



GREENHOUSE  
GAS PROTOCOL



SCIENCE  
BASED  
TARGETS

# Webinar

**Greenhouse Gas Protocol land sector and removals guidance**

**Science-based Targets for Forest, Land and Agriculture (FLAG)**

**March 3, 2021**



WORLD  
RESOURCES  
INSTITUTE



wbcscd

# ZOOM WEBINAR

- This is a **zoom webinar**. Your camera and microphone are automatically muted.
- Participants can **send questions via the Q&A button** at the bottom of the screen.
- Participants can **add comments via the chat button** at the bottom of the screen.
- Presenters address questions during **Q&A time slot** at the end
- **Slides and a recording of this meeting** will be shared after this call



*Please note that this meeting will be recorded*

# Webinar presenters today



**MARTHA STEVENSON**

Sr Director, Forests Strategy &  
Research, WWF



**TIM LETTS**

Deputy Director, Climate  
& Business WWF



**DAVID RICH**

Senior Associate  
WRI



**AMIR SAFAEI**

Manager, NCS Supply  
WBCSD



**CHRISTA ANDERSON**

Senior Program Officer, Climate  
WWF



**MONICA MCBRIDE**

Director, Agricultural &  
Environmental Metrics, WWF



**CHRISTOPHER WEBER**

Global Climate & Energy  
Lead Scientist, WWF



**MATT RAMLOW**

Research Associate  
WRI





© Aaron Gekoski / WWF-US

# AGENDA

**Introduction**

**5 min**

**GHG Protocol update**

**15 min**

**FLAG project update**

**15 min**

**Q&A**

**25 min**

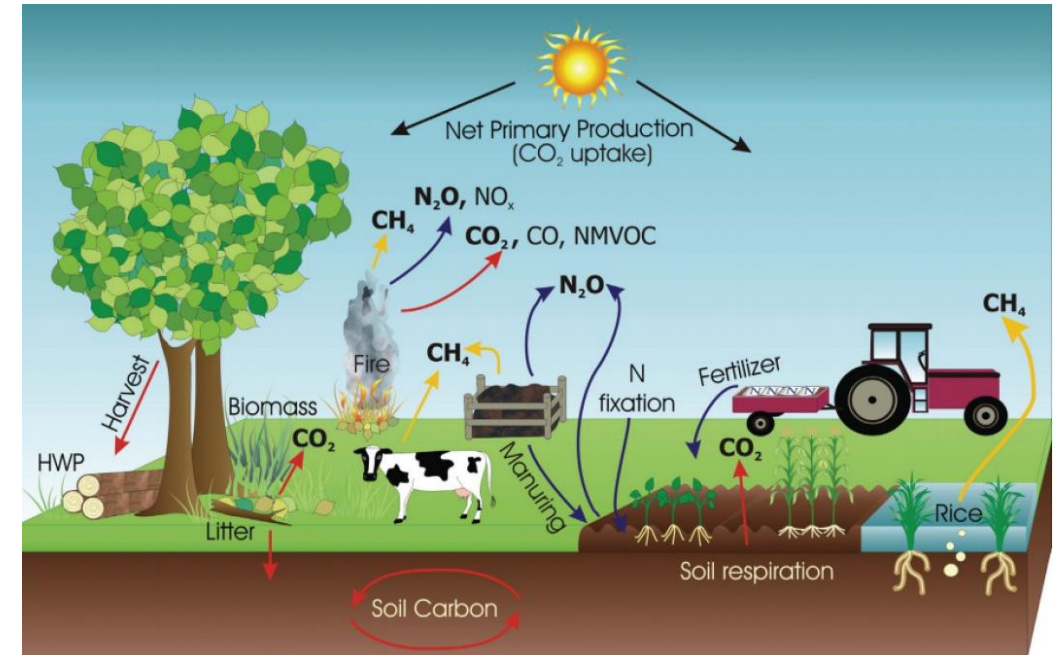
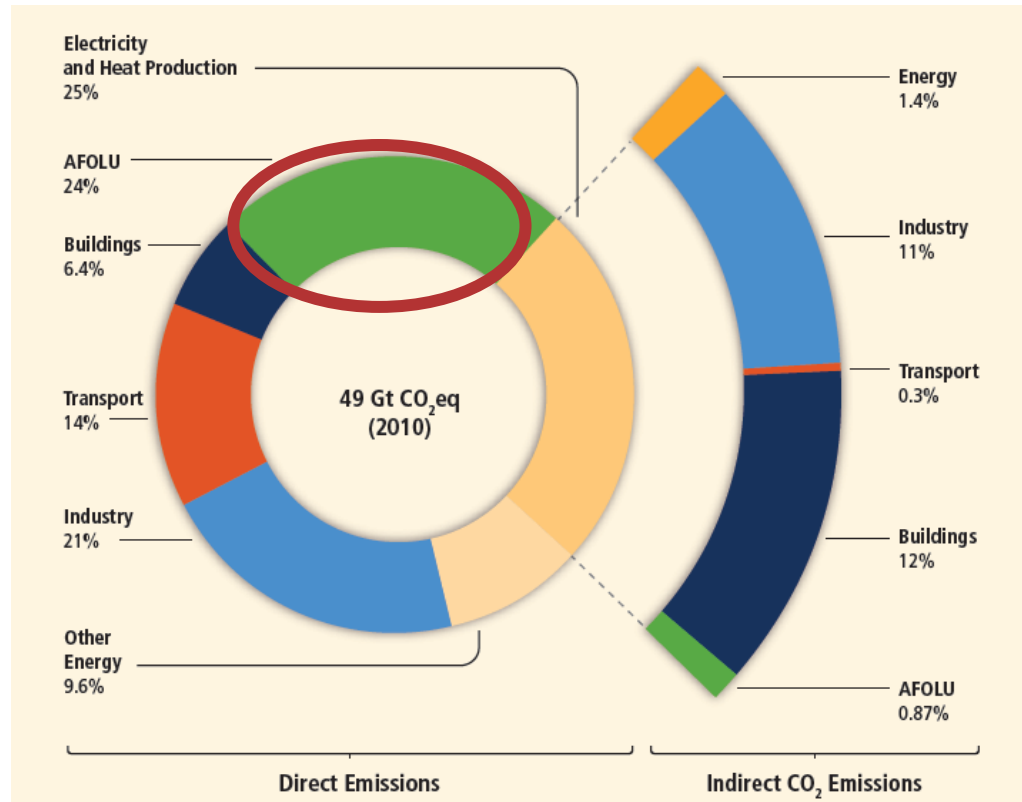


# WHAT IS FLAG/AFOLU AND WHY IS IT IMPORTANT?

Agriculture, Forestry, and Other Land Use (AFOLU) emissions represent ~24% of global annual GHG emissions

BUT

There is not a standard method for companies to account for and set targets for these emissions



# TWO COMPLEMENTARY PROJECTS ON LAND-BASED EMISSIONS



## GHG PROTOCOL UPDATE | WRI, WBCSD

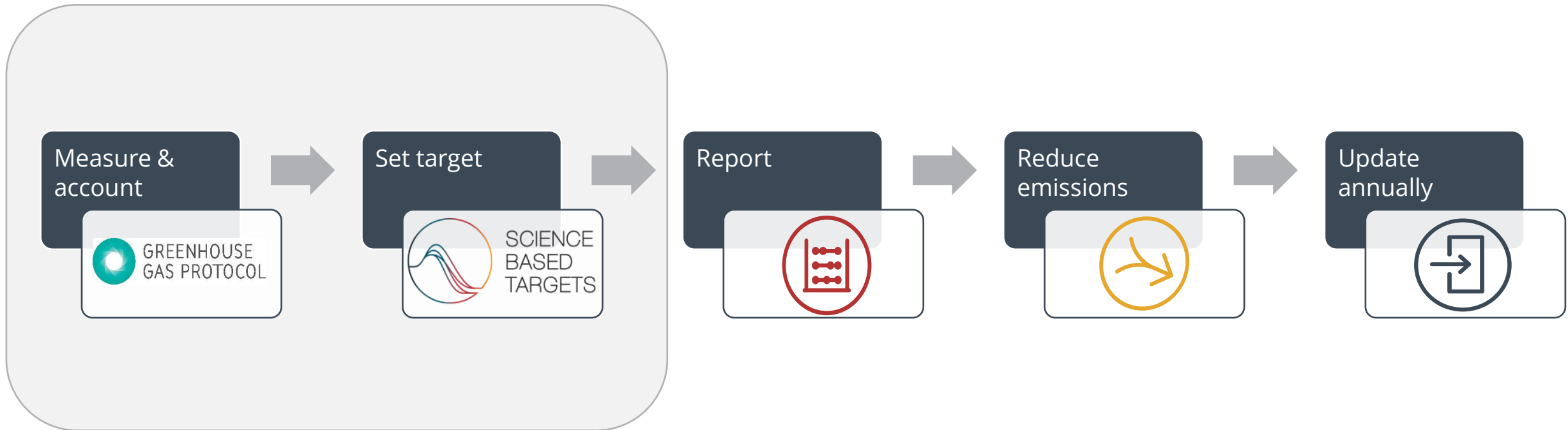
**Scope:** Develop updated and improved Greenhouse Gas (GHG) Protocol guidance on the land sector and removals



## FLAG PROJECT | WWF

**Scope:** Develop methods and guidance to enable the forest, land, and agriculture sectors to set science-based targets (SBTs) that include forests, land, and agriculture (FLAG) emissions

# Corporate GHG accounting and target setting







© Aaron Gekoski / WWF-US

# AGENDA

Introduction

*5 min*

**GHG Protocol update**

***15 min***

FLAG project update

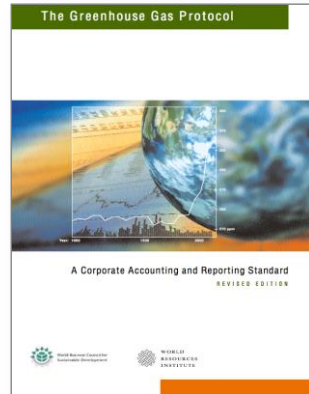
*15 min*

Q&A

*25 min*



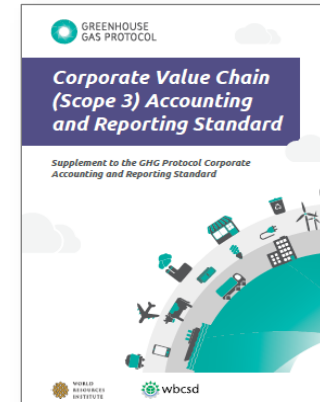
# Greenhouse Gas Protocol standards for the private sector



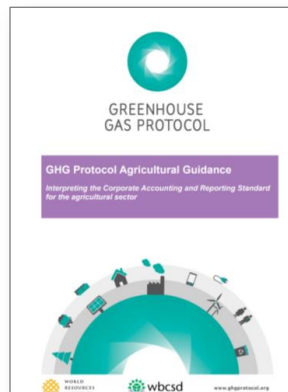
**Corporate  
Standard**



**Scope 2  
Guidance**



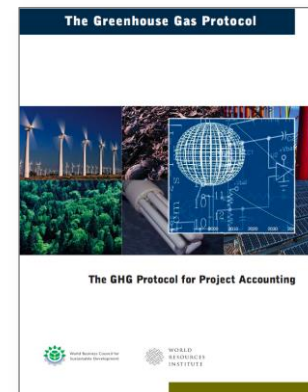
**Corporate Value Chain  
(Scope 3) Standard**



**Agriculture  
Guidance**



**Product  
Standard**



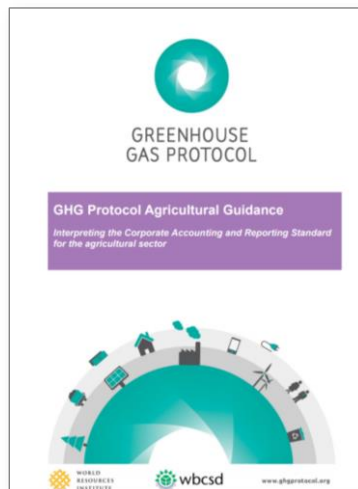
**Project  
Protocol**



**Policy and Action  
Standard**

## Existing guidance for the land sector

- Limited guidance for corporate GHG inventories on accounting for emissions and removals from land use, land use change and forestry
- Existing guidance:



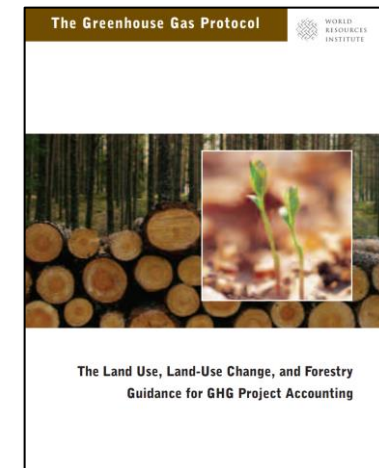
**Agriculture  
Guidance**



**Product Standard  
(Appendix B)**



**Mitigation Goal  
Standard  
(Chapter 6)**

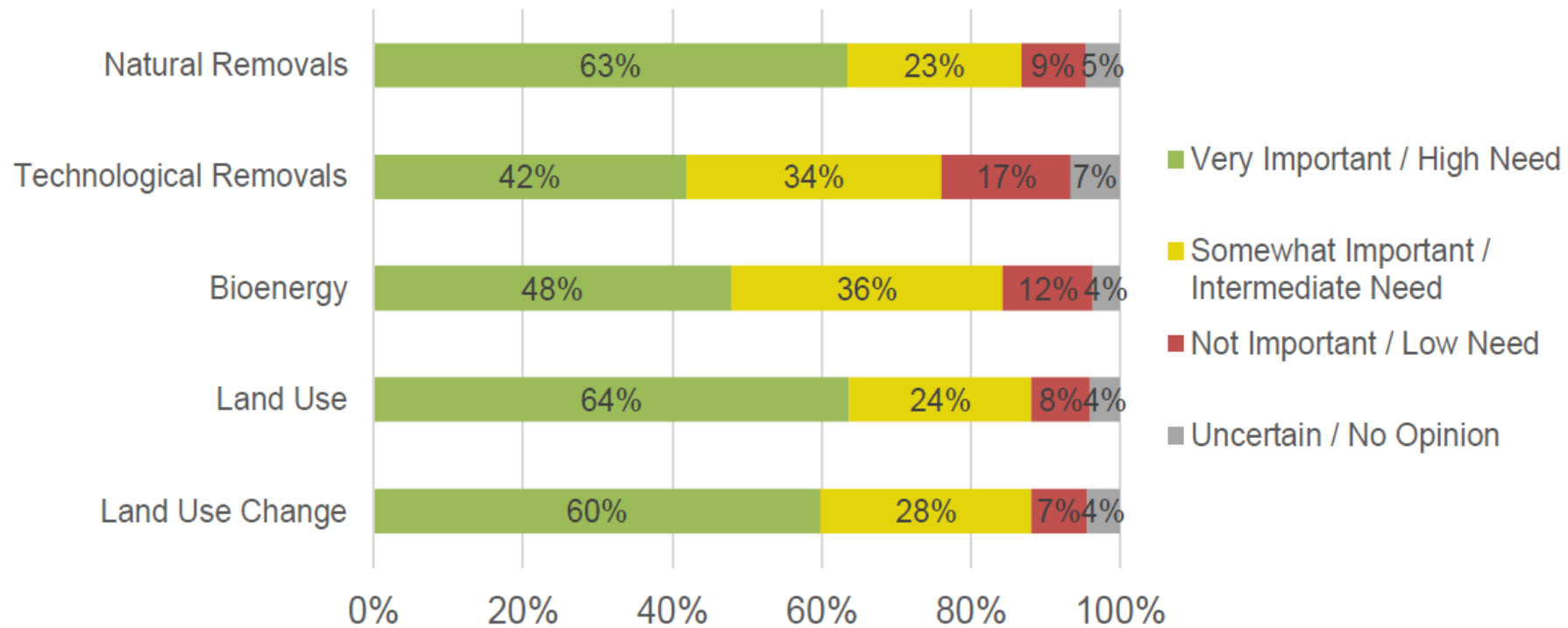


**LULUCF Guidance for  
Project Accounting**



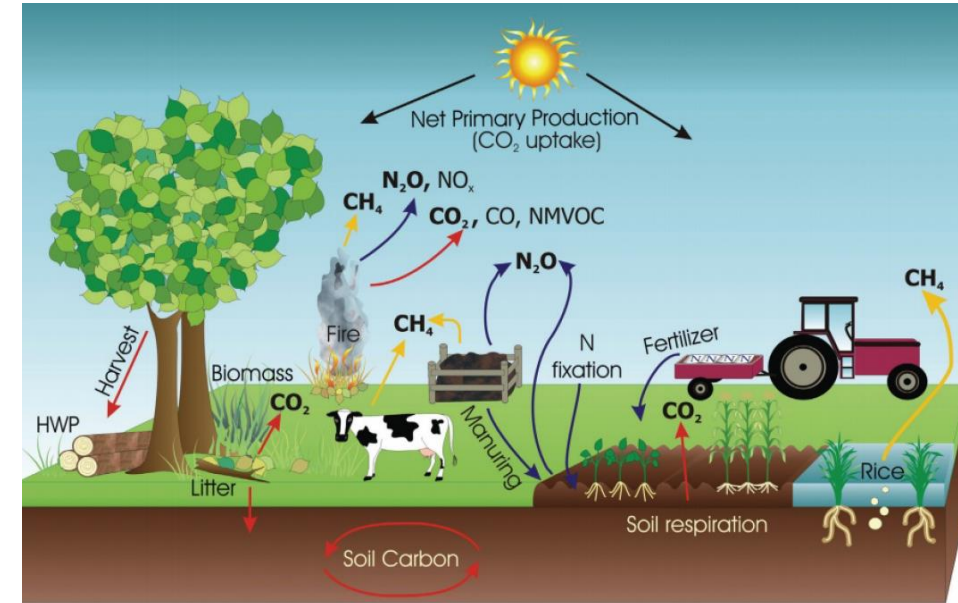
## Need for new guidance

Demand for guidance by topic



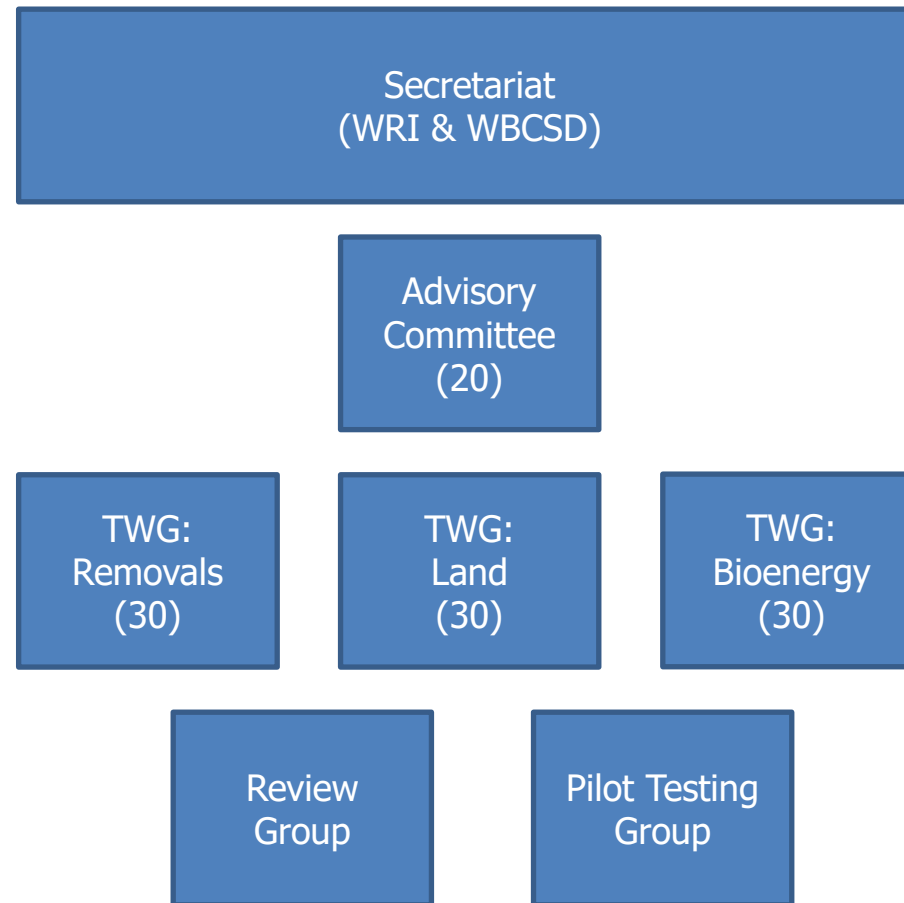
## GHG Protocol Land Sector and Removals Guidance

- Corporate-level greenhouse gas accounting and reporting guidance for:
  - Land use and management
  - Land use change
  - CO<sub>2</sub> removals and storage (biogenic and technological)
  - Biogenic products across the value chain
- Value chain approach building on Corporate Standard and Scope 3 Standard
- Help companies:
  - Inform mitigation strategies
  - Set targets and track performance
  - Report GHG inventories and progress toward targets
  - Support Paris Agreement goal of balancing emissions and removals globally by mid-century

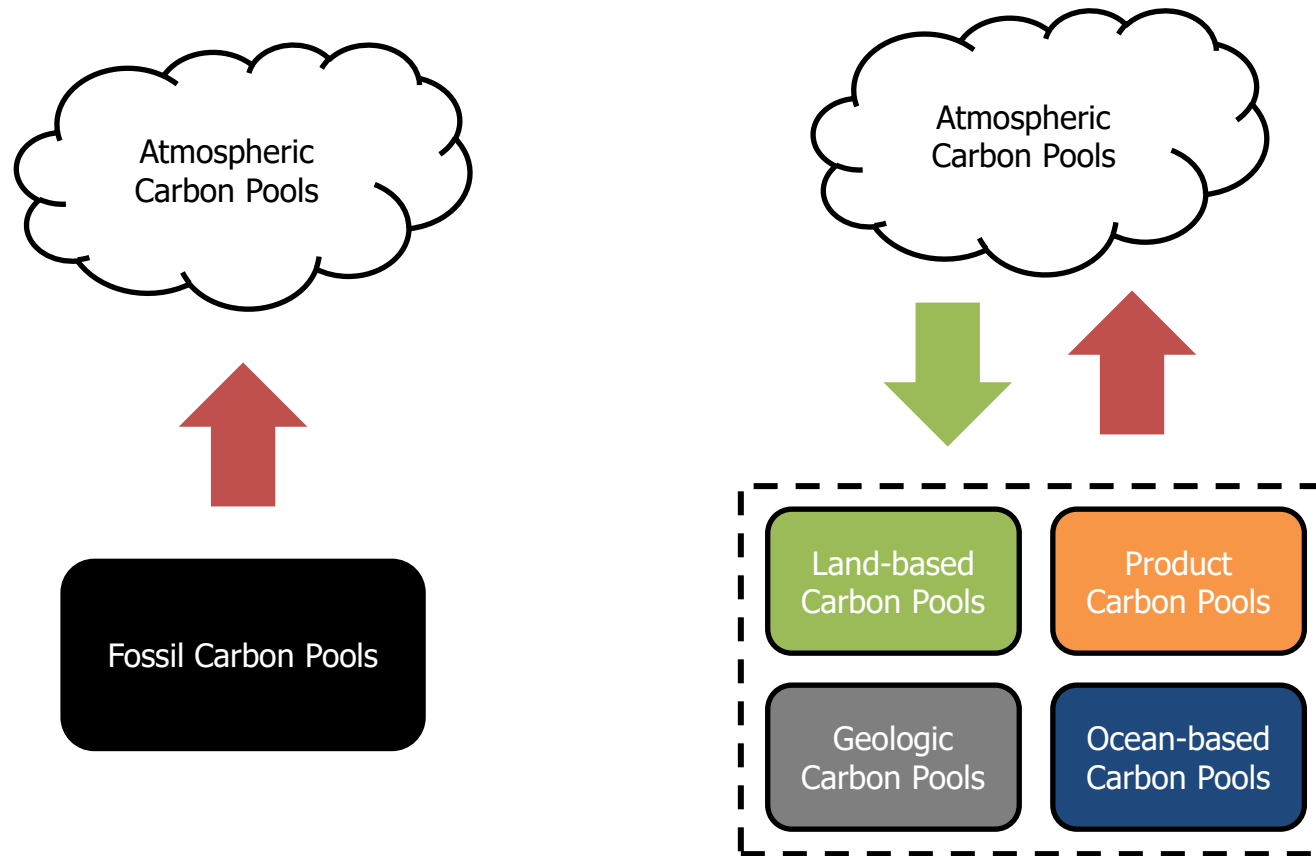




## Multi-stakeholder development process



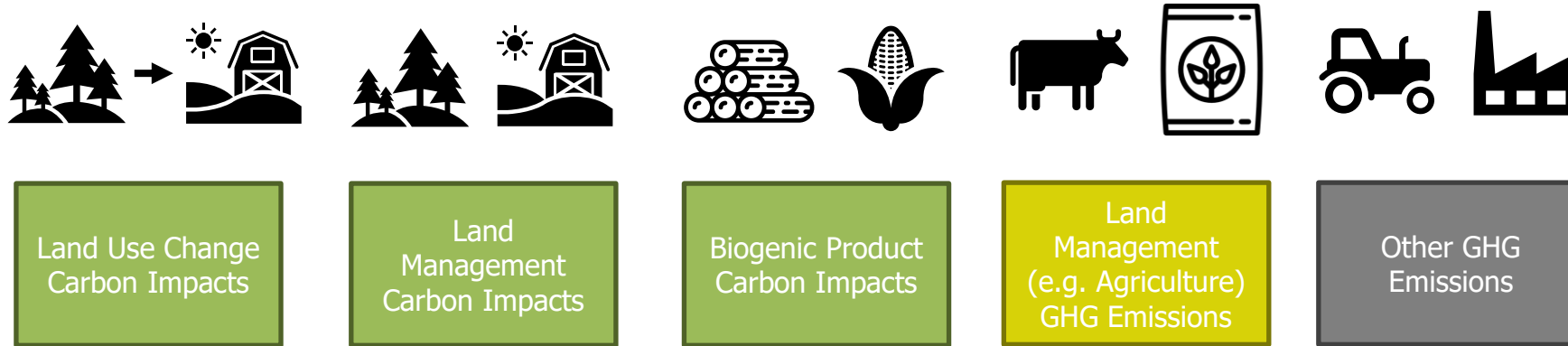
## Including CO<sub>2</sub> removals in inventories



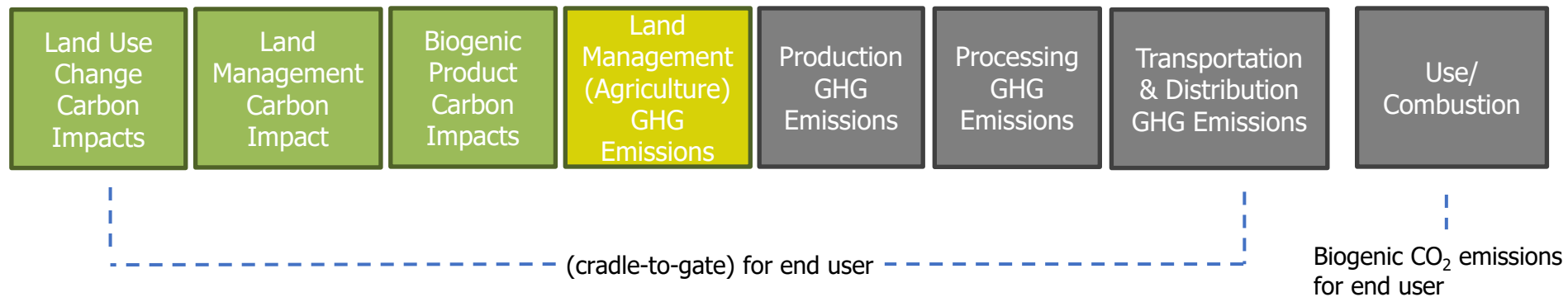


## Land sector GHG impacts

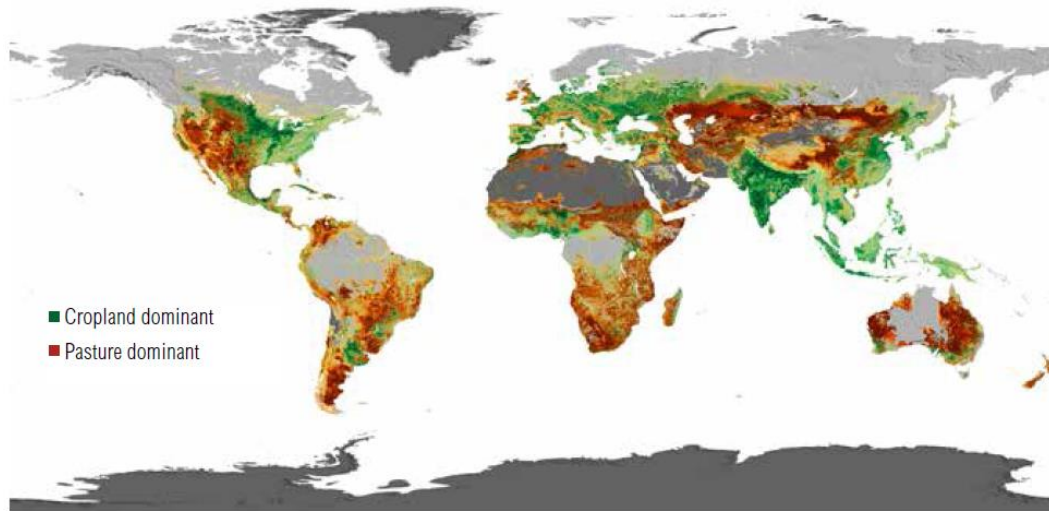
Direct GHG impacts from land management:



Indirect GHG impacts from biogenic product consumers:



## Land use change carbon impacts



### Scope 1 and Scope 3

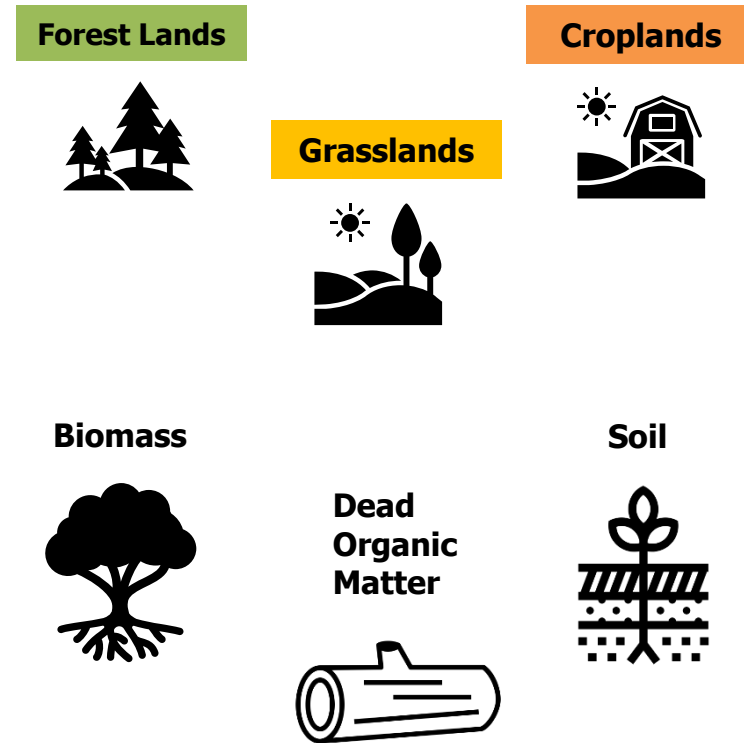
- Account for and report on land use change emissions on lands owned controlled by the reporting company or within their value chain
- Report impacts at both the level of direct suppliers and sourcing regions
- Metrics
  - Direct land use change emissions
  - Statistical land use change emissions

### Land Tracking Category

- Account for and report on the global impacts of land use
- Metrics
  - Indirect land use change emissions (t CO<sub>2</sub>e)
  - Carbon opportunity cost (t CO<sub>2</sub>e)
  - Land occupation (ha)

## Land management carbon stock changes

- Reporting guidance
  - CO<sub>2</sub> emission → where net carbon stock decreases occur
  - CO<sub>2</sub> removals → where net carbon stock increases occur, in accordance with criteria for reporting removals (in development)
- Methods under consideration
  - Carbon stock change factors
  - Model-based approaches
  - Remote sensing-based approaches
  - Measurement-based approaches
  - Hybrid approaches





## Project timeline

Activities	2020				2021				2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Convene stakeholder groups												
Technical working group discussions												
Develop first draft												
<b>Stakeholder review</b>												
Develop second draft												
<b>Pilot testing</b>												
Develop third draft												
<b>Stakeholder review</b>												
Publish final guidance												

- We welcome your inputs; if interested please [sign up](#) for one of our stakeholder groups:
  - **Review Group**
  - **Pilot Testing Group**



© Aaron Gekoski / WWF-US

# AGENDA

Introduction

*5 min*

GHG Protocol update

*15 min*

**FLAG project update**

***15 min***

Q&A

*25 min*

# WHAT IS THE SCIENCE BASED TARGETS INITIATIVE (SBTi)?



PARTNER ORGANIZATIONS



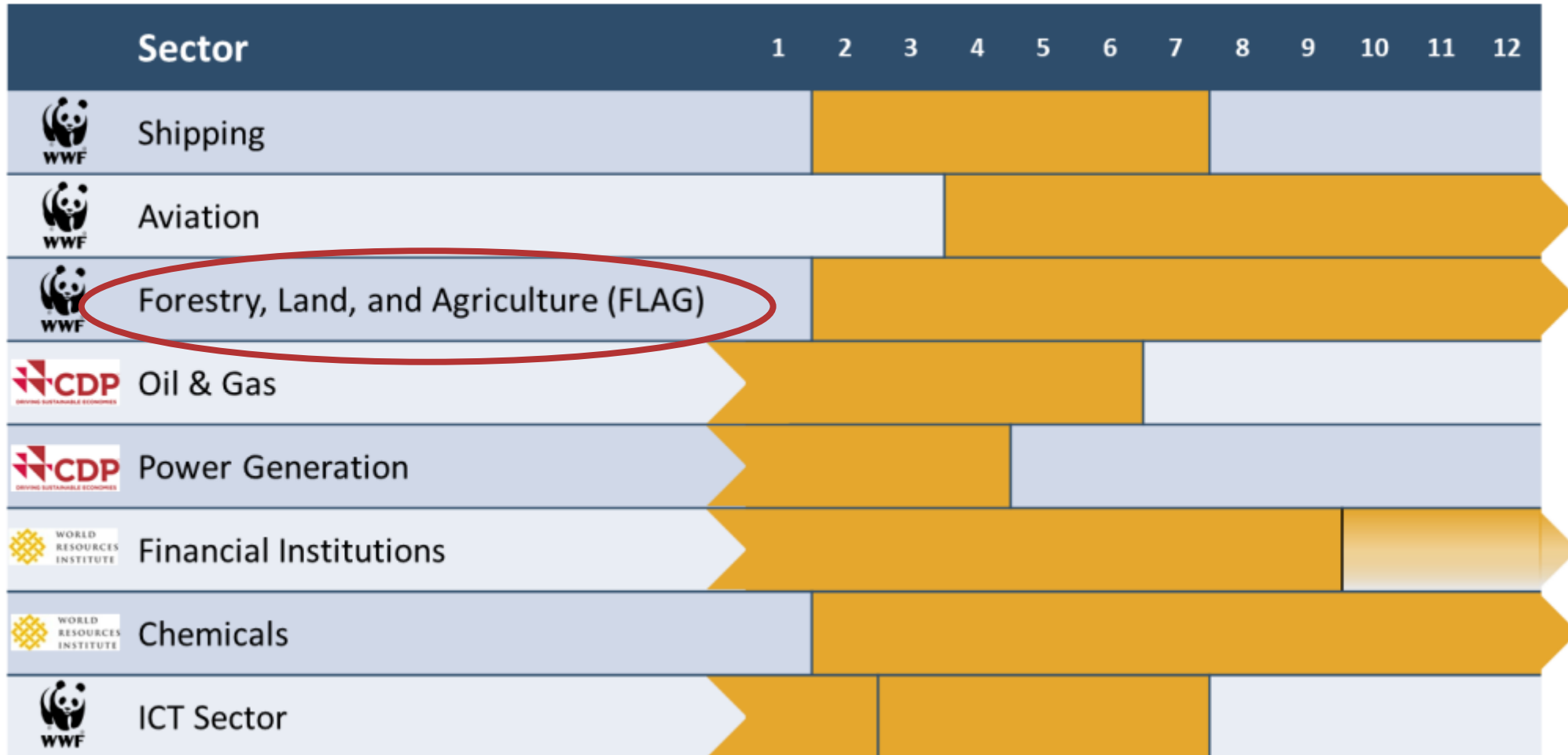
IN COLLABORATION WITH



The Science Based Targets Initiative (SBTi) is a collaboration providing a consistent vision and approach for how corporations can set GHG emissions reduction targets in line with the Paris Agreement



# SBTI SECTOR DEVELOPMENT PROJECTS



# FLAG Example: Food and Beverage Processing Company X

## Current Target

Company X commits to reduce absolute scope 1 and 2 GHG emissions 42% by FY2030 and scope 3 GHG emissions 30%.



## Scope 1 & 2 Target

450,000 tCO<sub>2</sub>e

Stationary combustion	150,000
Mobile combustion	100,000
Process emissions	0
Fugitive emissions	0
Purchased electricity	200,000

## Scope 3 Target

14,100,000 tCO<sub>2</sub>e

1	Purchased goods and services	10,000,000
2	Capital goods	50,000
3	Fuel-and-energy-related activities (not included in Scope 1 or 2)	500,000
4	Upstream transportation and distribution	200,000
5	Waste generated in operations	30,000
6	Business travel	20,000
7	Employee commuting	100,000
8	Upstream leased assets	0
9	Downstream transportation and distribution	2,000,000
10	Processing of sold products	0
11	Use of sold products	1,000,000
12	End of life treatment of sold products	200,000

# FLAG Example: Food and Beverage Processing Company X

## Current Target + FLAG Target

Company X commits to reduce absolute scope 1 and 2 GHG emissions 42% by FY2030 and scope 3 GHG emissions 30%.



### Scope 1 & 2 Target

450,000 tCO<sub>2</sub>e

Stationary combustion	150,000
Mobile combustion	100,000
Process emissions	0
Fugitive emissions	0
Purchased electricity	200,000

### Scope 3 Target

14,100,000 tCO<sub>2</sub>e

1	Purchased goods and services	<del>10,000,000</del> 5,000,000
2	Capital goods	50,000
3	Fuel-and-energy-related activities (not included in Scope 1 or 2)	500,000
4	Upstream transportation and distribution	200,000
5	Waste generated in operations	30,000
6	Business travel	20,000
7	Employee commuting	100,000
8	Upstream leased assets	0
9	Downstream transportation and distribution	2,000,000
10	Processing of sold products	0
11	Use of sold products	1,000,000
12	End of life treatment of sold products	200,000

### +FLAG Target

1	Purchased goods and services	5,000,000
---	------------------------------	-----------



# TWO FLAG TOOLS



## 1. FLAG SECTOR PATHWAY

for companies with diversified  
emissions or further from  
direct production  
*(Roe et al 2019)*



## 2. COMMODITY PATHWAYS

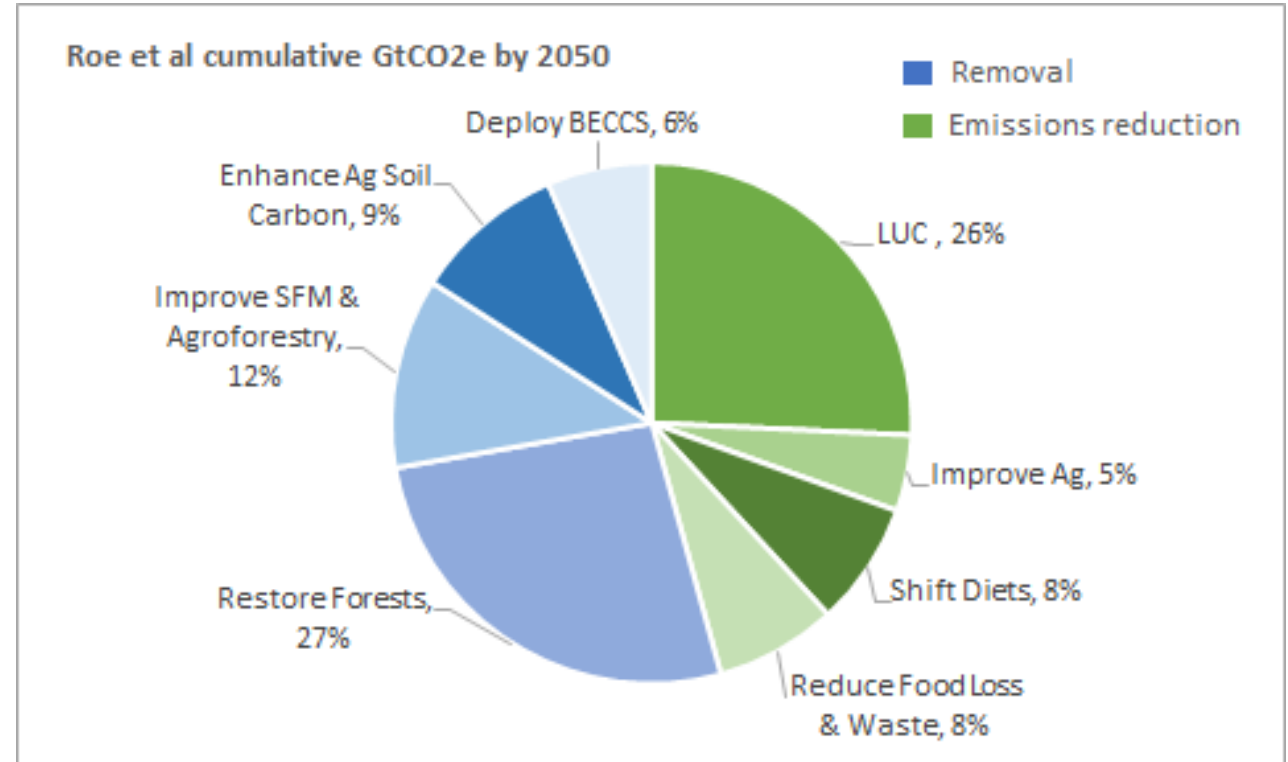
for companies with focused  
commodity emissions  
*(PBL 2016)*





## 1. FLAG SECTOR PATHWAY

for companies with diversified  
emissions or further from  
direct production  
*(Roe et al 2019)*



Note: For FLAG purposes, BECCS are reallocated across other wedges



## 2. COMMODITY PATHWAYS

for companies with focused  
commodity emissions

*(PBL 2016)*

- Beef
- Dairy
- Pork
- Poultry meat & eggs
- Roundwood
- Rice
- Soy
- Palm Oil
- Maize
- Wheat

# MAJOR QUESTIONS **ALREADY ADDRESSED**

## 1.

### Combining data sources and models

- Two-pronged approach most appropriate
- Combining specific commodity pathways and general FLAG sector pathway

## 2.

### Temperature targets

- Well-below 2C and 1.5C pathway data are not available for all approaches
- FLAG will proceed with available data noting that pathways for well-below 2C and 1.5C are similar for this sector

## 3.

### Accounting for GHG removals

- SBTi includes only emissions reductions, not removals, in pathways
- FLAG is proceeding to include removals in some form as they are a critical component of land-based mitigation



## 1.

### Roundwood commodity pathway

- Needed and was not possible in prior work on commodity pathways
- Status: developing options across several new datasets

## 2.

### Land use change in commodity pathways

- Options available but not included in commodity pathway tool
- Status: comparing existing methods used in commodity pathways and building out LUC specifications in the model

## 3.

### Continued alignment with GHG Protocol

- A FLAG target pathway needs to be in alignment with accounting guidance
- Status: close coordination ongoing

# PROJECT TIMELINE

Q1 2020			Q2 2020			Q3 2020			Q4 2020			Q1 2021		Q2 2021			Q3 2021			Q4 2021			
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Scientific feasibility assessment and Model review						Develop V0.1 model and guidance	Develop V1.0 model and guidance							Develop V2.0 final model guidance and support tools									



© Aaron Gekoski / WWF-US

# AGENDA

Introduction

*5 min*

GHG Protocol update

*15 min*

FLAG project update

*15 min*

**Q&A**

***25 min***





GREENHOUSE  
GAS PROTOCOL



SCIENCE  
BASED  
TARGETS

# Webinar

**Greenhouse Gas Protocol land sector and removals guidance**

**Science-based Targets for Forest, Land and Agriculture (FLAG)**

**March 3, 2021**



WORLD  
RESOURCES  
INSTITUTE



wbcSD



# CONTACT US



GREENHOUSE  
GAS PROTOCOL

---

[Matt.Ramlow@wri.org](mailto:Matt.Ramlow@wri.org)  
[www.ghgprotocol.org](http://www.ghgprotocol.org)



SCIENCE  
BASED  
TARGETS

---

[FLAG-SBTi@wwfus.org](mailto:FLAG-SBTi@wwfus.org)  
[www.sciencebasedtargets.org](http://www.sciencebasedtargets.org)

GHG Protocol Guidance and SBT FLAG work is funded by the Gordon & Betty Moore Foundation  
Additional support for GHG Protocol from the Australian Government Department of Foreign Affairs and Trade,  
CDPQ, IKEA, Cargill, UPS, Shell, Weyerhaeuser, Kimberly Clark. Additional support for SBT FLAG from Danone,  
Mars, Cargill, IKEA, Kimberly Clark, General Mills Foundation, and Tyson.



WORLD  
RESOURCES  
INSTITUTE



wbcscd