AXA Climate AXA Investment Managers

Debunking myths on biodiversity and deforestation target-setting

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Summary

The deforestation battle is not yet won

The issue persists and is relevant for financial institutions. Setting targets for both deforestation and biodiversity remains a difficult task, but a mix of viable tools and approaches has emerged. Despite the complexity of the biodiversity topic, it is possible to act now and in a meaningful way.

Our society is currently facing two interlinked emergencies: Climate change and biodiversity loss.

This month, delegates meet at the United Nations Biodiversity conference COP15 in Montreal at a time when biodiversity is deteriorating at such an alarming rate that the phenomenon has been referred to as the sixth mass extinction – and is expected to cause new organisational and subsistence challenges to human societies. [1]

The 2022 global Living Planet Index [2] gives a good idea of the magnitude of this collapse as it shows an average 69% decrease in monitored wildlife populations between 1970 and 2018. Every organisation is at risk of being destabilised as this phenomenon continues.

This decline in biodiversity is mainly driven by human activities through five key pressures: Land use, climate change, exploitation of resources, introduction of invasive species and pollution. [3]

Land use intensification and modification are considered the main causes of biodiversity loss as the major drivers of loss or fragmentation of natural habitats. [4] Change in land use is mainly due to the increase of demand for agricultural land and often happens through deforestation and forest degradation. [5]

Many actors are now trying to reduce their negative impacts on nature and biodiversity by introducing targets on deforestation, but setting these targets is no easy task, never mind wider targets on biodiversity in general.

Below, we will address some of the myths related to current strategies on deforestation and biodiversity.

[1] Emergence of a sixth mass extinction?, John C Briggs, Biological Journal of the Linnean Society, October 2017
[2] The Living Planet Index acts as an early warning indicator by tracking trends in the abundance of mammals, fish, reptiles, birds and amphibians around the world.
[3] The Global Assessment Report on Biodiversity and Ecosystem Services, Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), May 2019
[4] Land use change, Biodiversity Information Systems for Europe, retrieved November 2022
[5] FAO Remote Sensing Survey reveals Tropical rainforests under pressure as agricultural expansion drives global deforestation, Food and Agriculture Organization of the United Nations (FAO), 2020

About the authors

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She began her career in 2016, working as a sustainable investment analyst for EthiFinance specialising in ESG, climate-related analysis and reporting. She then joined Eleva Capital as an ESG/SRI specialist in 2019 where she developed an ESG strategy for the company and represented them to the UN PRI. In April 2021, Liudmila joined AXA IM as an ESG Analyst to provide thematic research and analysis on ESG topics, including a specific focus on biodiversity, to support AXA IM's active engagement initiatives as well as to contribute to research on sustainable bonds.

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He is in charge of leveraging technology to ensure high-quality nature-related risk assessments and provide AXA Climate's customers with both quantitative and qualitative insights. He is in charge of transforming data into actionable positive-impact strategies and adaptation plans.

He is currently working on developing a series of indicators to establish the state of natural capital in future or current project locations and quantify the value of ecosystem services or impacts produced by these projects, with a not exclusive focus on climate adaptation projects. He works with existing models, an extensive set of data to build indicators (e.g. VIIRS for light pollution, land cover and species disturbance) and existing frameworks to value nature and ecosystem services, such as Capitals Coalition.

Deforestation target setting

Many companies are willing to seek to eliminate deforestation from their operations and supply chains, and are increasingly eager to restore forest ecosystems. A common first step is to focus on eliminating commodity-based deforestation and then to adopt new practices such as sustainable agroforestry (mix of species, increased lifespan of plantations, parcels of re-wilding).

Myth

1. Everybody now knows how to set effective targets on deforestation and work towards achieving them

It could appear that the deforestation topic is well managed now as activity around the subject has increased. However, it is estimated that despite many commitments and targets on deforestation, the net loss in forests globally was 4.7 million hectares per year during the last decade. [6]

The most common approach to set these targets is to start with the most material commodities and geographies for a company's activities. The seven commodities often used are palm oil, soy, timber products, cattle products, natural rubber, cocoa and coffee. The main geographical hotspots related to the production of these commodities are in South-East Asia and South America.

Following this approach, setting a deforestation target can be done by stating a straightforward ambition such as: "Reach 100% deforestation-free beef from Brazil by 2025, and work towards 100% deforestation-free beef globally by 2030".

However, the implementation of these targets is not that simple as it is difficult to find a good balance between ambition and achievability, and also by the side-effects of the current methodologies for evaluating deforestation as will be highlighted in the following myths.

This may explain, at least partly, the continued deterioration of forests mentioned above. Having said that, a wider use of strong measurement, reporting and verification (MRV) approaches should help moving forward.

[6] Global Forest Resources Assessment 2020, FAO, 2020

Myth

2. Full top-to-bottom traceability of supply chains is a now easily achievable prerequisite for zero deforestation targets

It can be very difficult to understand the impact of a company's activities on deforestation as it is often necessary to understand the individual effects from all stages along its supply chain.

However, for many corporates, their supply chain can be a matter of business confidentiality, especially for intermediary actors who do not want to be bypassed by customers who could build direct relationships with their suppliers.
Consequently, it can often be the case that a company lacks the necessary data to properly assess its impact on forests.

To limit this risk, corporates often look for certifications and deploy sustainable sourcing practices. These certifications will help prove the recycled content of a company's products or prove that no high-value land was transformed due to those products,[7] but there are still many risks or side-effects from this uneven spread of information such as a difficulty or an inability to verify effective implementation.

[7] These may include certifications such as those issued by the Forest Stewardship Council or the Roundtable on Sustainable Palm Oil.

Myth

3. Geolocation data solves the traceability problem

As one potential solution to the problems described above, and in an effort to go beyond certification programmes, new tools and datasets have emerged to help understand deforestation rates and perform assessments of the risk levels.

These include the GMAP Tool to estimate human footprint,[8] geoFootprint to understand the footprints of key commodity crops, [9] or the European Union's Copernicus Land Monitoring Service. [10] All these and many more aim to track land use through satellite observations.

These tools are very helpful to offer an estimate of the risk levels, but it remains very difficult to attribute direct responsibility for deforestation to corporates as these tools can only give an idea of the degradation of some regions and the footprint of some generic activities.

[8] GMAP Tool, International Finance Corp, retrieved November 2022
[9] geoFootprint: How it works, geoFootprint, retrieved November 2022
[10] Copernicus Land Monitoring Service, CLMS, November 2022

Myth

4. Set protected areas = save the world

Another important risk is leakage, notably when mitigation actions are too tightly focused. Indeed, protecting key areas or implementing sustainable practices in some regions – even if they are active measures against biodiversity loss or to mitigate climate change – can potentially lead to the emergence of new pressures in areas very close by, at the country level or further afield [11] [12]. It has been shown that 42%-95% of reduced forestry production implemented in a country or region can be transferred to other locations at a global scale [13]. In all cases, inter-regional and international cooperation can be a great vector to get significant results in preventing leakage.

How can we move forward despite these challenges to set accurate targets and reduce deforestation footprint?

It remains very difficult to understand and incorporate all the effects of a deforestation reduction strategy and, consequently, best-in-class approaches tend to go beyond the company's activities to also build partnership with local governments and stakeholders to limit the potential side-effects of well-intentioned strategies.

Finally, forest landscape restoration must complement efforts to halt deforestation if we want to achieve ambitious targets to not only limit losses, but also recover some of the lost ecosystem services of cleared forests. Restored forests can indeed enhance biodiversity and absorb carbon, providing an interesting solution to tackle two of our main environmental challenges. Deforestation targets, and their link with carbon objectives, raise the question of biodiversity targets too.

[11] Deforestation leakage undermines conservation value of tropical and subtropical forest protected areas, Scott Alan Ford et al, Global Ecology and Biogeography, August 2020
[12] A global evaluation of the effectiveness of voluntary REDD+ projects at reducing deforestation and degradation in the moist tropics, Alejandro Guizar-Coutiño et al, Conservation Biology, June 2022
[13] Measuring transnational leakage of forest conservation, Jiangbang Gan, Bruce A McCarl, Ecological Economics, December 2007

Climate Biodiversity Nexus

Key links between climate and biodiversity for investors to consider

* Nature-based solutions (NBS) for climate, such as mangroves which represent not only high biodiversity value areas but also perfect carbon sinks and providers of coastal protection services. Their restoration can be key for global goals.

* Climate change is one of the five direct drivers of biodiversity loss – limiting climate change is therefore part of the solution for biodiversity erosion mitigation

* The biodiversity risks of climate solutions should be properly assessed and accounted for. For instance, planting random tree species in one ecosystem could have damaging effects.

Climate Transition Planning & Nature: Integrating the subject into your net zero planning

* Environmental life-cycle analysis for each climate project based on a value chain approach capturing the full environmental value/risks of a solution.

* General environmental due diligence based on the “do no significant harm” principle.

* This will allow for concrete guidelines and decision-making processes to avoid projects with highly unsustainable global environmental profiles.

Biodiversity target setting

Due to the alarming rate of biodiversity deterioration, biodiversity targets are currently a hot topic. Clear and quantifiable metrics and goals are necessary to provide a guide for public and private actors to evaluate the measures to be taken and report on the success of the efforts deployed. However, measuring biodiversity is still a complex challenge.

Myth

1. Just as climate change measures CO2, we clearly need a single metric to effectively act on biodiversity

Unlike deforestation or emissions, there is no simple, unique metric to measure biodiversity. The subject takes into account many components such as diversity (genetic, of species or of ecosystems), abundance, intactness, connectivity and more, and these dimensions are assessed through diverse and complex methodologies, suggesting the need to develop a dashboard of multiple indicators to assess biodiversity approaches.

Moreover, the variability and location-specificity of biodiversity would require very precise analysis to avoid side-effects or unsustainable economic pressures on specific regions, or to track biodiversity restoration locally.

Furthermore, the granularity of the analysis adds a level of complexity that is difficult to manage at the moment. This leaves financial institutions with a choice to make on the most efficient level of detail as regards biodiversity data and analysis. For instance, studying biodiversity performance at a corporate level, at portfolio level or at asset level is very different and requires different levels of analysis and data. Access to suitable indicators, tools or datasets remains a challenge for financial institutions.

Myth

2. Current aggregated metrics and solutions have no connection to concrete biodiversity issues

Huge progress has been made in measurement thanks to tools such as biodiversity footprint that can be used by financial institutions to assess biodiversity impacts at portfolio or corporate level. Model-based tools and metrics, such as the Corporate Biodiversity Footprint (CBF) developed by Iceberg Data Lab can attract questions over their ability to accurately capture real impacts on the ground. [14]

However, despite some limitations that modelling presents today, we believe biodiversity footprint measures are still directly and clearly linked to the level of impacts (in tons of carbon dioxide or nitrous oxide emitted, or square kilometer of land converted, etc.) generated by each of a company's various activities on biodiversity.

These tools can therefore be used to inform biodiversity approaches by corporates and financial institutions in combination with other more specific metrics and data.

Biodiversity footprint tools, like CBF, may also be well adapted to extend relevant models towards biodiversity dependencies and eventually biodiversity positive impacts (opportunities) methodologies and metrics – currently under development. We think such innovative solutions, even if almost fully modelled, provide a useful global picture of how a company or sector interacts with nature. It is therefore worth mentioning the ever-evolving capacity to 'remote sense' essential biodiversity variables through geolocation data could boost accuracy in those models and increase the connection between metrics and real-world biodiversity issues.

[14] Line on Iceberg relationship here

Myth

3. Biodiversity offsetting is "THE" solution

Biodiversity targets bring to light a fundamental debate: Once manageable negative impacts on biodiversity are “avoided” and “reduced”, is there a place for biodiversity offsetting? [15]

The introduction of targets with clear metrics could indeed lead to the possibility of compensating for nature deterioration by comparing different ecosystems in the world and establishing a system for “buying” the right for nature destruction when it is unavoidable.

The maturity and transparency of biodiversity-related offsetting solutions are currently extremely limited.

Without proper structuring and regulation this future market would likely create a risk of greenwashing and unsustainable treatment of nature. [16]

Many international initiatives are raising this question such as the Science Based Targets Network and the Taskforce on Nature-related Financial Disclosures, and it is of course one of the main challenges of the COP15 meeting and beyond.

[15] The biodiversity impact mitigation hierarchy of “avoid, reduce, restore/compensate” is a commonly accepted principle to address biodiversity loss drivers, i.e. to mitigate negative impacts on biodiversity
[16] ‘Greenwashing’ refers to the reputational or regulatory risks that may follow when stated ambitions on environmental issues are not matched by practical and verifiable action

Myth

4. Biodiversity is too complex an issue to act on immediately

Despite all these difficulties around targets for biodiversity, it remains clear that a strong assessment of a company's impacts and dependencies on nature is a necessary first step to tackle biodiversity loss.

And it is a step that can be taken by corporates and financial institutions right now with the solutions available and based on basic data around negative impacts and externalities that have been tracked for years on pollution, water intensity, etc.

We see no need to wait for flawless solutions before taking action. Nor do we think difficulties setting perfect final targets should stop us fixing viable interim, incremental milestones.

An opportunity to act

Whatever the outcome from COP15, it won't solve everyone's problems or address every caveat about measurement and metrics. However, the magnitude of the problems created or exacerbated by biodiversity loss and deforestation are such that there should be a powerful motivation to act. In our view, viable tools and approaches have emerged that can help to build a useful picture of the risks and opportunities at hand and give us confidence that, despite the complexity of the biodiversity topic, it is now possible to act in a practical and meaningful way.

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