Antitrust & Legal Reminder for Training Session: Getting Started on Estimating Your Carbon Footprint

- The purpose of this webinar is share educational materials related to estimating a company's carbon footprint

- However, be mindful that you may compete with other participants attending the Summit and, therefore, you should <u>avoid discussing</u>:

  - <u>Any agreements or understandings to limit any aspect of competition</u>; and

  - <u>Competitively-sensitive information</u>, including pricing, costs, margins, and other price-related or confidential terms of sale; forward-looking strategies or business plans (discussing, for example, a specific customer, geographic, or segment focus); and non-public information regarding employee recruitment strategies and/or wages/benefits.

- You will have an opportunity to discuss sensitive strategic issues with your Walmart buying team on an individual basis – **<u>do not do so</u>** in front of your competitors.

- If you have any questions, please contact your company's legal counsel.

THIS TRAINING DOES NOT CONSTITUTE LEGAL ADVICE. SUPPLIERS SHOULD CONSULT THEIR OWN COUNSEL WITH LEGAL QUESTIONS RELATED TO CLIMATE REPORTING.

Getting Started on Estimating Your Carbon Footprint

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Walmart >|< Sustainability

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"

Walmart is on a path to become a regenerative company, one dedicated to placing nature and humanity at the center of our business practices."

—

Doug McMillon
President and CEO, Walmart Inc.

What does Regeneration mean for Sustainability?

Spurring a circular economy, eliminating waste along the product chain

Decarbonizing operations

Restoring, renewing, replenishing and conserving natural resources

Adopting regenerative practices in agriculture, forest management and fisheries

Advancing prosperity, equity for associates, customers, people across our supply chains

Project Gigaton: Driving action with suppliers toward Regeneration

PLANET

Energy	Nature	Waste	Packaging	Transportation	Product Use & Design

Aiming to reduce or avoid
1 billion MT of emissions by 2030

Cumulative **750+ million MT CO$_2$e avoided** (supplier reported) and **5,200+ suppliers** engaged since 2017

Major Contributors
EDF ENVIRONMENTAL DEFENSE FUND
WWF

ProjectGigaton

Agenda

Climate change and carbon footprint basics

- Context for business action on climate

- Terms and definitions

- Business case for estimating a carbon footprint

Estimating emissions

- Greenhouse Gas Protocol and emissions "scopes"

- Four step process for estimating emissions

Climate Change and Carbon Footprint Basics

Zoom Poll

1. Did your company **achieve recognition** in Project Gigaton in 2022?

2. What is your experience with **estimating carbon footprints** (or developing greenhouse gas inventories)?

3. On what sustainability topics could your organization most use **additional training** and resources?

4. How did you **learn about** this training session?

5. How many **employees** does your company have?

Definitions

Greenhouse gas (GHG) emissions / carbon emissions

- Gases from human activities that trap heat in the earth's atmosphere, contributing to global climate change

- Examples: carbon dioxide (most common), methane, HFCs, nitrous oxide

Carbon footprint (aka GHG inventory)

- An organization's GHG emissions resulting from operations and business activities over a one-year period

Climate target

- A pledge or goal to reduce GHG emissions associated with operations or business activities

IPCC Urges Rapid Action

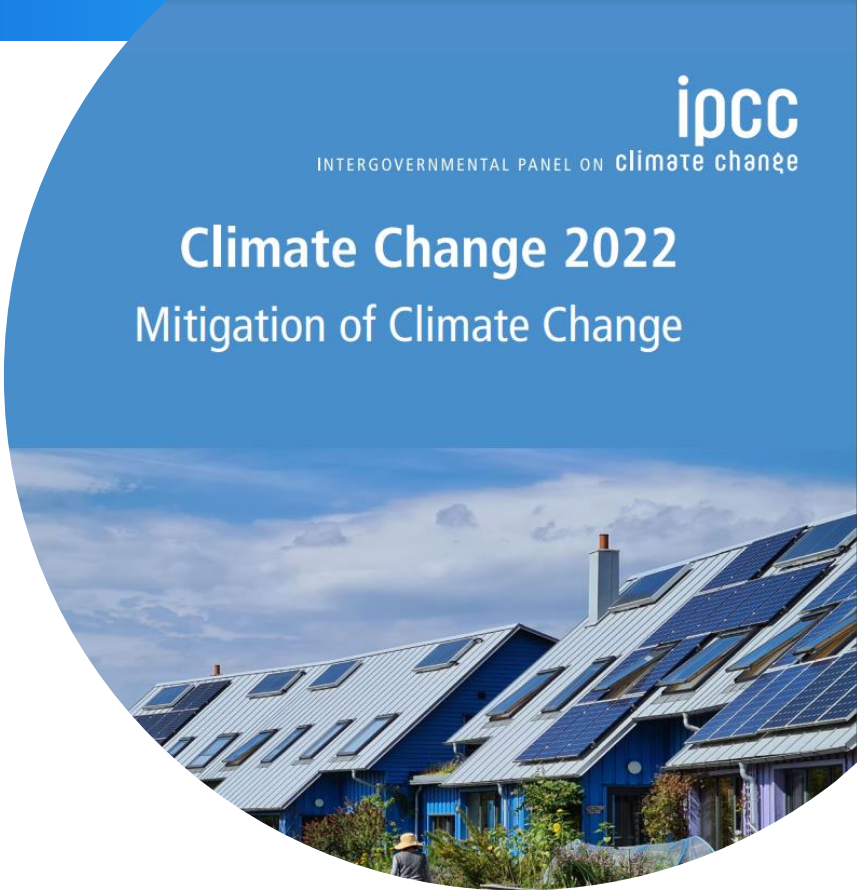Recent IPCC report found that we're off track to meet global climate goals.

To limit irreparable damage, we need to:

1. **Peak greenhouse gas (GHG) emissions by 2025**

2. **Halve GHG emissions by the end of this decade**

3. **Achieve global net zero GHG emissions by around 2050**

ipcc

INTERGOVERNMENTAL PANEL ON **climate change**

Climate Change 2022
Mitigation of Climate Change

Major Impacts to Businesses and Communities

Extreme Heat

Flooding

Drought

Wildfire

Ocean Acidification and Warming
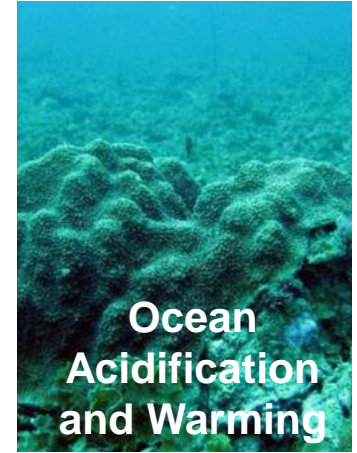
Widespread crop damage

Power grid issues

Farm, factory, transportation impacts

Reduced crop yields, port impacts

Pulp, paper, timber impacts, general supply chain interruptions

Acidification and Warming

Seafood yield impacts

What is the value of estimating, managing and disclosing greenhouse gas emissions?

Meet stakeholder expectations

Stakeholders including customers, investors, and employees expect businesses to transparently manage emissions.

Climate change mitigation

Reducing emissions is critical for maintaining surety of supply in the face of climate change disruption.

Risk mitigation

Managing emissions can mitigate risk by reducing costs, enhancing reputation, improving efficiency, and preparing for regulation.

Business is Taking Action

85%

of global top 2000 businesses have set a climate commitment

~5000

companies committed to science-aligned targets through the Science Based Targets Initiative (SBTi)

$38t+

market cap of companies setting targets through SBTi

Carbon management is a journey for businesses

Aware
- Beginning to estimate carbon footprint
- Building capacity

Disclosing
- Public disclosure of carbon footprint
- Sector benchmarking
- Developing SMART goals

Managing
- Public disclosure of climate-related risks/opportunities
- Setting science-based targets
- Implementing on SMART goals

Leading
- Full climate transition plans
- Implementing on science-based targets
- Engaging suppliers and stakeholders

Companies can and should take action to **reduce emissions at all stages** of their journey.

Remember:

Estimating a carbon footprint is a means to an end, not the end goal.

You can act now to reduce emissions, save money, and boost efficiency.
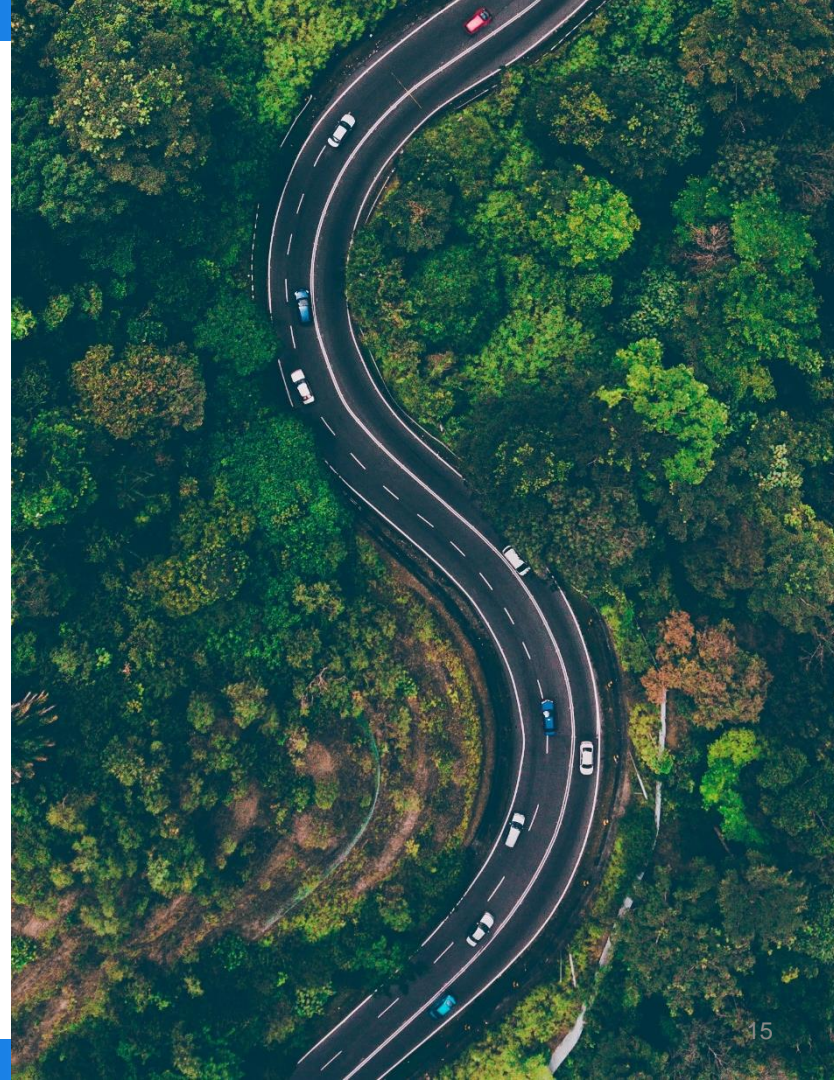
Estimating Emissions:
What is a Carbon Footprint, and What Are Emissions "Scopes"?

What is a carbon footprint?

An organization's GHG emissions resulting from business operations (e.g., energy consumption) over a specific time period

- Typically represents one year of activities

- Includes greenhouse gases other than carbon (e.g., methane, refrigerants like HFCs)

- Typically measured in metric tons (MT) of carbon dioxide equivalent (CO_2e)

Carbon Footprint vs. Project Gigaton Reporting

Project Gigaton:

- Suppliers report GHG emissions **reduced or avoided from changes** in operations or products

Example:

*Acme Company **avoided 500 metric tons CO_2e** in 2022 by switching to renewable energy in global offices*
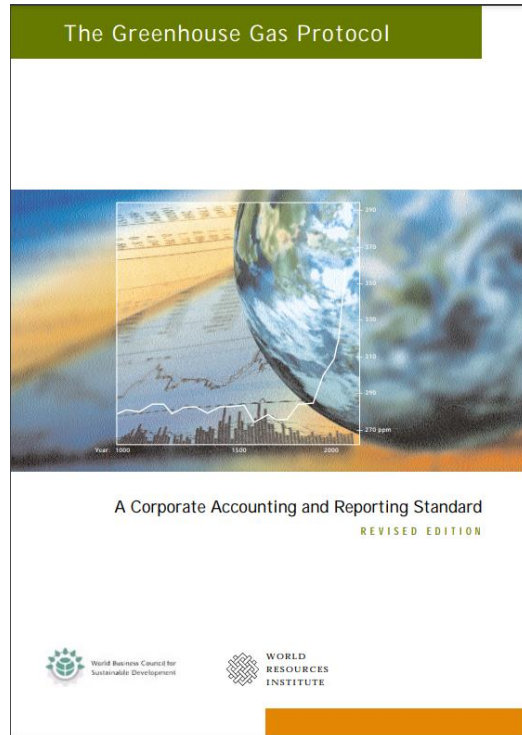
Carbon footprint:

- Suppliers report **total GHG emissions** from operations
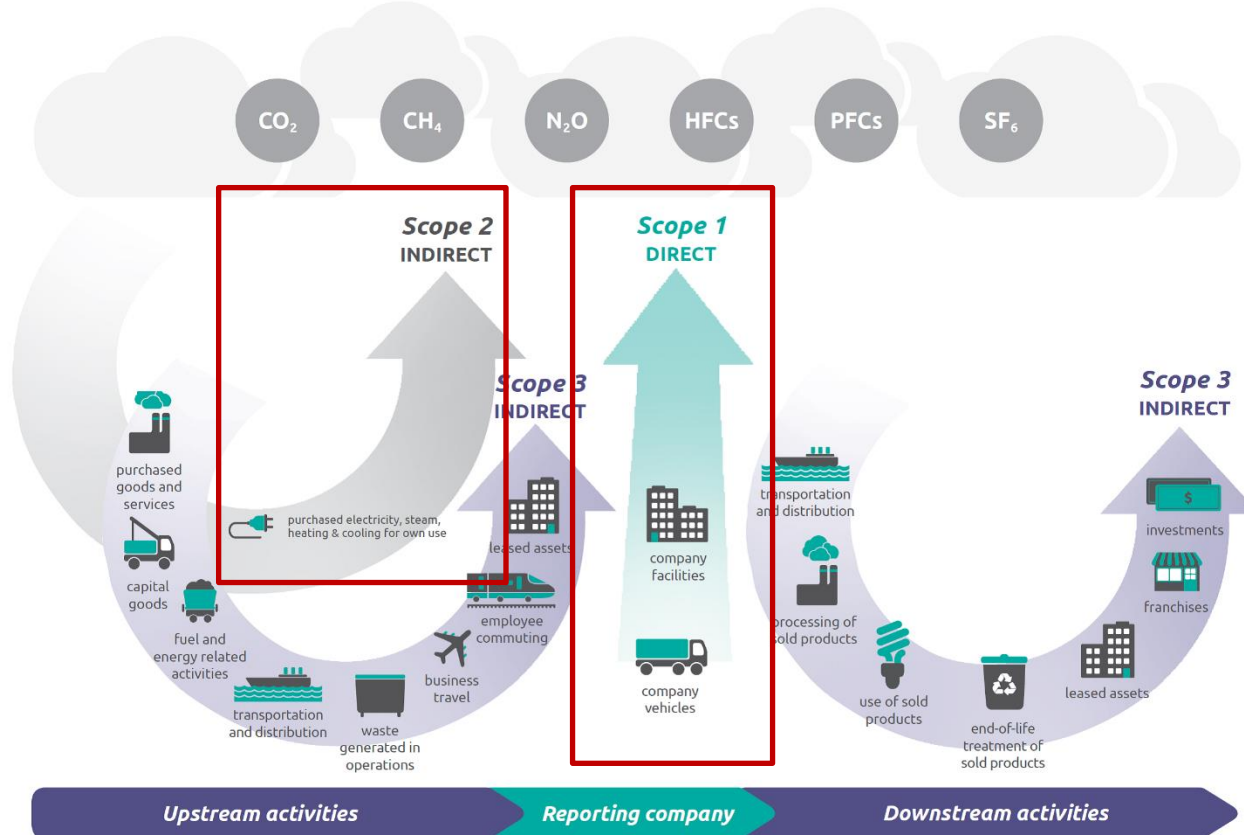
Example:

*Acme Company's 2022 carbon footprint **was 1000 metric tons CO_2e** from office electricity consumption and truck fleet.*

Who writes the rules for corporate carbon footprints?

- The Greenhouse Gas Protocol's Corporate Standard is the leading framework for corporate footprints

- Nearly all major companies (>92%) rely on GHG Protocol to estimate emissions

- Underlying framework for potential GHG reporting regulations in several jurisdictions (EU, US, etc.)

GHG Protocol defined "Scopes" of emissions

Scope 1 Emissions

- Direct GHG emissions produced by a company's **own activities or operations**

- Often related to fuel consumption

Scope 1 Examples:

- Space heating

- Vehicle fleets

Scope 2 Emissions

- Indirect GHG emissions from consumption of **purchased electricity**

- Emissions are "indirect" because they occur somewhere else

- E.g., at a power plant where coal is burned to produce electricity

Scope 2 Examples:

Electricity purchased from local utility provider

Scope 3 Emissions

- Indirect emissions from upstream and downstream value chains

- Emissions from activities that are not directly controlled, but related to business activities

- **Not a focus of today's session**

Scope 3 Examples:

- Shipping of products
- Waste disposal
- Business travel

Estimating Emissions:
Four Steps for Developing a Footprint

Four steps for estimating a carbon footprint

1. Define reporting boundaries

2. Identify emissions sources

3. Collect relevant data

4. Calculate emissions

Four steps for estimating a carbon footprint

1. **Define reporting boundaries**

2. Identify emissions sources

3. Collect relevant data

4. Calculate emissions

1. Define reporting boundaries

What will you be reporting for?

And how do you draw those boundaries?

GHG Protocol has detailed guidance on these questions.

Best practices:

- Account for all relevant greenhouse gases

- Include all emissions sources under your control across all operations and geographies

- **Be transparent about boundaries and any exclusions**

Four steps for estimating a carbon footprint

1. Define reporting boundaries

2. **Identify emissions sources**

3. Collect relevant data

4. Calculate emissions

2. Identify Emissions Sources

Scope 1
Stationary Combustion

Anything that burns fuel on site:

- Boilers for heat or hot water

- Furnaces

- Engines

- Gas heaters

- Emergency generators

2. Identify Emissions Sources

Scope 1
Mobile Combustion

Vehicles that burn fuel*:

- Owned/operated delivery fleet

- Maintenance vehicles

- Corporate aircraft

- Forklifts

- Construction equipment

*does not include electric vehicles – we'll talk about it!

2. Identify Emissions Sources

**Scope 1
Fugitive Emissions**

Intentional or unintentional release of gasses:

- Refrigeration
- Chemical manufacturing
- Methane leaks

2. Identify Emissions Sources

Scope 2

- Purchased electricity is the primary source of Scope 2 emissions*

- Most commonly, electricity purchased through a local electric power utility

*also includes purchased heating, cooling, and steam (less common sources)

2. Identify Emissions Sources – Examples

Small Office-Based Company

Scope 1:

- Natural gas boiler for space heating

Scope 2:

- Purchased electricity for office

Warehouse and Delivery Company

Scope 1:

- Natural gas boiler for space heating
- Propane forklift
- Delivery truck fleet

Scope 2:

- Purchased electricity for office and warehouse space

2. Identify Emissions Sources - Examples

Manufacturing Company

Scope 1:

- Natural gas boiler for space heating
- Coal for industrial heat
- Refrigerants for manufacturing operations

Scope 2:

- Purchased electricity for office and factory equipment

Major Multinational Company

Scope 1:

- Natural gas boiler for space heating
- Corporate jet
- Corporate fleet

Scope 2:

- Purchased electricity for offices
- Purchased steam for offices

Four steps for estimating a carbon footprint

1. Define reporting boundaries

2. Identify emissions sources

3. **Collect relevant data**

4. Calculate emissions

3. Collect Relevant Data

To calculate emissions, you need underlying data about the business activities that generate emissions

Ideally, this is primary data – e.g., bills, invoices, receipts

Data should cover the full year

Common Data Sources

Scope 1	Scope 2
Natural gas utility bills (ideally sub-metered)	Electricity utility bills (ideally sub-metered)
Fuel purchase records	Green power contracts
Vehicle/equipment maintenance records	Renewable energy certificates
Gasoline receipts, purchase records, fleet management software	
Refrigerant invoices or purchase records	

3. Collect Relevant Data

"I don't have this data! What do I do?!"

It's ok! Even the most experienced companies struggle with incomplete data.

1. Rely on estimation methodologies
2. Document assumptions and be transparent
3. Open new avenues for data collection and continual improvement over time

Four steps for estimating a carbon footprint

1. Define reporting boundaries

2. Identify emissions sources

3. Collect relevant data

4. **Calculate emissions**

4. Calculate Emissions

Three critical pieces of data to calculate emissions:

Activity data (e.g., gallons of gasoline, kWh of electricity)

- Already gathered in step 3!

Emission factors

- Converts activity data to quantity of GHGs

Global warming potential (GWPs)

- Converts quantity of GHGs to CO_2 equivalent (CO_2e)

4. Calculate Emissions

Emission factors

- Convert energy or activity data into greenhouse gas quantities

- Can typically be found through governments or NGOs, e.g.:
  - US EPA GHG Emission Factor Hub
  - The Climate Registry Default Emission Factors

Examples (note that units vary):

- Pounds of CO_2 emitted per gallon of gasoline burned

- Kilograms of CH_4 (methane) emitted per kWh electricity consumed

- Metric tons of CO_2e emitted per ton of coal burned

4. Calculate Emissions

Putting it all together

1. Calculate emissions with **activity data** (e.g., gallons of gas) and **emission factors** (e.g., CO_2 emissions per gallon) for each emissions source

2. Convert each greenhouse gas total to CO_2 equivalent (CO_2e) with **global warming** potentials

3. Sum up emissions for **Scope 1** and **Scope 2** separately

What does a published carbon footprint look like?

Annual greenhouse gas (GHG) emissions (million metric tons carbon dioxide equivalent – MMT CO_2e)[2]

CY2019

Total: 17.20

Scope 1: 6.85

Scope 2 (market-based): 10.35

CY2020

Total: 15.93

Scope 1: 7.25

Scope 2 (market-based): 8.68

CY2021

Total: 13.99

Scope 1: 7.37

Scope 2 (market-based): 6.62

Wrapping Up

Why does this matter?

1. The future of people and the planet depend on **collective and urgent climate action**

2. Strong **business case to measure and manage** carbon footprint

   - Risk mitigation
   - Stakeholder expectations
   - Surety of supply
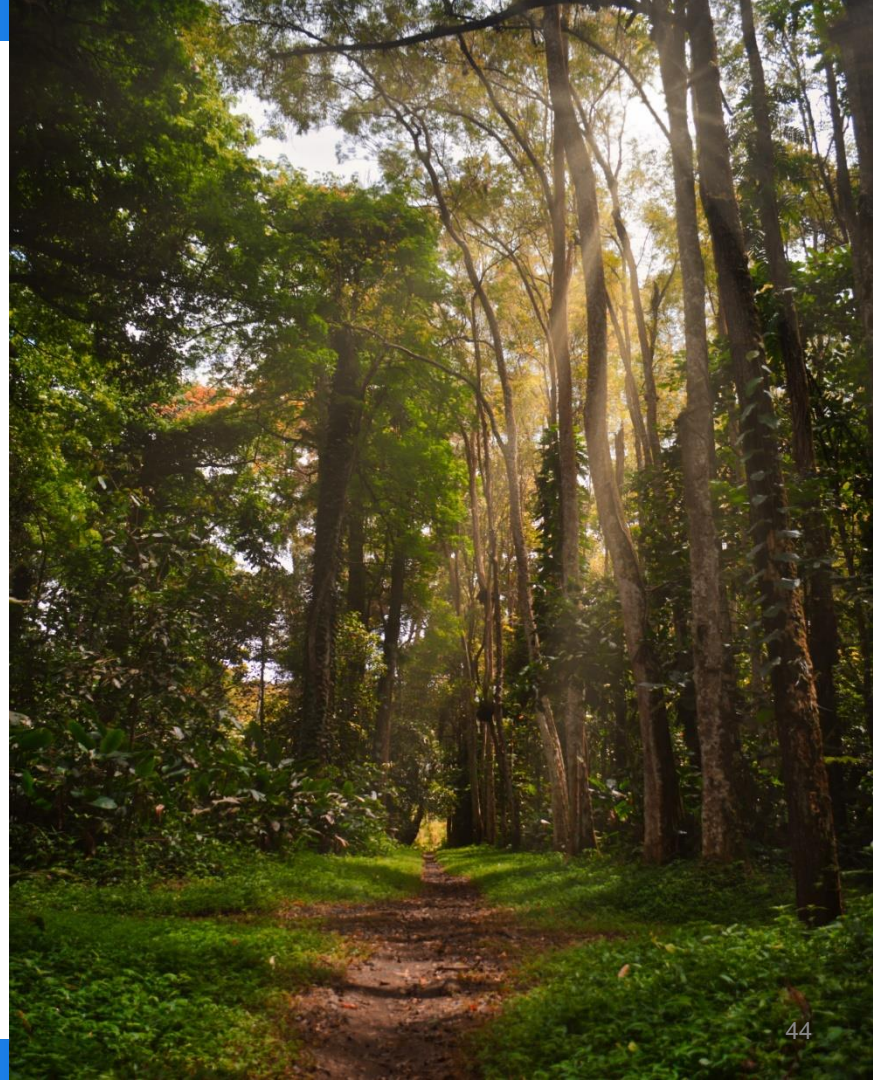
What we will cover in next week's session

1. Managing and updating emissions inventories

2. Deeper dive on Scope 2 emissions: market-based method vs. location-based method

3. Setting science-based emissions reduction goals

4. Resources for more help

Resources to Learn More

- [Project Gigaton](#)

- [SME Climate Hub](#)

- [Greenhouse Gas Protocol](#)

    - [Corporate Standard Webinar Training](#)

- [US EPA Center for Corporate Climate Leadership](#)

    - [GHG Inventory Guidance](#)
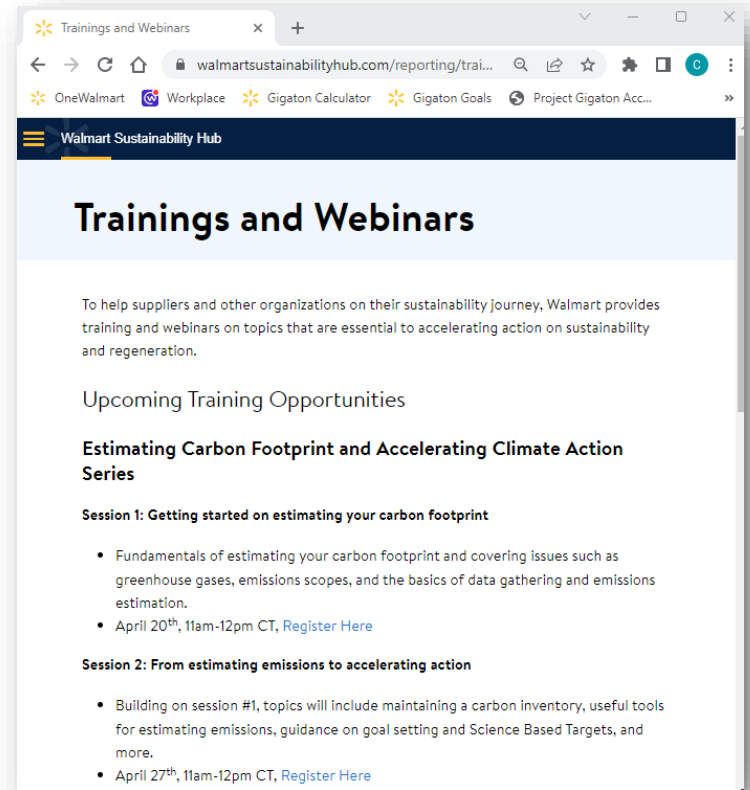
    - [GHG Measurement Resources](#)

Future Walmart Trainings

Session 2: From estimating emissions to accelerating action

•April 27th, 11am CT, [Register Here]

Session 3: Climate action companies with 500 or less employees - Introduction to the SME Climate Hub

May 4th, 11am CT, [Register Here]

https://www.walmartsustainabilityhub.com/reporting/trainings-and-webinars