



**BUREAU  
VERITAS**

# HOW TO ACHIEVE CLIMATE MITIGATION

2024



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# AS SEEN IN

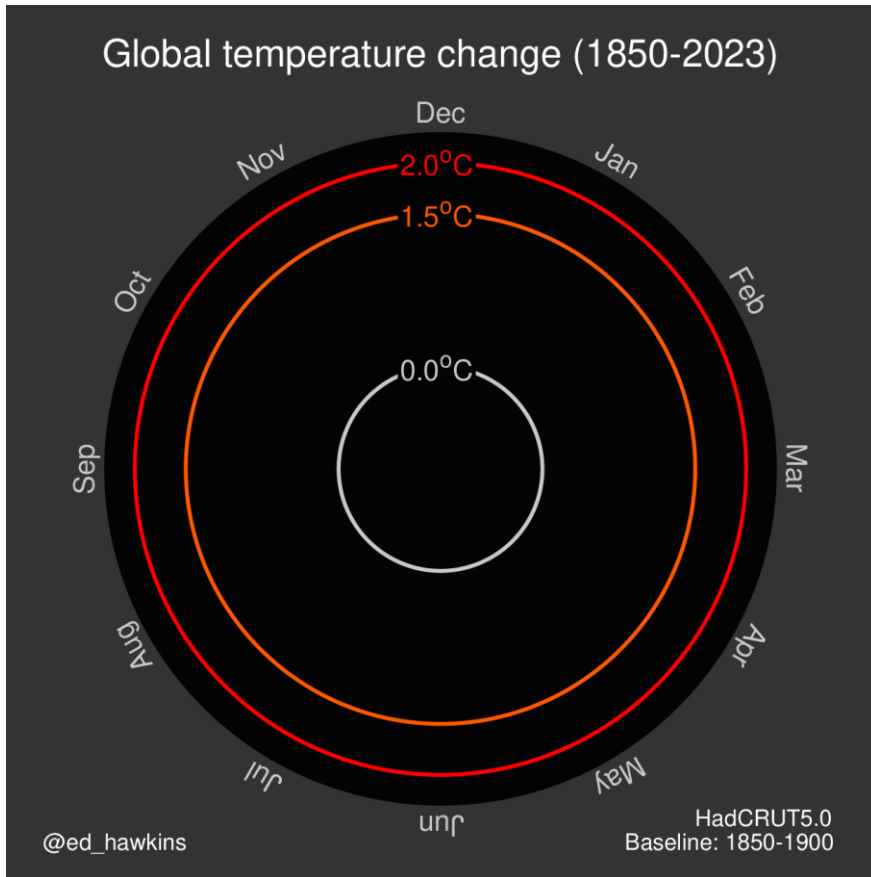


# TAKE CAREFUL STEPS



imgflip.com

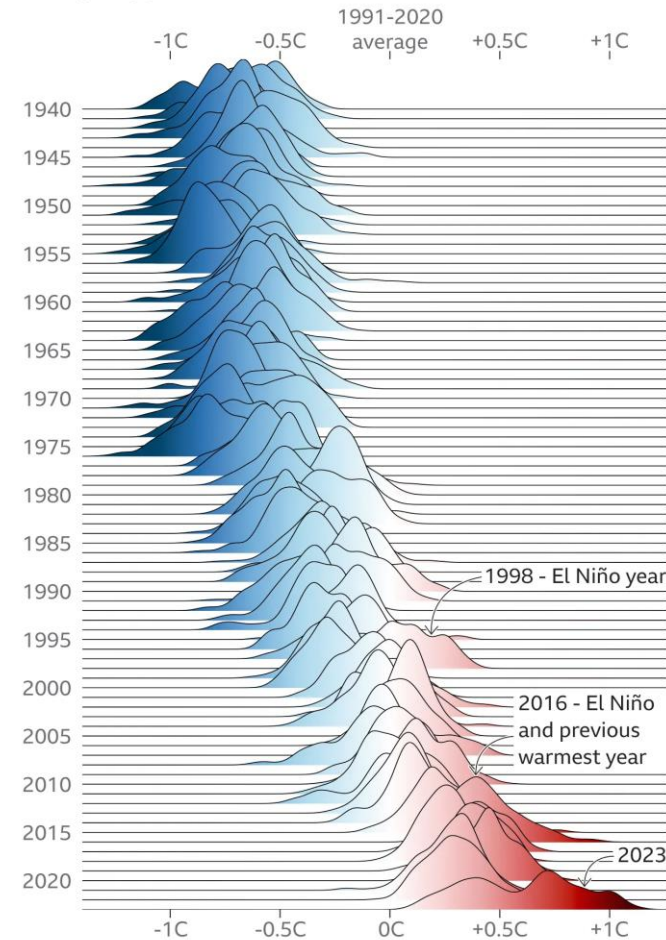
# (REVERSE) WINTER IS COMING



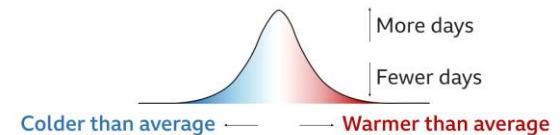
Prof. Ed Hawkins

## More days at the highest temperatures in 2023

Daily global air temperature compared with the 1991-2020 average, by year



Each ridge in the chart shows every day in a year and how their temperatures compare with the 1991-2020 average



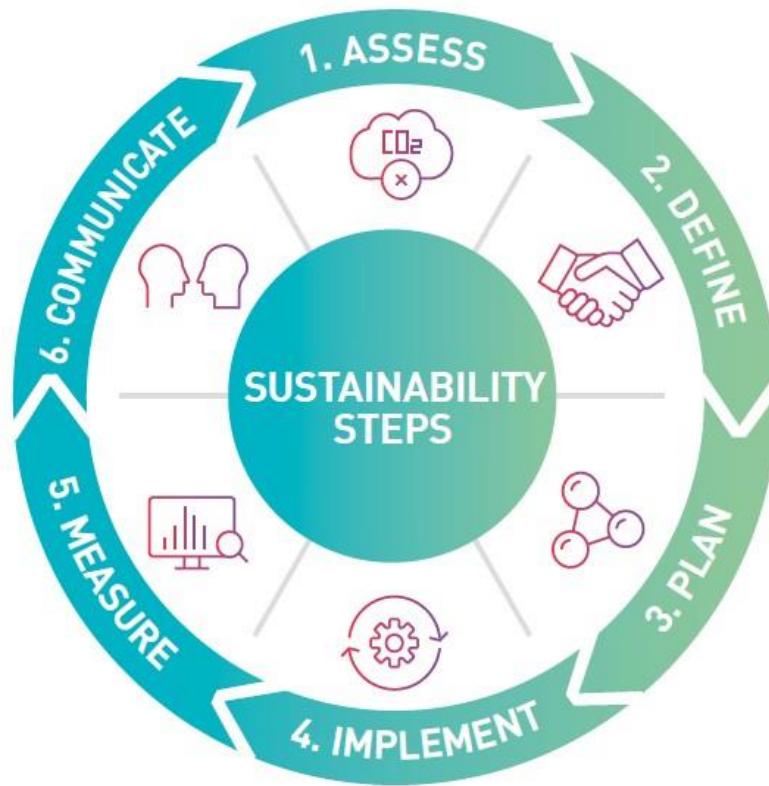
Source: ERA5, C3S/ECMWF

BBC



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# WHEEL OF SUSTAINABLE PRACTICE



## 1. ASSESS

Understand where you are in the journey.

**Typical Services:** Benchmarking, gap analysis, carbon footprint assessment, environmental reviews, environmental due diligence.

## 2. DEFINE

Establish where you want to go and set goals.

**Typical Services:** Materiality Assessment, stakeholder engagement, support in setting objectives, targets and KPI's.

## 3. PLAN

Work out how you will get there.

**Typical Services:** Strategy development, Systems development and Environmental Management Systems.

## 4. IMPLEMENT

Putting the plan into action.

**Typical Services:** Sustainability, carbon and environmental services, capacity building workshop, stakeholder engagement, legal registers.

## 5. MEASURE

Evaluate performance in line with sustainability KPIs.

**Typical Services:** Carbon foot printing, verification, auditing, pollution risk assessments, Clarity, Evaluate legal compliance / legal compliance audits.

## 6. COMMUNICATE

Share your progress and performance credibly with stakeholders.

**Typical Services:** Sustainability / carbon reporting, assurance, certification, auditing.

# THE 3 STEPS

OF ORGANISATIONAL CLIMATE MITIGATION

## MEASURE

GHG by  
carbon accounting

- Carbon footprint for organisation
- Carbon footprint for product

## REDUCE

GHG EMISSIONs  
through meaningful  
mitigations

- Climate action strategies
- Material topic

## OFFSET

neutralising emissions  
permanently

- Carbon credits



# MEASURE



# STANDARDS

## FOR ACCOUNTING GHG EMISSIONS

| ISO



| GHG  
PROTOCOL



| TGO



# THE 2 METHODS

## 3-Scope



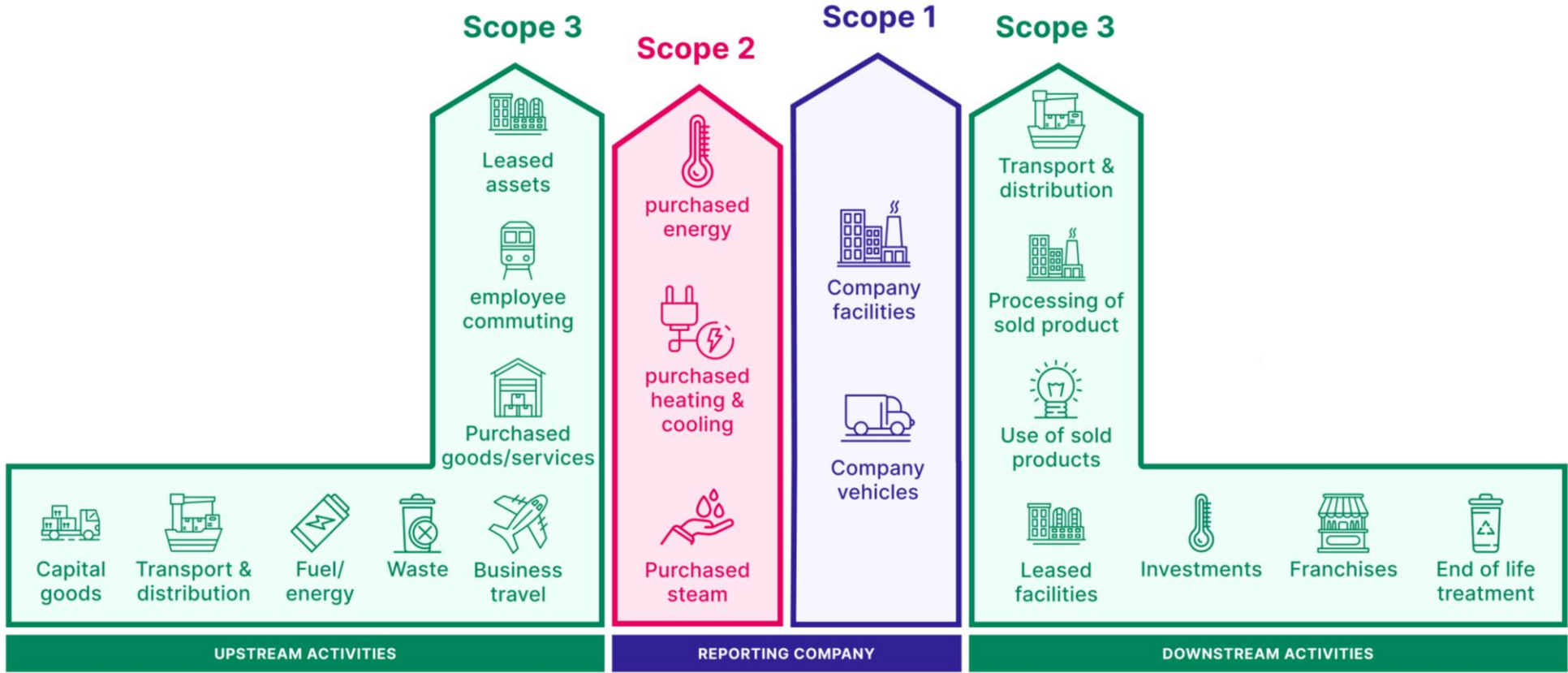
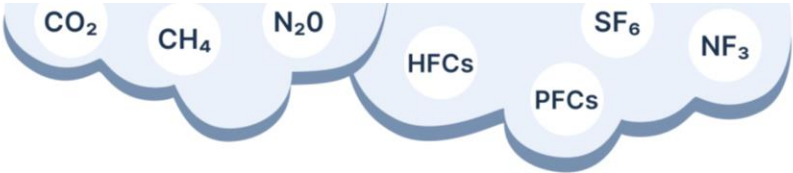
GREENHOUSE  
GAS PROTOCOL



## 6-Category



# The GHG Protocol



**Scope 1 (direct emissions)**

**Scope 2 (indirect emissions from purchased energy)**

**Scope 3 (other indirect emissions)**

Category 4: Upstream transportation and distribution

Category 6: Business travel

Category 7: Employee commuting

Category 9: Downstream transportation and distribution

Category 1: Purchased goods and services

Category 2: Capital goods

Category 3: Fuel and energy related activities

Category 5: Waste generated in operations

Category 8: Upstream leased assets

Category 10: Processing of sold products

Category 11: Use of sold products

Category 12: End-of-life treatment of sold products

Category 13: Downstream leased assets

Category 14: Franchises

Category 15: Investments

# 3-SCOPE VS 6-CATEGORY

Category 1: Direct GHG emissions and removals

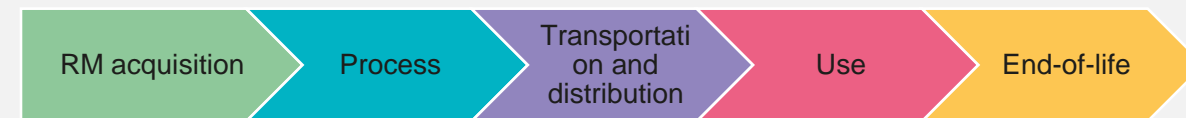
Category 2: Indirect GHG emissions from purchased energy

Category 3: Indirect GHG emissions from transportation

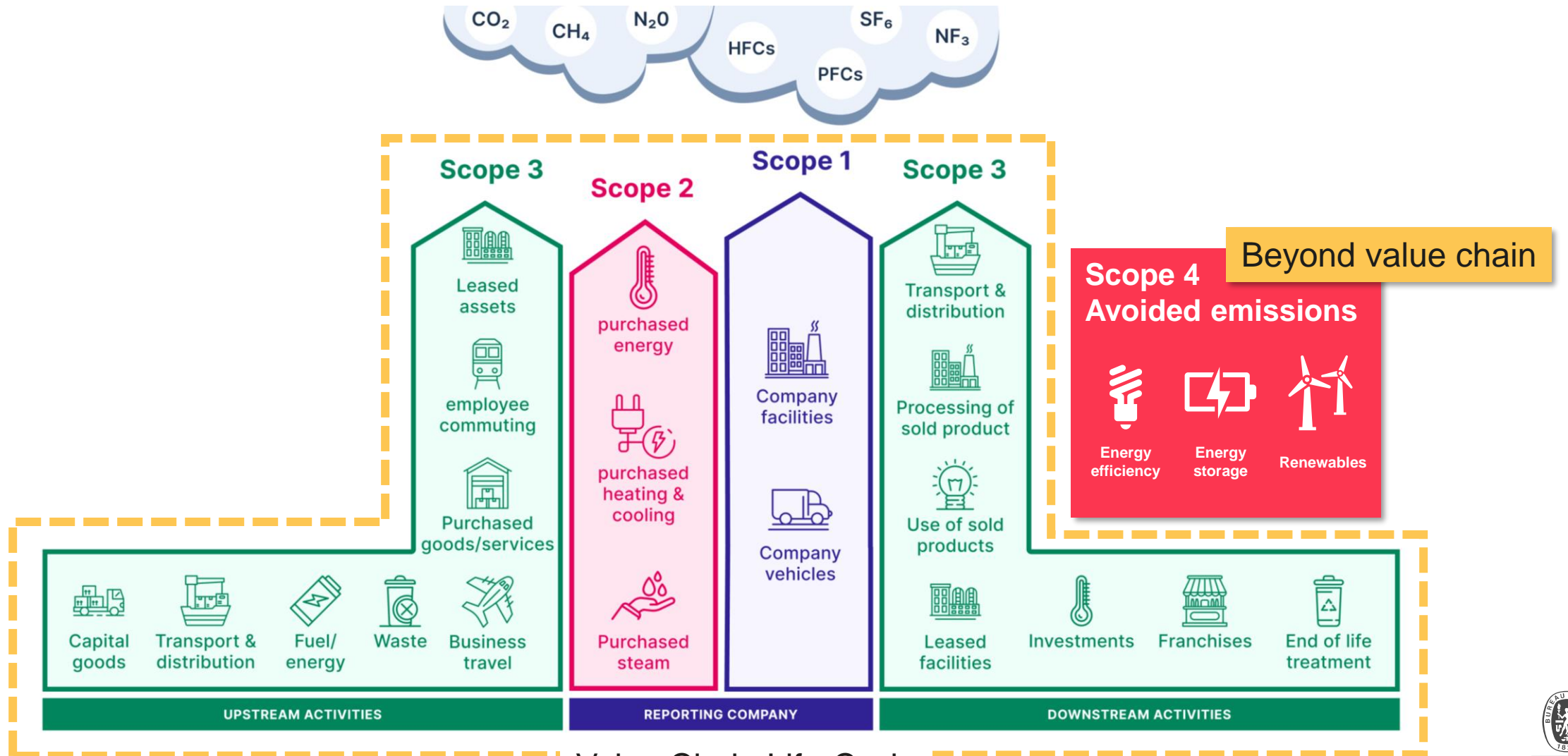
Category 4: Indirect GHG emissions from the use of products by the organization

Category 5: Indirect GHG emissions associated with the organization's use of products

Category 6: Indirect GHG emissions from other sources



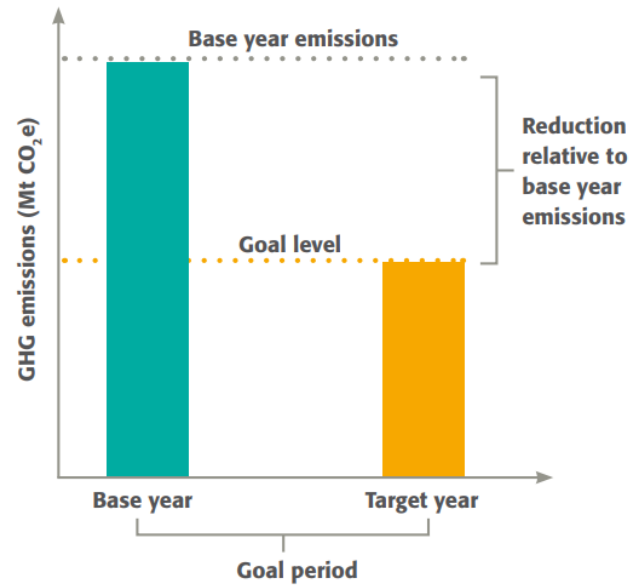
# INDIRECT GREENHOUSE GAS EMISSIONS FROM OTHER SOURCES?!



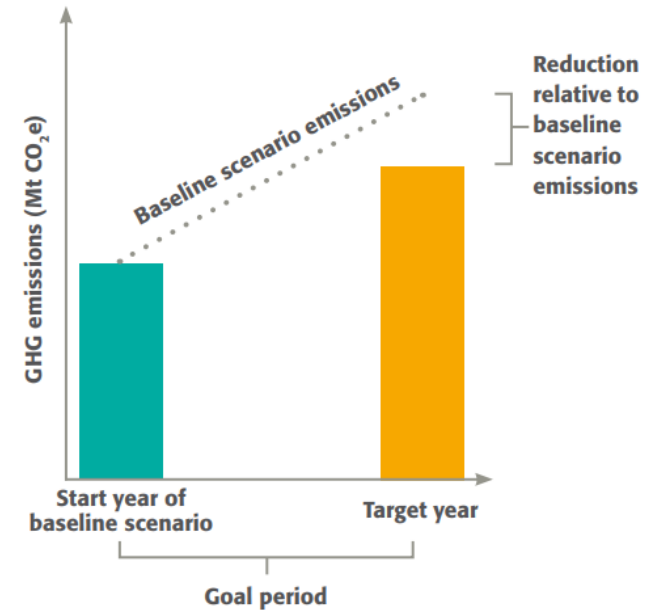
Value Chain Life-Cycle

# TARGET SETTING

## THE OUTCOME OF GHG MEASURING



Base year approach



Baseline approach

*The base line approach is only accepted for near-term SBT. Net-Zero emission is still required.*

## EXAMPLES OF AMBITIOUS TARGETS

### AMBITIOUS TARGETS

#### NDC

- | Reduction of 30% unconditionally and 40% conditionally
- | Net-Zero 2065



#### IPCC

| Scenarios     | 2030 | 2035 | 2040 | 2050 |
|---------------|------|------|------|------|
| 1.5°C Pathway | 43%  | 60%  | 69%  | 84%  |
| 2°C Pathway   | 21%  | 35%  | 46%  | 64%  |



*\*2019 base year*

Near-term: Either absolute emission or intensity emission is acceptable

# FORECASTING

## HOW TO

### Time Series Forecast

- | Forecast using economical model for time series consistency
- | *FORECAST.ETS*

### No Data?

- | Use electricity consumption as base for scaling emissions
- | Assumptions are applicable

Near-term: Either absolute emission or intensity emission is acceptable



**REDUCE**

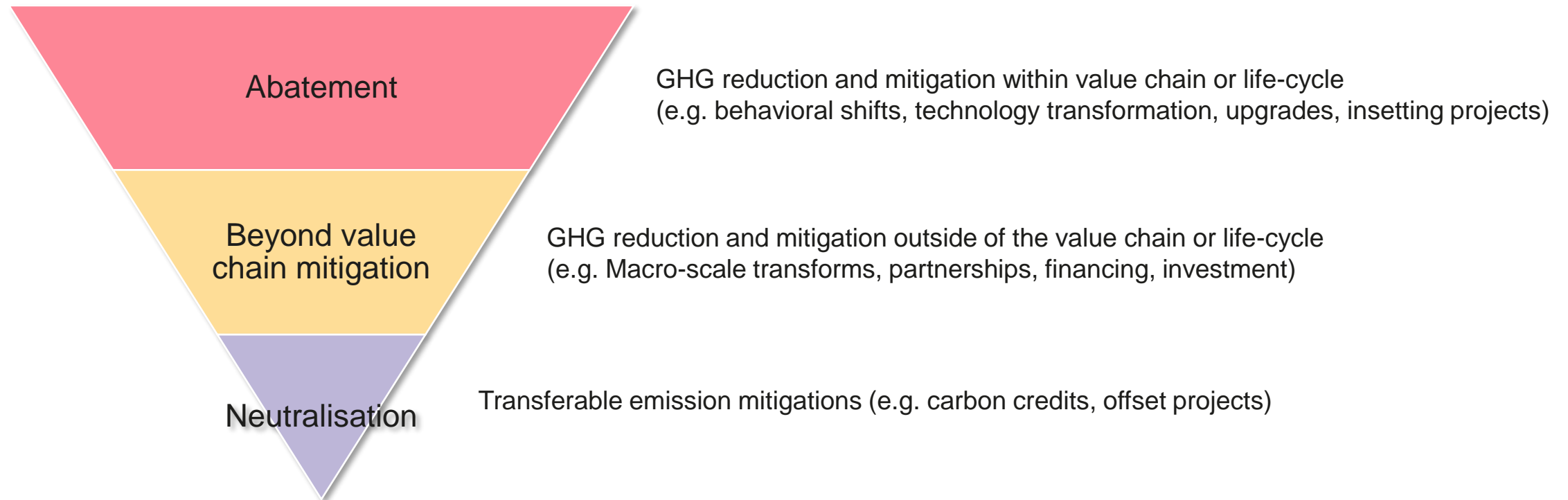


# SCIENCE-BASED TARGET MITIGATION



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

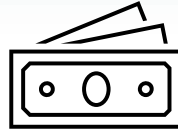


| INCLUDE



Include stakeholders  
to join the journey

| INVEST



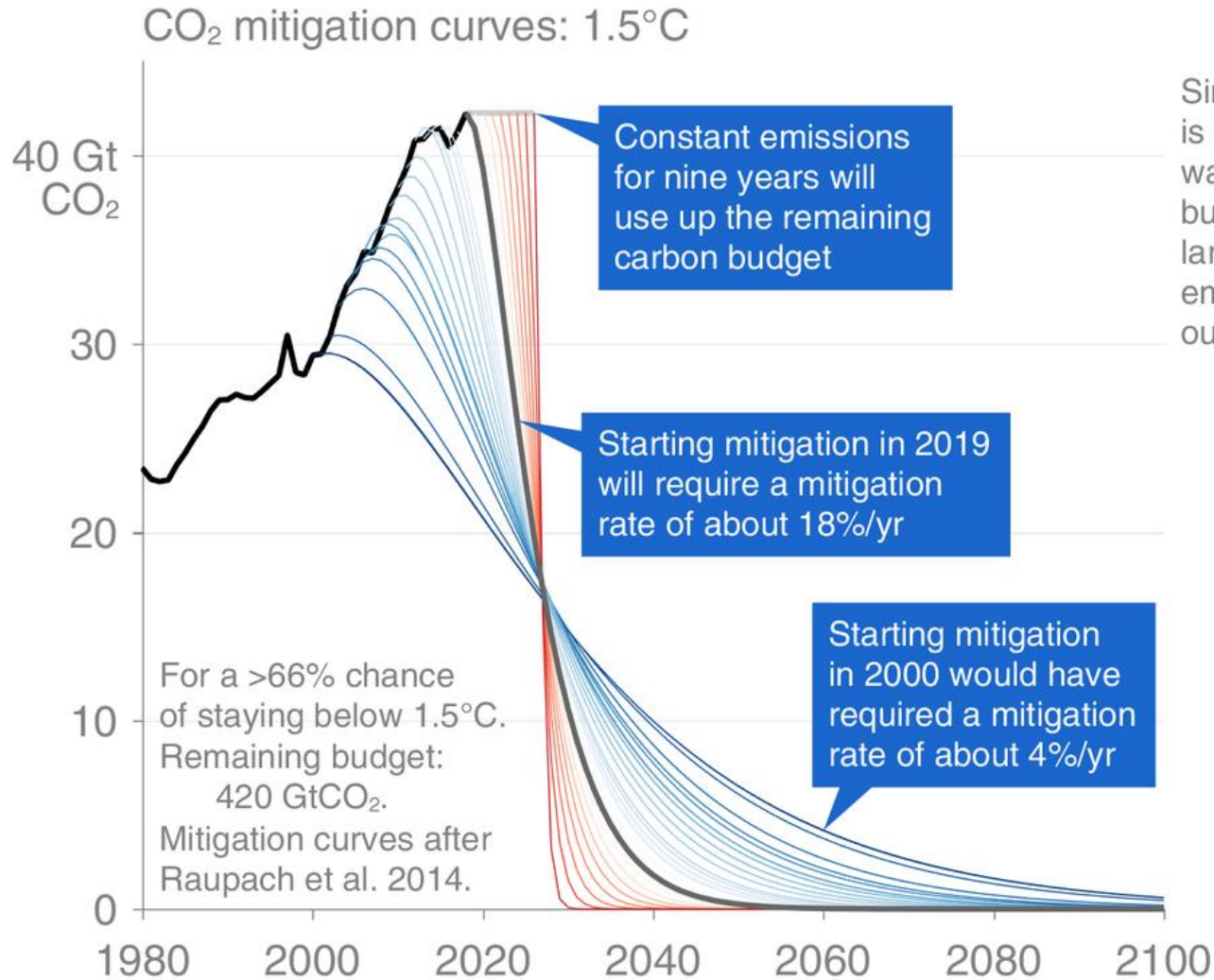
Invest in cleaner  
technology or gain  
investment

| INSET



Finance on material  
activities or projects in  
the life-cycle

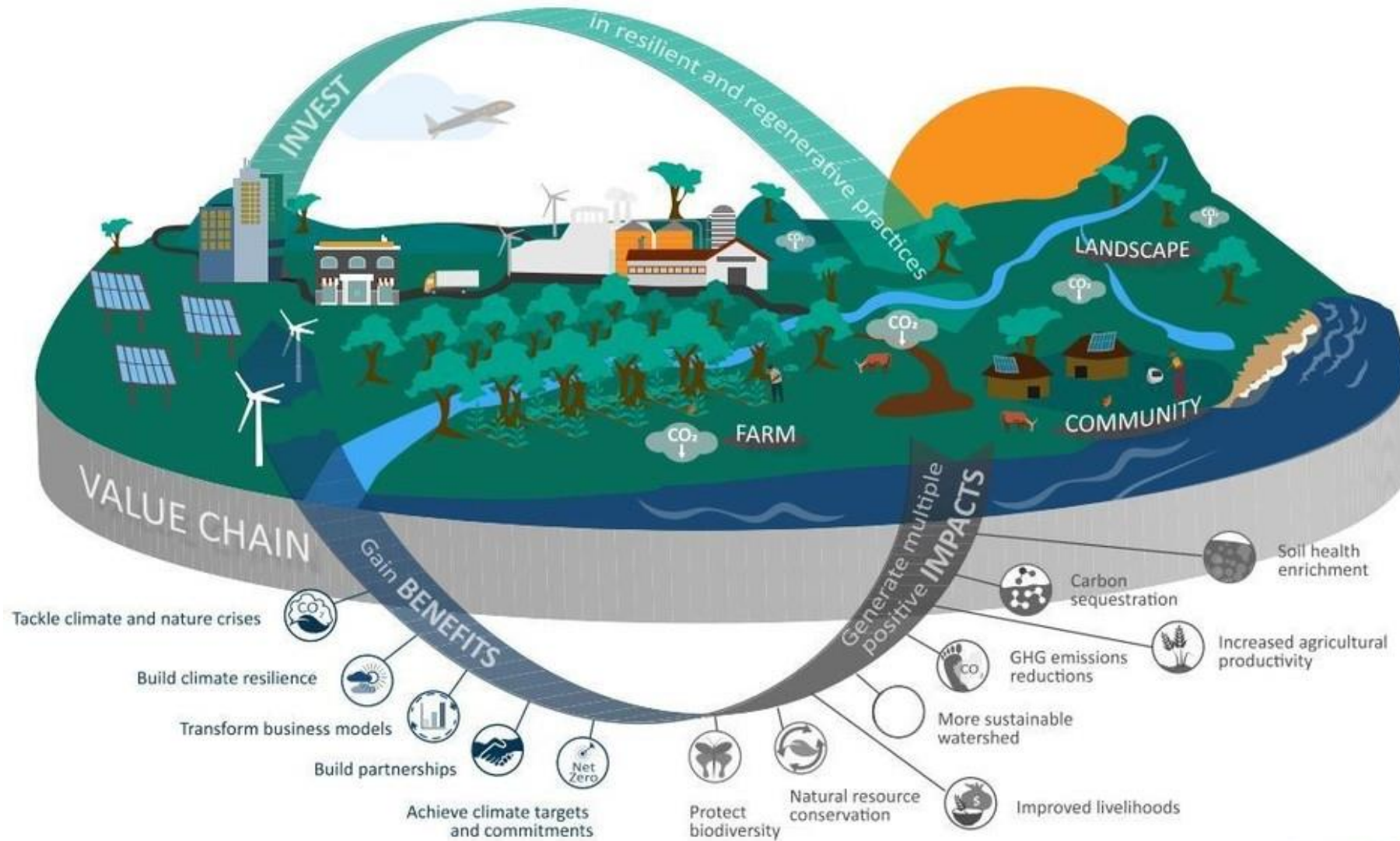
# THE OPPORTUNITY COST



Since 18%/yr mitigation is impossible, the only way to achieve this budget is with very large "negative" emissions: pulling CO<sub>2</sub> out of the atmosphere.

The national investment to achieve 4% reduction and reach net-zero by 2050 is THB 91trillion or THB 3.4trillion (2023). By not investing, the cost increases THB 1.15trillion every year

# INSETTING EMISSION (ABATEMENT)



# OFFSET

# DIFFERENT WAYS TO OFFSET



# GREENWASHING



CHULALONGKORN UNIVERSITY THESES AND DISSERTATIONS (CHULA ETD)

การฟอกเขียวด้วยการซื้อขายคาร์บอนเครดิตในประเทศไทย

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Other Title (Parallel Title in Other Language of ETD)  
Greenwashing by carbon credit trading in Thailand

320 DOWNLOADS  
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ฉบับนี้ที่ กั้นทวงต, คณะรัฐศาสตร์

## Forbes

FORBES > INNOVATION > SUSTAINABILITY

# Carbon Neutral Claims Under Investigation In Greenwashing Probe


Amy Nguyen Contributor 

*I write about sustainable business, fashion and supply chains.*

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## Bloomberg

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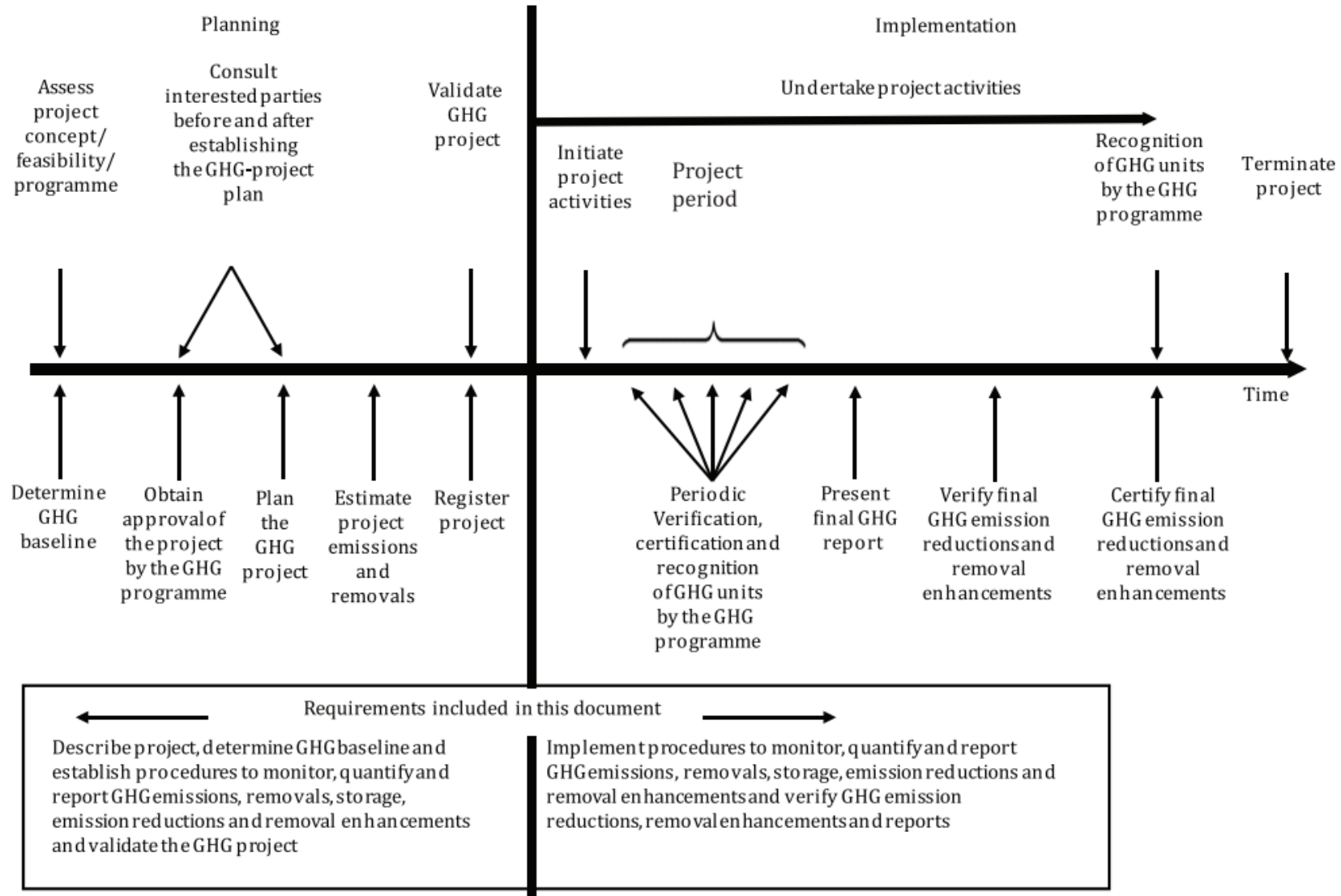
Green ESG & Investing

# Junk Offsets Are Feeding Wave of Greenwashing, Study Shows

- Only 6% of offsets are linked to additional carbon reductions
- Eni, BA, Nestle and TotalEnergies exposed to credits in study



# OFFSET PROJECT LIFE-CYCLE





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