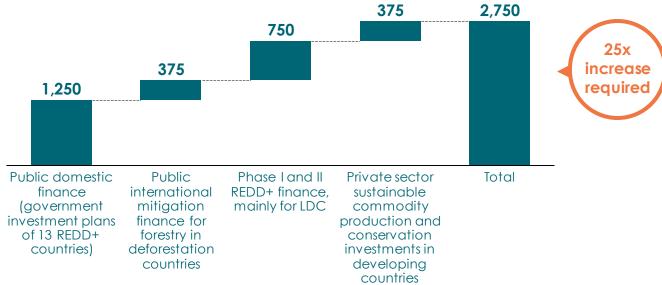
We need at least a 25x increase in finance from both public and private sources to fill the forest finance gap

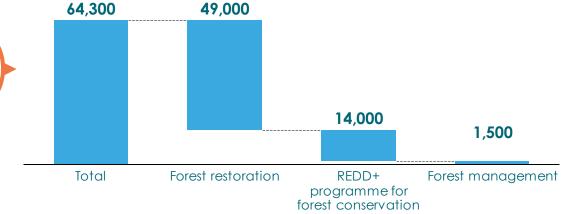
\$22 billion in green finance commitments were directed towards forests from 2010 to 2017, or \$2.8 billion a year

Average annual public and private sector finance committed for forests (over the period 2010–2017), USD million

Additional investment requirements to forests to 2030 total \$65 billion a year

Additional investment requirement to 2030 for forest protection and restoration, USD million





See technical annex of the FOLU Growing Better report for calculations.

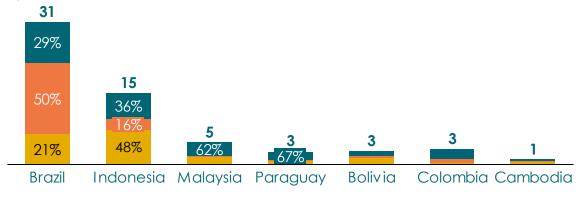


It is essential that finance is targeted towards forest country governments to incentivise action to tackle root causes of deforestation

Governments alone have the ability to crack down on illegal deforestation and to increase the area of forests under protection

If the international trade in agro-commodities from illegal deforestation were a country, it would be the 6th largest contributor to climate change in the world.

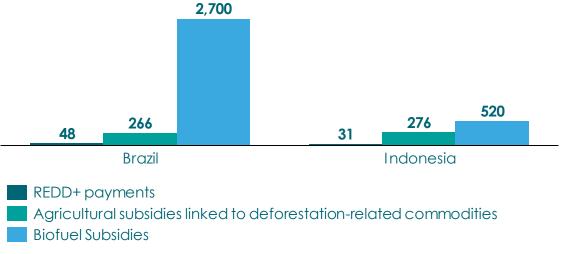
Tropical forest converted from 2000–2012, million hectares



Legal forest loss Illegal forest loss for domestic markets Illegal forest loss for export markets Governments alone have the ability to redirect perverse public incentives such as agricultural subsidies which drive deforestation

Of more than \$700 billion paid in agricultural subsidies each year, only 15% of this support goes towards building public goods. Similarly, \$30 billion of public support is poorly targeted at fisheries, with around \$22 billion of this classified as harmful.

Subsidies for deforestation-linked commodities compared to REDD+ finance, USD million



REDD+ payments refer to the annual averages based on the results periods 2014-2016 in Indonesia, and 2014-2015 in Brazil. Agricultural subsidies are based on 2019 Single Commodity Support estimates by the OECD and exclude timber. Negative market price support measures are not included. Primary biofuel feedstocks are palm oil in Indonesia and soy in Brazil. Apart from subsidies, high biofuel mandates are driving the production of these feedstocks (30%/5% for biodiesel/ bioethanol in Indonesia; 10%/27% for biodiesel/ bioethanol in Brazil).



Voluntary carbon markets for avoided deforestation, forest management and afforestation/reforestation have significant scaling potential

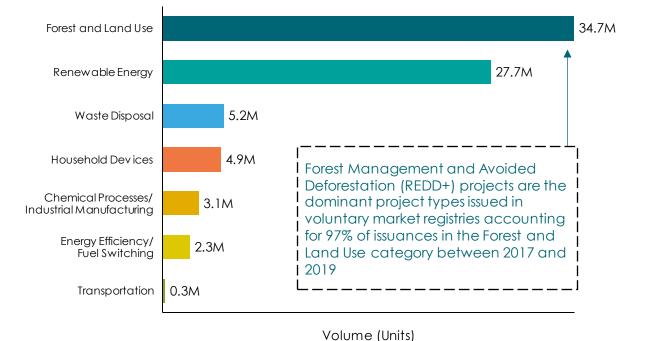
Serv ices

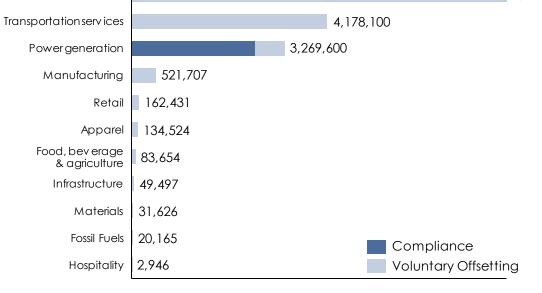
'Forest and Land Use' credits are a prominent feature of voluntary carbon markets, receiving an average of \$132 million and mitigating 35 million tCO₂e a year between 2017 and 2019

Average annual volume and market value of units traded between 2017 and 2019, based upon transaction data from the 'State of the Voluntary Carbon Market' reports

135 of the 3,856 companies that responded to CDP in 2019 reported purchases of 14 million tCO_2e from the forest and land use sector on the voluntary carbon market, and a further 3 million on the compliance market

Project-based carbon credits purchased and reported by CDP respondents (split between voluntary and compliance market purchases), tCO₂e





Volume (Units)



8,015,420

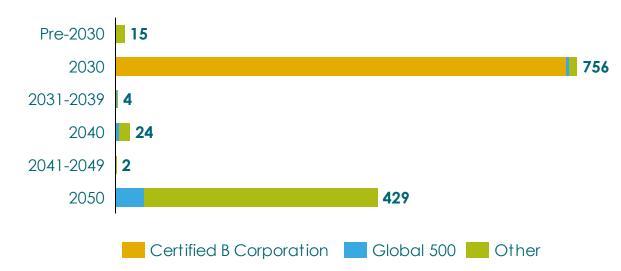
20 Source: State Of the Voluntary Carbon Markets 2020. To understand the 2019 breakdown of 'Forest and Land Use' projects, data was downloaded directly from the VCS, Gold Standard, ACR and CAR registries for analysis.

While there has been a three-fold increase in corporate net-zero commitments over the last year, this does not necessarily translate into an increased financing for forests through voluntary carbon markets

"Offsetting" does not replace the need to reduce value-chain emissions in line with science. But the Science Based Target initiative, in its recent "Net Zero Foundations" paper suggests that companies can offset in the following ways as part of a science-based net-zero strategy:) In the transition to net-zero: Companies can compensate or neutralise* unabated emissions while they transition towards a state of net-zero emissions by mid-century.

At net-zero: Companies with unavoidable residual emissions are expected to neutralise those emissions with an equivalent amount of carbon dioxide removals.

Target dates for 1,230 corporate net-zero committed companies (number of committed companies)



We assess 1,230 companies that have set a net-zero target as of 6th December 2020. The bulk of commitments set net-zero target dates at 2030 or 2050.

Of the 756 companies committed to net-zero by 2030, 96% of these are B-corps with a small carbon footprint.

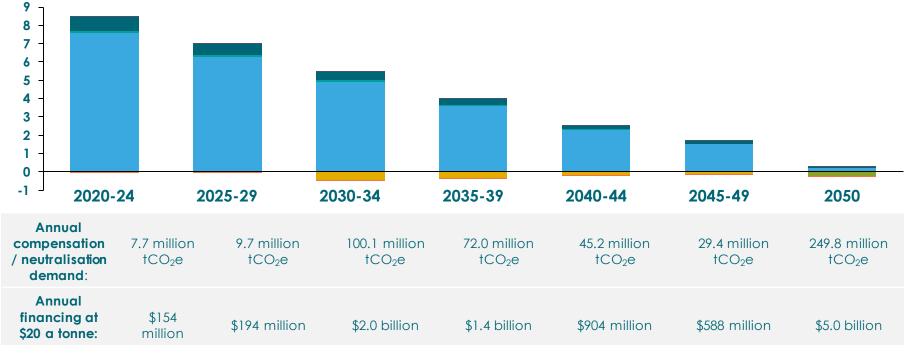
Whereas the majority of the committed Global 500 companies have committed to net-zero by 2050 (50 of just 67 companies) meaning there would only be a role for neutralisation of unavoidable residual emissions.

*Compensation is defined as measures to prevent, reduce or eliminate sources of GHG emissions outside of a company's value chain and neutralisation is defined as measures to remove carbon from the atmosphere in order to counterbalance the impact of a source of emissions that remains unabated.



Current corporate net-zero commitments would result in just 50 million tCO_2e per year of corporate demand for offsets - or \$500 million of financing at an illustrative \$10/tCO₂e carbon price

Remaining emissions and estimated compensation and neutralisation approaches from net-zero committed companies, GtCO₂e



Legend - remaining unabated emissions from net-zero companies

Companies committed to net-zero in 2020s
Companies committed to net-zero in 2030s
Companies committed to net-zero in 2040s
Companies committed to net-zero in 2050s

Legend - compensation/neutralisation of unabated emissions

Companies committed to net-zero in 2020s Companies committed to net-zero in 2030s Companies committed to net-zero in 2040s Companies committed to net-zero in 2050s To understand the potential of voluntary carbon markets, FOLU has estimated demand for forest and land use sector offsets over the next 30 years, based on existing corporate net-zero commitments.

This chart shows the remaining Scope 1 and 2 emissions of 1,230 net-zero committed companies.

We project their emissions to 2050 based on a 1.5°C or well below 2°C pathway (see technical annex for details). We assume that they will start compensating at their net-zero target date.

The resulting estimate of total corporate demand for offsets is equal to just 50 million tCO_2e per year - or \$500 million of financing at an illustrative \$10/tCO₂e carbon price.

Clearly, this is now here near enough to yield the 15 GtCO₂e of potential forest and land use mitigation nor to close the \$65 billion annual forest finance gap.



Raising corporate ambition towards nature-positive net-zero



If we are to meet the additional financing requirements, we need to raise the bar on corporate ambition towards "nature-based net-zero"

- 1 Abatement of value chain emissions (including emissions from land use change) at a rate consistent with the 1.5°C pathway; eliminating all feasible emissions by midcentury; and permanently removing any residual emissions from the atmosphere (i.e., neutralisation).
- 2 Compensation of all unabated value chain emissions during the transition to netzero through purchasing forest and land use sector carbon offsets and prioritizing interventions that help preserve and enhance existing terrestrial carbon stocks. Action should be targeted so that there is a win-win for both nature and climate, for example by targeting avoided deforestation in the tropical belt.
- 3 Compensation and neutralization measures must (a) apply robust baselines (b) ensure additionality, (c) have measures to ensure permanence of the mitigation outcomes, (d) minimize and account for leakage and (e) avoid double-counting. These conditions can be guaranteed by purchasing carbon units that are verified to robust and specific environmental and social standards.
- Companies with material impacts on nature should also commit to aligning with the initial guidance from the Science-Based Target Network on setting science-based targets for nature.

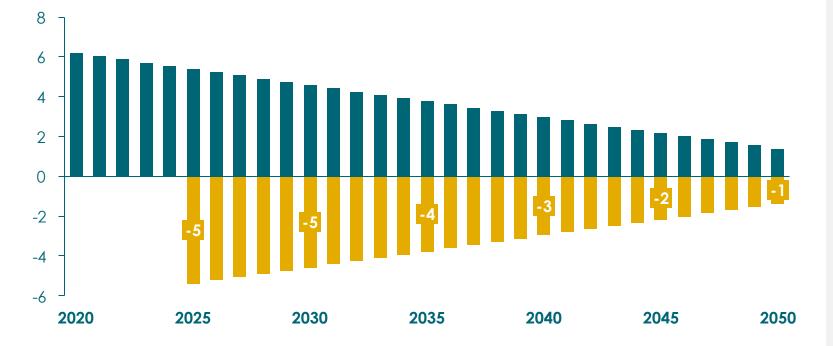




In September 2020, the Science Based Targets Network (SBTN) issued initial guidance on science-based targets (SBTs) for nature as a first step toward integrated SBTs for all aspects of nature: biodiversity, climate, freshwater, land, and ocean (expected in 2022).

For example, if the Global 500 companies compensate 100% of unabated scope 1 and 2 emissions in 2025 this would yield 5 GtCO₂e of demand, or \$50 billion at \$10/tCO₂e





Remaining scope 1 and 2 emissions

Compensation or neutralisation of unabated emissions through forest and land use offsets

Note, Scope 3 emissions are not included to avoid double-counting

If the Global 500 companies committed to compensating 100% of their unabated scope 1 and 2 emissions by 2025, demand in the voluntary carbon market would soar to 5GtCO₂e in that year alone.

If 50% of that demand were channelled through REDD+ (i.e. avoided deforestation and degradation), it would deliver the majority of potential mitigation available from protecting standing forests in 2025 in scenarios where zero gross deforestation is achieved globally by or before 2030. At an illustrative price of $10/1CO_2e$, this would cost the Global 500 \$25 billion - less than 0.1% of their total revenues and less than 1.5% of total profits.

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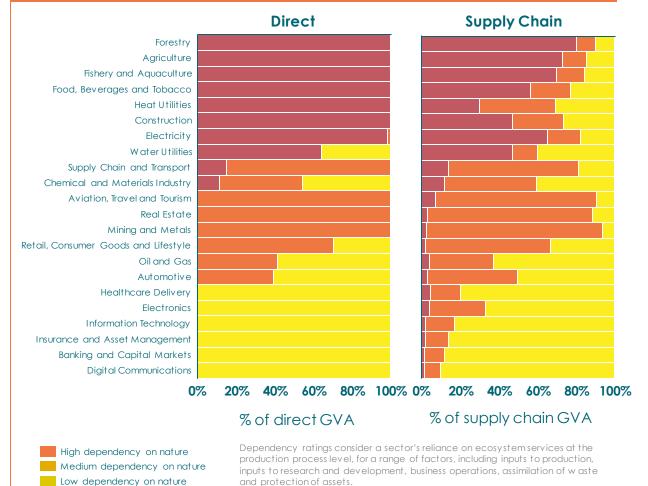


There is already a strong business case for corporates to raise the bar on ambition on climate and nature...

There is significant value at risk if we fail to act on climate change by protecting and restoring forests. More than half of global GDP (\$44 trillion) is generated in industries that depend moderately to highly on nature and its services.

Corporates need to see a clear business case if they are to raise their nature and climate ambition in this way. Such a case is not hard to make, though it varies from one sector to the next. In some sectors (most obviously food and agriculture), companies are directly exposed to losses caused by the ongoing destruction of nature, weather-related shocks, increasing pest risks and damage to crop pollinators. Similarly, sectors such as mining are affected when loss of natural capital makes hydrological flows more uncertain. The electricity sector is affected, as seen most recently in California, when periods of extreme drought undermine the physical integrity of grid networks, sparking forest fires that lead to major outages.

Other sectors, perhaps not as directly exposed to nature, also have a strong business case for financing nature now. Airlines, for example, have good reason to enable their passengers to travel on a "zero emissions" basis to avoid the risk of "flight shame". This risk has likely grown since COVID-19 has forced changes in flying behaviours. Oil and gas companies have similarly strong motives to compensate for emissions which they cannot rapidly eliminate on the basis of their historic (and continuing) role as a major source of greenhouse gas emissions. Even as they transition to clean energy, their licence to operate depends on demonstrating the "polluter pays" principle. Highly profitable sectors whose direct emissions are more limited, such as tech, also have a commercial interest in demonstrating to consumers and regulators that their privileged economic position is balanced by tangible social responsibility. Certain sectors have a higher dependency on nature and therefore revenue at risk from nature loss





... but science-based standards and ratings need strengthening to ensure that corporates are recognised for stepping up their ambition in this way

See below for an **illustrative** approach to rating corporate ambition which would recognise and reward leaders

	PLATINUM	GREEN	AMBER	RED	BLACK
Commitment to and progress towards abatement in line with 1.5°C	\checkmark	\checkmark	-	-	-
Commitment to and progress towards abetment in line with at least 2°C	\checkmark	\checkmark	\checkmark	-	-
Commitment to compensate or neutralise all unabated Scope 1 and 2 emissions	√ by 2021	✓ by 2025	-	-	-
Commitment to compensate unabated full value chain emissions	✓ by 2025	√ by 2030	-	-	-
Commitment to compensate some emissions ahead of 2050	\checkmark	\checkmark	-	\checkmark	-
Where compensating using avoided deforestation carbon offsets, commitment to purchase units at or nested within a jurisdictional level where supply is available	\checkmark	\checkmark	-	-	-
Neutralisation of residual emissions in 2050	\checkmark	\checkmark	\checkmark	\checkmark	-
For corporates with material impacts on nature, a commitment to engage with the Science Based Target Network during its design phase (2020–2022)	\checkmark	\checkmark	-	-	-

"-" = no requirement



The road to Glasgow



The next 12 months on the run up to COP26 at Glasgow are key and the following actions are required (1 of 2)

Action is urgently needed to align the interests of private (and public) sector actors who want to invest in high-quality natural capital with those of the progressive rainforest nations, who need reliable, long-term financial support if they are to effect the massive "people and nature positive" transformation of their rural economies.

NGOs and standard setters such as the Science Based Target initiative should:

- a) Define a gold standard for nature-based net-zero corporate climate leadership that incentivizes and supports companies to adopt maximum ambition in setting aggressive emission reduction pathways consistent with 1.5°C (i.e., net-zero by mid-century) and compensating for their unabated emissions along the pathway by investing in nature-based solutions. Standards must also ensure high-integrity on the supply side by requiring compensation and neutralisation measures to (a) apply robust baselines, (b) ensure additionality, (c) have measures to ensure permanence, (d) minimise and account for leakage, (e) avoid double-counting and (f) ensure social safeguards.
- b) Develop clear methodologies for corporates to set science-based targets for nature. This should be linked to the promotion of sector-specific business cases for corporate action on nature.
- c) Facilitate aggregation or "clubbing" of corporate demand in the voluntary carbon market to help drive systemic change.

Corporates and investors should:

- a) Commit to and enforce deforestation-free supply chains and financing by 2025 at the latest.
- b) Commit to the gold standard for corporate climate leadership described in 1a) above.
- c) Commit to paying a minimum carbon price of $10/1CO_2e$ for high quality post-2020 REDD+ emissions reductions. Where possible they should publicly signal their estimated demand for offsets through to 2030.



The next 12 months on the run up to COP26 at Glasgow are key and the following actions are required (2 of 2)

- Tropical forest countries should:
 - a) Communicate clear plans and strategies around reaching zero deforestation and large-scale restoration activities to signal near term supply of jurisdictional REDD+ emissions reductions.
 - b) Adopt the highest standards for independent accreditation and verification of forest emission reductions, for example, the Architecture for REDD+ Transactions (ART).
 - c) Establish high-integrity investment frameworks and credible funding mechanisms to direct finance received by emission reduction sales transparently and in line with international standards. Investment should benefit local and indigenous communities who play critical roles in forest stewardship, and both enforce and incentivize forest protection and restoration.



3

Non-tropical forest countries should:

- a) Commit to paying a minimum carbon price of $10/1CO_2$ for high quality post-2020 REDD+ emission reductions. Where possible they should publicly signal their estimated demand for offsets into the future.
- b) Provide Official Development Assistance (ODA) for lower income countries to develop policies, capacity, and enforcement so they can reduce tropical deforestation, increase restoration, and also support investments to address drivers of deforestation.
- c) Promote deforestation-free supply chains through demand-side measures, public procurement and market access.

Parties to the Paris Agreement, guided by the COP26 presidency

- a) Support and give a platform to the actions described above.
- b) Encourage and support a coalition of ambitious countries and companies to launch 4–6 jurisdictional REDD+ deals at COP26 to be implemented over the next five years by channelling at least \$2.5 billion of private sector finance towards such deals, delivering at least 250 million tCO₂e of mitigation.
- c) Ensure that there are clear monitoring and reporting protocols that allow a transparent assessment of non-state actors' contributions to country Nationally Determined Contributions (NDCs).



Technical annex



Approach for assessing corporate demand for emission compensation and neutralisation between now and 2050, based upon the current number of commitments (1,230)

Data and Inclusion Criteria

- 1. Inclusion criteria: only companies that have committed to a net-zero target* have been included in the analysis. The rationale being that there is a clear role for compensation and neutralisation in achieving net-zero.
- 2. **Emissions scopes**: many corporates are already and planning to offset Scope 3 emissions but to avoid double-counting of emissions and overestimating demand, Scope 3 emissions are not included.
- 3. **Data coverage:** emissions data is available for 266 companies committed to net-zero, responsible for 1.81 GtCO2e. Data is taken from the 2019 CDP emission dataset as well as through manual data collection.

Key Assumptions

- 1. **Future emissions trajectory:** corporate emissions are calculated out to 2050 based upon Science Based Target decarbonisation scenarios.
- 2. Mitigation hierarchy: we assume that corporates follow a high integrity approach, prioritising emission abatement, followed by compensation and/or neutralising any remaining emissions at their set net-zero date.
- 3. Non-abatable emissions: the scenarios do not account for any nonabatable emissions; we model 1.5°C and Well-Below 2°C pathways that reach zero emissions for all industries.
- 4. Estimations: where emissions data is not available, emissions have been estimated using average emissions per unit of revenue for each sector or using a representative company profile. It is assumed that companies with no publicly available data are small.

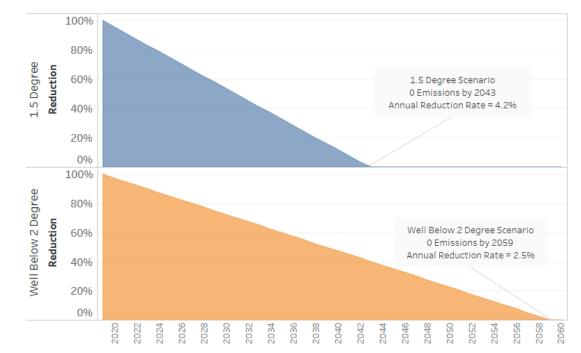
Decarbonisation Scenarios



The Science Based Target initiative's Absolute-Based Approach lays out the annual reduction rate required to meet 1.5°C and Well-below 2°C targets.

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The scenario chosen for each corporate depends on what each has committed to. For companies that have not set or committed to a sciencebased target, a well below 2°C scenario has been assumed.



*We assess 1,230 companies that have set a net-zero target as of 6th December 2020. There is no single repository for net-zero commitments and the

32 total number varies between sources. Our main source is the Race-to-Zero campaign, covering 1,101 corporate commitments. The others have been gathered through online research.



References (1 of 2)

American Carbon Registry. Available at: https://acr2.apx.com/myModule/rpt/myrpt.asp?r=112

B Corp. "What is the average size of a Certified B-Corp?". Available at: https://bcorporation.net/faq-item/what-average-size-certified-b-corp [Accessed: 10 December 2020]

CDP 2019 Corporate Emissions dataset.

Dobson, A., Pimm, S., Lee, H., Kaufman, L., Ahumada, J., Ando, A., Bernstein, A., Busch, J., Daszak, P., Engelmann, J., Kinnaird, M., Li, B., Loch-Temzelides, T., Lovejoy, T., Nowak, K, Roehrdanz, P., Vale, M. 2020. Ecology and economics for pandemic prevention. Science. 369.379-381.10.1126/science. abc3189

Food and Land Use Coalition (FOLU). 2019. Growing Better: Ten Critical Transitions to Transform Food and Land Use. London: FOLU. https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/FOLU-GrowingBetter-GlobalReport.pdf

Forest Trends. 2014. Consumer Goods and Deforestation: An Analysis of the Extent and Nature of Illegality in Forest Conversion for Agriculture and Timber Plantations. Washington, DC: Forest Trends. https://www.forest-trends.org/wp-content/uploads/imported/for168-consumer-goods-and-deforestation-letter-14-0916-hr-no-crops_web-pdf.pdf

Forest Trends. 2020. State of the Voluntary Carbon Markets 2020: Voluntary Carbon and the Post-Pandemic Recovery. Washington, DC: Forest Trends. https://www.forest-trends.org/publications/state-of-the-voluntary-carbon-markets-2020-2/

Global Forest Watch. Available at: https://data.globalforestwatch.org/

Global Justice Now. 2018. "69% of the richest 100 entities on the planet are corporations, not governments, figures show". 17 October 2018. https://www.globaljustice.org.uk/news/2018/oct/17/69-richest-100entities-planet-are-corporations-not-governments-figures-show#:~:text=Pharma-

,69%20of%20the%20richest%20100%20entities%20on%20the,corporations%2C%20not%20governments%2C%20figures%20show&text=Top%20corporations%20continue%20to%20accrue,are%20corporations%20rath er%20than%20governments

Gold Standard Registry. Available at: https://registry.goldstandard.org/credit-blocks?q=&page=1

Green Climate Fund. "FP130: Indonesia REDD+ RBP for results period 2014–2016". Av ailable at: https://www.greenclimate.fund/project/fp130 [Accessed: 14 December 2020]

Griscom, B. W., J. Adams, P. W. Ellis, R. A. Houghton, G. Lomax, D. A. Miteva, W. H. Schlesinger, D. Shoch, J. V. Siikamäki, P. Smith, P. Woodbury, C. Zganjar, A. Blackman, J. Campari, R. T. Conant, C. Delgado, P. Elias, T. Gopalakrishna, M. R. Hamsika . . . J. Fargione. 2017. "Natural Climate Solutions". PNAS 114 (44) 11645-11650. https://www.pnas.org/content/pnas/114/44/11645.full.pdf

High-Level Commission on Carbon Prices. 2017. Report of the High-Level Commission on Carbon Prices. Washington, DC: World Bank. https://www.carbonpricingleadership.org/report-of-the-highlevel-commission-on-carbon-prices

Intergovermental Panel on Climate Change (IPCC). 2018. Global Warming of 1.5°C. Geneva: IPCC. https://www.ipcc.ch/sr15/chapter/chapter-2/

Intergovermental Panel on Climate Change. 2019. Climate Change and Land. Geneva: IPCC. https://www.ipcc.ch/srccl/

International Institute for Sustainable Development (IISD). 2012. State of Play on Biofuel Subsidies: Are policies ready to shift? Global Subsidies Initiative Research Report. Geneva: IISD. https://www.iisd.org/gsi/sites/default/files/bf_stateplay_2012.pdf

Kompas, T., Van Ha Pham, and Yuong Nhu Che. 2018. "The Effects of Climate Change on GDP by Country and the Global Economic Gains from Complying with the Paris Climate Accord". Earth's Future 6 (8): 1153–1173. https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2018EF000922.



References (2 of 2)

Nature Map. Available at: https://naturemap.earth/

New York Declaration on Forests Assessment Partners (NYDF). 2019. Progress on the New York Declaration: Goal 8 Assessment. New York: NYDF. https://forestdeclaration.org/images/uploads/resource/2019NYDFGoal8.pdf

New York Declaration on Forests Assessment Partners (NYDF). 2019. Protecting and Restoring Forests: A Story of Large Commitments yet Limited Progress. New York Declaration on Forests Five-Year Assessment Report. New York: NYDF. https://forestdeclaration.org/images/uploads/resource/2019NYDFReport.pdf

Organization for Economic Cooperation and Development (OECD). 2020. Agricultural Policy Monitoring and Evaluation 2020. Paris: OECD. https://www.oecd-ilibrary.org/agriculture-and-food/agricultural-policy-monitoring-and-evaluation_22217371

Organization of Economic Cooperation and Development (OECD). 2019. Agricultural Policy Monitoring and Evaluation 2019. Paris: OECD Publishing. https://doi.org/10.1787/39bfe6f3-en

Overseas Development Institute (ODI). 2015. Subsidies to key commodities during forest loss: Implications for private climate finance. London: ODI. https://www.odi.org/sites/odi.org.uk/files/odiassets/publications-opinion-files/9577.pdf

PlanVivo. Data provided 19 October 2020.

Race to Zero. Available at: https://unfccc.int/climate-action/race-to-zero-campaign

Roe, S., Streck, C., Obersteiner, M. et al. 2019. "Contribution of the land sector to a 1.5 °C world". Nature Climate Change 9, 817–828. https://doi.org/10.1038/s41558-019-0591-9

Science-Based Targets Initiative (SBTi). 2019. Foundations of Science-Based Target Setting. SBTi. https://sciencebasedtargets.org/resources/files/foundations-of-SBT-setting.pdf

Science-Based Targets Initiative (SBTi). 2020. Foundations for Science-Based Net-Zero Target Setting in the Corporate Sector. SBTi. https://sciencebasedtargets.org/resources/legacy/2020/09/foundations-for-net-zero-full-paper.pdf

Staal, A., I. Fetzer, L. Wang-Erlandsson, et al. 2020. "Hysteresis of tropical forests in the 21st century". Nature Communications 11, 4978. https://doi.org/10.1038/s41467-020-18728-7

Sumaila, U. R. et al. 2019. "Updated estimates and analysis of global fisheries subsidies". Marine Policy 109. https://www.sciencedirect.com/science/article/pii/S0308597X19303677

The Reserve. Available at: https://thereserve2.apx.com/myModule/rpt/myrpt.asp?r=112

United Nations Framework Convention on Climate Change (UNFCCC). 2019. "Forest Protection in Brazil Boosted Through REDD-plus". UNFCCC. 5 March 2019. https://unfccc.int/news/forest-protection-in-brazil-boosted-through-redd-plus".

United States Department of Agriculture (USDA) and Global Agricultural Information Network (GAIN). 2020. Biofuels Annual Report. Jakarta: USDA/GAIN: https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Biofuels%20Annual_Jakarta_Indonesia_06-22-2020

Verra Registry. Available at: https://registry.verra.org/

World Economic Forum. 2020. Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy. Geneva: World Economic Forum. http://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf





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