SBTi FOREST, LAND AND AGRICULTURE (FLAG) PROJECT FAQs

VERSION 3.0

Last updated November 2022

CONTENTS

Frequently Asked Questions on the SBTi FLAG project were updated based on the FLAG public consultation January-February 2022. Please contact FLAG@sciencebasedtargets.org for additional questions not answered here.

1 WHAT IS FLAG AND OTHER KEY QUESTIONS

What is FLAG?

The SBTi Forest, Land and Agriculture (FLAG) project is the approach (including a tool and guidance) for companies in land-intensive sectors to set science-based targets in line with the goals of the Paris Agreement.

When is a company required to set a FLAG science-based target?

The Science Based Targets initiative (SBTi) requires companies that meet either of the following two criteria to set a FLAG science-based target:

i) Companies with land intensive activities in their value chain from the following FLAG-designated sectors are required to set FLAG targets:

- Forest and Paper Products – Forestry, Timber, Pulp and Paper
- Food Production – Agricultural Production
- Food Production – Animal Source
- Food and Beverage Processing
- Food and Staples Retailing
- Tobacco

ii) Companies in any other SBTi-designated sector that have FLAG-related emissions that total more than 20% of overall emissions across scopes 1, 2 and 3.

If my company is required to set a FLAG science-based target, will I also have a 'non-FLAG' target?

Yes. FLAG targets cover forests, land, and agriculture (see the SBTi FLAG Guidance for details), while a company's non-FLAG target covers all other fossil-based emissions.

If my company is not required to set a FLAG target, but has some FLAG emissions, where should those emissions be included?

For companies with some FLAG emissions but not required to set a FLAG target (<20% FLAG emissions or not in FLAG sector), they have two options:

- Option 1. These companies can still choose to set a separate FLAG target for those emissions. This is the only way a company could also count FLAG removals as part of that target.
- Option 2: Include FLAG-related emissions together with energy/industry (non-FLAG) targets for a complete GHG inventory. No removals may be included if the target is not a separate FLAG target.

How does my company account for removals in FLAG?

FLAG science-based targets include land-based removals. The specific guidance for accounting for land-based removals will come from the [GHG Protocol Land Sector and Removals guidance](#), draft currently undergoing pilot testing and review process. FLAG and GHG Protocol are working closely to ensure that targets and accounting guidance are aligned.

What temperature targets does FLAG cover?

Both the FLAG sector pathway and the commodity pathways are 1.5°C compliant pathways.

Are removals included in near-term targets outside of FLAG?

Removals are included in FLAG targets only. Removals cannot be used in energy/industry targets.

2 FLAG DEVELOPMENT PROCESS

How and when can my company set FLAG targets?

The FLAG guidance is launched and published. Companies are encouraged to review the FLAG materials on our [webpage](#). With additional questions, please contact [FLAG@sciencebasedtargets.org](#).

How were companies engaged in the FLAG development process?

18 companies participated in our corporate consultative group: AB InBev, Arauco, Cargill, Danone, General Mills, IKEA, International Paper, Kimberly-Clark, Klabin, Mars, McDonald's, Nestlé, P&G, PepsiCo, RCL Foods, Sodexo, Tyson, and Walmart. These companies piloted tested guidance and tools, and provided feedback. See additional details in the [FLAG public consultation summary and Q&A](#).

How was the public engaged in the FLAG development process?

In January and February 2022, the SBTi FLAG Team held a public consultation process, which yielded comments from more than 165 stakeholders. See additional details in the [SBTi FLAG Guidance](#) document.

How were NGOs, farmers, indigenous communities, local communities, and others included in the development of FLAG?

WWF, a non-profit organization with a public benefit mission, led the development of the SBTi FLAG Guidance and Tool, with consultation from actors across the agriculture and forestry value chain, including primary producers. Additionally, throughout the development process, the FLAG team consulted GHG accounting and other subject matter experts from non-profits representing a range of environmental and social expertise. We held multiple workshops and webinars with targeted

groups working in the public interest to gather feedback prior to the publication of the first draft. Our largest outreach effort was through the public consultation phase which elicited feedback and review from NGOs, producer groups, companies, and other stakeholders from all around the world.

3 FLAG TIMELINE

Should companies submit traditional energy/industry science-based targets at the same time as their FLAG targets?

Yes. All targets, including long-term targets, will need to be submitted together as of April 2023.

When will companies be required to set FLAG science-based targets?

Companies are encouraged to set FLAG targets now, either in addition to their existing targets or as they are in the process of setting science-based targets for the first time. FLAG targets will be required starting in April 2023.

The full timeline for requiring FLAG target setting and recalculation is elaborated in the diagrams below.
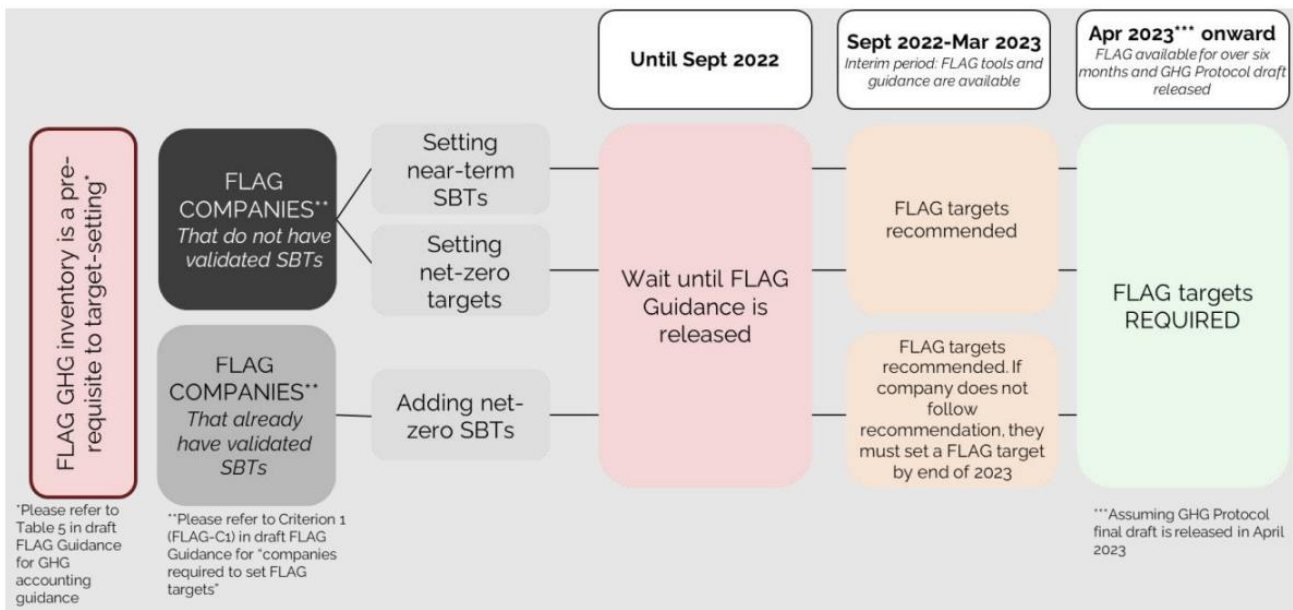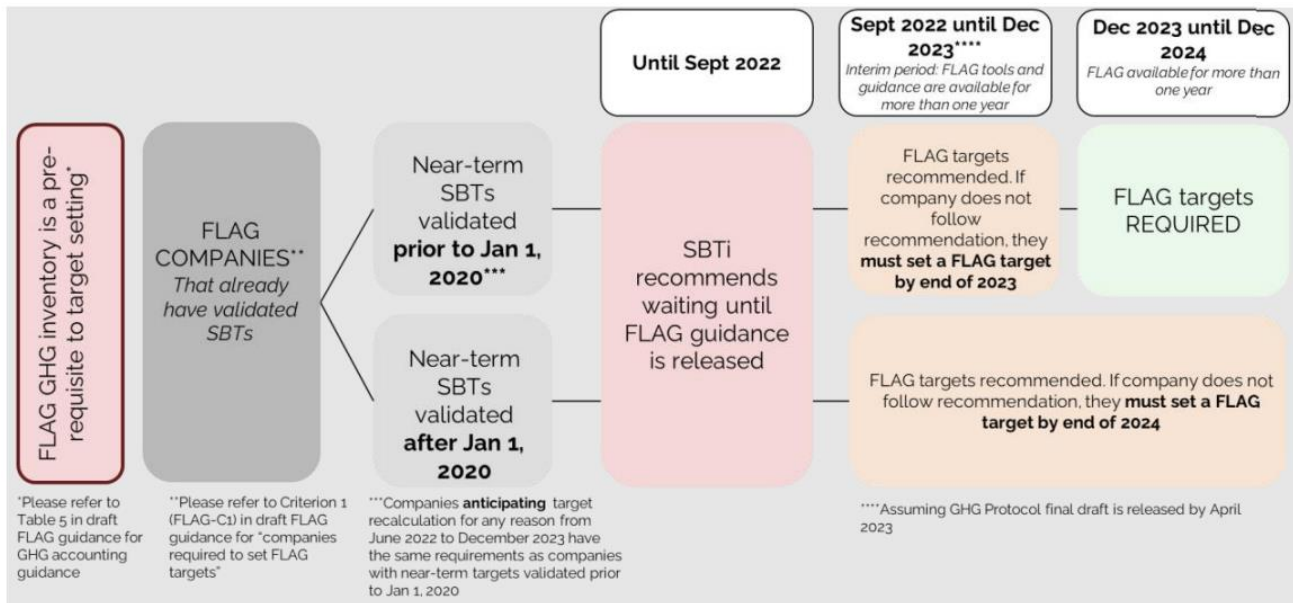
4   WHAT IS INCLUDED IN A FLAG SCIENCE BASED TARGET?

Where can I learn more about the methods used and the data underlying the FLAG work?

You can access the FLAG methods addendum and other FLAG resources here. The principal reference for the FLAG sector approach is: Roe, S., Streck, C., Obersteiner, M., et al. (2019). Contribution of the land sector to a 1.5 °C world. Nat Clim Chang 9:817–828. doi: 10.1038/s41558-019-0591-9. The principal reference for the FLAG commodity approach is: Smith, P., Dali N., Giel, L., Daan, P., Coraline, B., Detlef, V., Elke, S., Mathijs, H., Lidewij van den B. (2016). 'Science-Based GHG Emissions Targets for Agriculture and Forest Commodities.' University of Aberdeen, Ecofys, and PBL.

Are avoided emissions included?

The SBTi and FLAG project follow the accounting guidance of the GHG Protocol. This guidance operates on the inventory accounting approach rather than a project accounting approach. Avoided emissions based on product or material use or substitution are not included in inventory accounting. However, the term 'avoided emissions' is also confused with 'avoiding deforestation'.

In inventory accounting, the way that 'avoided deforestation' is included is in year 1 a company sources from lands that have been deforested in the last 20 years and needs to include those associated emissions in their inventory. That same company, in year 2, sources from lands with no deforestation in the last 20 years and this will reflect a reduced volume of emissions from avoiding

deforestation in their supply chain and thus in their GHG inventory. *(Note: due to a technicality, there will still be carry-over emissions from the deforestation in year 1 due to the 20-year legacy emissions factor.)*

Are pathways designed to be differentiated for different regions/countries?

The FLAG sector pathway is a global pathway. The FLAG commodity pathways are regionally specified pathways, defined for 26 regions of the world. See the SBTi FLAG Guidance and Tool for additional details.

How is land use change included in FLAG? What is considered under land use change?

Emissions from land use change are included in both the FLAG sector and commodity pathways. Following GHG Protocol guidance, land use change emissions are accounted for using a 20-year allocation.

Land use change refers to the conversion of any land from one form to another, for example from forest to pasture, or from peatlands to agricultural fields.. Conversion of natural forest to planted forests is accounted for in the same way as land use change, even though both land uses are forest land. Replanting forest land is not considered a land use change.

Are Bioenergy and Carbon Dioxide Capture and Storage (BECCS) included in FLAG?

No. Although BECCS are included in the underlying Roe et al 2019 data, they are excluded under FLAG as it is not appropriate to assign these removal requirements exclusively to the Agriculture and Forestry sectors. BECCS are included in the SBTi general criteria and recommendations under the bioenergy criteria.

Do the commodity pathways account for growth in production?

Yes, future production estimates are included in the pathways. Furthermore, because the commodity pathways are based on emissions intensity, companies are required to set targets based on their estimated future production.

Does the beef commodity approach also include leather?

FLAG has a separate commodity pathway for leather.

Why is the target for the FLAG sector pathway 30.3% reduction from 2020 to 2030 if the science says we need to halve emissions by 2030?

This target is based on the best available literature (see Roe et al 2019 for a thorough review of the academic literature and integrated assessment models on which the FLAG pathway is built). While as a global average, we need to half emissions by 2030, some sectors are expected to decarbonize

faster or slower than others, which is why not all sectors have a 50% by 2030 rate of reduction. In particular, significant agricultural emissions of nitrous oxide and methane are expected to continue.

Will other commodities be added?

Other commodities will be considered in future developments. The commodities currently covered were selected based on data availability and carbon intensity. Targets for emissions from all other commodities should use the FLAG sector pathway at this time.

Below is a list of the top requests for additional commodity pathways based on public consultation feedback. Updates to the commodity list will be considered as the commodity pathways are revised and as additional data become available.

Aquaculture, barley, cocoa, coffee, cotton, perennial crops, rubber, sheep/lamb/goat and wool, sugar/sugarcane, and sunflower.

Is aquaculture included in FLAG?

FLAG does not include a specific commodity pathway for aquaculture, but FLAG emissions related to feed for aquaculture should be included in accounting and can merit setting a FLAG target.

Do maritime fishing operations need to set FLAG targets?

No. Even though maritime / wild-caught fishing often falls under a 'required' FLAG target sector, maritime fishing / wild-caught fishing operations are not required to set FLAG targets because there are not generally FLAG-related emissions associated with this activity. Please see this guidance document for the seafood industry developed by SBTi partners.

Does the timber and wood fiber pathway cover pulp and paper companies?

Yes. The timber and wood fiber pathway covers emissions 'up to yard' for pulp and paper companies. Other 'non-FLAG' emissions (i.e., direct process emissions) from pulp and paper are covered under our SBTi industrial sector resources, including the pulp and paper pathway.

What rate of emissions reductions and removals is expected in the FLAG pathways?

The emission reduction rates for each of the FLAG pathways can be found in the SBTi FLAG Guidance, Table 9.

Can overachievement of a FLAG science-based target be used to meet a non-FLAG target?

No. FLAG and energy/industry targets are separate. FLAG emission reductions and removals may be used only toward a FLAG target.

What emissions and removals are covered by FLAG science-based targets, and what is the emissions boundary?

Please refer to Table 6 in the SBTi FLAG Guidance for a full list of emissions covered. The emissions boundary extends to 'farm gate' and does not include processing emissions (see FLAG Criterion 7).

Which greenhouse gases does FLAG cover and what Global Warming Potential (GWP) conversion is used?

FLAG targets are set using carbon dioxide equivalents (CO_2e). Following IPCC guidance, GWP100 factors are used to include methane and nitrous oxide.

*GWP is not used.

How does FLAG handle nitrous oxide and methane agricultural emissions that are expected to continue into the future?

FLAG pathways follow the climate science in recognizing that some nitrous oxide and methane emissions from agriculture will endure. This is reflected in the models.

Are biogenic emissions from wastewater treatment covered by FLAG?

FLAG does not cover biogenic emissions from wastewater treatment at this time.

How are fertilizers being handled between SBTi FLAG and SBTi Chemicals guidance?

All companies: Companies that use fertilizers should include these emissions (both upstream production and volatilization from use) in their GHG inventories as appropriate. They should also incorporate these emissions into their energy/industry target or FLAG target. Current databases sometimes group fertilizer-use emissions with other sources of land emissions and so they may be difficult to isolate. If companies can separate fertilizer-use emissions from other land emissions, they can be included in their traditional SBTi target (energy/industry). If not, they may be included in the FLAG target.

Fertilizer companies: However, FLAG pathways are not appropriate for fertilizer companies' direct fertilizer production emissions. Specific pathways for the chemical sector are currently under development in the SBTi framework. This is expected to include pathways relevant to fertilizer companies, specifically for the production of the ammonia used in synthetic fertilizers. In the meantime, companies should use SBTi cross-sector methods. For example, fertilizer companies should use FLAG pathways to account for their scope 3, category 11 Use Phase targets until specific chemical sector pathways are available. SBTi will update FLAG to align with future developments on the SBTi chemical sector's work as needed.

Is mining included in FLAG?

Mining is covered by SBTi industrial targets, not FLAG. In cases where land use change associated with mining brings FLAG emissions above the 20% emissions threshold, mining companies would also need FLAG targets.

What is considered 'in supply chain' for a company?

In supply chain emissions (and removals) are those that are included within scope 1, 2, and 3 boundaries per the GHG Protocol Land Sector and Removals Guidance.

Removals

Do FLAG science-based targets include both emission reductions and removals?

Yes, FLAG targets are net reduction targets that include removals. However, companies are still required to report emission reductions and removals separately.

Does my company need to separate emissions and removals to calculate a FLAG science-based target?

Companies set net FLAG targets – land-related emissions combined with removals. However, in the validation process, companies must report emissions reductions and removals accounting separately. This is important to maintain focus on reducing cumulative emissions to the atmosphere, while separately increasing CO_2 removals. Companies shall deliver both emissions reductions and removals during implementation.

Are removals included in near-term targets outside of FLAG?

The SBTi only includes removals in FLAG targets. Energy/industry targets include emission reductions only.

Could land related reductions/removals be used to meet company non-FLAG science-based targets?

No.

Do FLAG science-based targets include forest restoration, reforestation, or afforestation?

Forest restoration that occurs on working lands (for example, silvopasture) is included in the FLAG sector target, but reforestation outside of working lands is otherwise excluded from targets because these efforts are generally outside of company supply chains. Models will be updated as needed to align with GHG Protocol guidance on this topic.

Is forest restoration occurring outside of working lands accounted for as removals?

Removals associated with actions occurring on working lands, (e.g., forest restoration from silvopasture) are included in the FLAG sector target. However, reforestation outside of working lands is otherwise excluded from targets because these efforts generally fall outside of company supply chains. Models will be updated as needed to align with GHG Protocol guidance on this topic.

FLAG science-based targets versus bioenergy targets

Does FLAG include emissions from biofuels?

No. FLAG does not include emissions from biofuels/ bioenergy.
The SBTi general guidance specifies what reporting and target setting companies need to do for bioenergy specifically. Future revisions will follow the release of the GHG Protocol Land Sector and Removals guidance.

Why is the FLAG guidance separate from emissions related to bioenergy?

FLAG and bioenergy are currently separate for two reasons. First, the SBTi bioenergy criterion pre-dated the FLAG project, and the SBTi is taking a stepwise approach to updating it. Second, many companies that have bioenergy emissions (and removals) are not companies in the land sector but rather companies in transportation, aviation, and other sectors. If bioenergy were included in FLAG targets, then these companies would be obliged to set separate FLAG targets for what is usually a very small portion of their GHG inventory. Future revisions will follow the release of the GHG Protocol Land Sector and Removals guidance.

Will FLAG include biofuels in the future?

With the publication of the GHG Protocol Land Sector and Removals Guidance, the SBTi will review the current arrangement in which FLAG targets are separate from the bioenergy criteria and make updates and modifications as needed.

Zero deforestation commitments

Does the No Deforestation target date need to be 2025, or can it be earlier?

Deforestation targets dates for FLAG can be earlier than 2025, but no later than 2025.

Does the No Deforestation cutoff date need to be 2020 exactly, or can it be earlier?

Deforestation cut off dates can be earlier than 2020, but no later than 2020.

Will ecosystem conversion beyond deforestation be considered?

All deforestation AND conversion are included in GHG emissions accounting and FLAG target setting. However, the additional requirement to have a specific deforestation commitment applies only to deforestation, not to conversion. Yet, the SBTi recommends that companies set a zero-land conversion and peat burning target across their value chains, and also recommends meeting these targets as soon as possible (see SBTi FLAG Guidance document).

Can other certifications count toward a deforestation or other FLAG target?

The relationship between standards/certifications and their effectiveness in meeting deforestation commitments is determined by the Accountability Framework Initiative (AFI). Companies should consult AFI's guidance materials on this topic including the joint guidance issued by AFI, GHG Protocol and SBTi on the intersection of GHG accounting/target setting and deforestation commitments/monitoring. Generally, certifications that ensure zero deforestation and conversion through their criteria, combined with chain of custody can be used to estimate deforestation/conversion free volumes within a supply chain and also as evidence to support GHG emission factor estimates.

5   HOW TO SET A FLAG SCIENCE BASED TARGET

What time period does the FLAG science-based target cover?

FLAG near-term targets are the same as all SBTi near-term targets in that they now cover a period of 5-10 years. There is also a long-term FLAG pathway in the Net-Zero Tool for setting long-term FLAG targets. This long-term FLAG target pathway covers all agricultural emissions but is not appropriate for forestry. Long-term forestry targets will be covered in a future version. All long-term targets, including long-term FLAG targets, should be set using the SBTi Net-Zero Standard and Tool.

Does FLAG require separate targets for each greenhouse gas?

No. FLAG targets are aggregated across greenhouse gases using standard CO_2e, accounted using GWP100.

How should companies separate out FLAG and non-FLAG emissions, particularly to-farm-gate emissions from processing emissions?

Companies often use a variety of databases to assemble their GHG inventories; some of these databases already split to-farm-gate emissions from processing emissions, and others don't yet. Companies should follow the most up-to-date GHG Protocol guidance. In particular, the GHG Protocol's compilation of emissions accounting resources here is a useful starting point—scroll to

the bottom of the page and click 'List of Land Sector Calculation Resources'. Several widely used databases already split to-farm-gate emissions from processing emissions.

Using FLAG tools

Are there specific criteria for using the FLAG Sector or the FLAG Commodity Tool?

Yes. The FLAG Sector Tool is the default target-setting tool. Companies that are 'demand side' companies with emissions associated with one of the ten available agricultural commodity pathways that account for 10% or more of a company's total FLAG emission (across all scopes) may use the commodity pathway for that commodity.

Companies with emissions related to timber and wood fiber accounting for 10% or more of their FLAG emissions are *required* to use the commodity pathway for timber and wood fiber (available in the commodity tool).

How are 'demand side' and 'supply side' companies distinguished for the purposes of defining which companies can use the commodity pathways without revision?

SBTi recommends that companies use the following guidelines to define supply- and demand-side actors within the FLAG value chains:

- Companies with the majority of their FLAG emissions falling in scope 3 of their inventory are generally considered demand companies.
- Companies selling directly to end-use customers or governments are generally considered demand companies.
- Companies with significant business activities categorized as consumer product goods are generally considered demand companies.
- Companies with significant FLAG emissions in scope 1 are generally considered supply companies.
- Companies whose primary business activity is agricultural or forestry commodity production are generally considered supply-side companies.

For companies that engage in business-to-business transactions post-production (e.g., commodity aggregation and trading, transport, and processing) as well as vertically integrated companies, the delineation is less clear. Therefore, for FLAG Guidance version 1.0, the SBTi recommends that these companies use the FLAG sector pathway as a precautionary approach while waiting for FLAG version 2.0 to address demand-side levels more appropriately in the commodity intensity pathways.

If my company uses a number of different commodities, one of which may be over 10% but the others are under 10%, would we use the pathway for the 10%+ commodity or the default FLAG pathway?

The company can decide whether to use the commodity tool only for commodities accounting for 10% or more of their total FLAG emissions and the sector tool for other commodities OR use the sector tool for all commodities. However, any company with timber and wood fiber comprising more than 10% of their emissions must use the timber commodity pathway.

If my company uses both pathways (FLAG Sector and FLAG Commodity) would the commodity-based FLAG emissions reductions need to be translated into an absolute target?

For clarity, companies using both commodities and sector pathways are encouraged to consolidate targets into one combined (absolute) FLAG target using the aggregator tool.

Do companies need to separate land use change emissions from other emissions in target setting?

No, it is not required to separate LUC emissions, but they must be included in a company's inventory.

Do small and medium enterprises (SMEs) set FLAG targets?

No. SMEs should continue to use the SME guidance from SBTi.

6   FLAG AND NET-ZERO

Can companies set both near-and long-term (net-zero) science-based targets for FLAG?

Yes, companies will be able to set both near-and long-term (net-zero) FLAG targets. The current long-term FLAG pathway is developed for agriculture only; a long-term FLAG pathway for forestry will come in future updates. Long-term (net-zero) FLAG targets are set using the SBTi Net-Zero Standard and Tool, NOT the FLAG Tool.

Can AFOLU removals be used to meet net-zero neutralization targets?

Further guidance on net-zero neutralization is forthcoming from the SBTi. Please see the Net-Zero Standard for further details, as well as the SBTi Beyond Value Chain Mitigation FAQ.

7   FLAG AND GHG PROTOCOL

What is the difference between FLAG and the GHG Protocol Land Sector and Removals guidance?

The GHG Protocol Land Sector and Removals Guidance will provide details on how to account for land-related emissions and removals. The SBTi FLAG Guidance and Tool outline how companies should set science-based targets for mitigation of land-related emissions and removals.

How are FLAG and GHG Protocol aligned?

FLAG and the GHG Protocol Land Sector Emissions and Removals Guidance have been working closely together and will continue to do so to ensure that target setting, and emissions accounting are as aligned as possible. Any updates needed based on the final GHG Protocol Land Sector Emissions and Removals Guidance will be made in a FLAG version update. Companies that set FLAG targets prior to any FLAG revisions will not need to set new FLAG targets outside of their regular SBTi target update cycle.

For scope 3 inventory, can companies use the GHG Protocol Scope 3 Standard?

The forthcoming GHG Protocol Land Sector and Removals guidance will address FLAG emissions and removals inventories across scopes, including scope 3. This new guidance should be used for GHG accounting within FLAG.

How should companies account for FLAG-related emissions?

Companies should use the GHG Protocol Land Sector and Removals Guidance to account for FLAG emissions. While awaiting finalization of GHG Protocol Guidance, see Box 1 in the SBTi FLAG Guidance for additional resources.

What guidance should companies use to account for FLAG emissions prior to the release of GHG Protocol Land Sector and Removals guidance?

Companies setting FLAG targets prior to the release of the GHG Protocol Land Sector and Removals guidance should use the draft GHG Protocol guidance, as well as the Quantis NCS guidance, and the GHG Protocol Agriculture guidance. A full list of recommended resources can be found in SBTi's FLAG Guidance, Box 1.

8   FLAG AND THE FINANCIAL SECTOR

How does FLAG guidance apply to Financial Institutions (FI)?

The SBTi FLAG and FI teams are working on guidance for financial institutions with FLAG-related emissions.

9   FLAG AND THE SCIENCE BASED TARGETS NETWORK (SBTN)

How does the SBTi FLAG project relate to the SBTN?

SBTi's climate GHG targets drive a group of actions on land - but not everything that is needed to align with a net-zero or nature positive future. The SBTN is developing targets that focus on these non-climate metrics - which are equally as important. There is staffing overlap between the two efforts to make sure that they are well aligned.

10   FLAG AND CARBON CREDITS

Are carbon credits included in FLAG?

No. Carbon credits cannot be used to meet FLAG targets, as the SBTi is focused on achieving the necessary science-based mitigation within a company's supply chain. Any sale or purchase of carbon credits should be handled in a company inventory following GHG Protocol guidance to avoid double counting.

Can insets be used to meet FLAG targets?

Because the term 'insets' is not well defined, it is not used in the FLAG guidance. Emissions reductions and carbon removals within supply chain are included in FLAG as part of a company's inventory accounting; neither emissions reductions nor carbon removals within supply chain need to be verified as a carbon credit. Emissions reductions or removals that occur outside of a company's supply chain are not covered by FLAG and would require a re-allocation of the pathways under Roe et al 2019 to the corporate sector.

How does FLAG protect the carbon rights of farmers and forest owners?

While beyond the scope for FLAG, we have added a section on implementation guidance within the SBTi FLAG Guidance document outlining the best practices when engaging your supply chain to reduce emissions and increase removals. These practices include fairly compensating

farmers/forest owners for their work, respecting human and land rights, informing them of their carbon rights and ensuring that farmers have access to carbon markets to choose how they are compensated for this additional commodity.