



INTRODUCTION TO CLIMATE CHANGE, NET ZERO & OFFSETTING



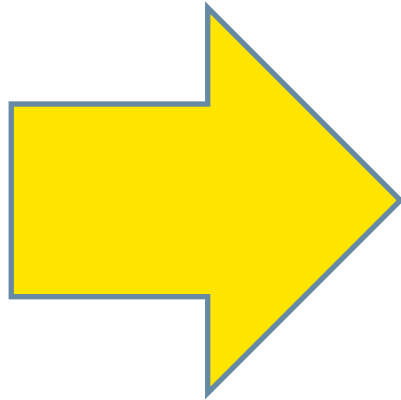
Stephanie Attal-Juncqua
Senior Partner, Carnstone

7th July 2021



THE EVOLUTION OF CARBON REDUCTION STRATEGIES

Meh!
2005



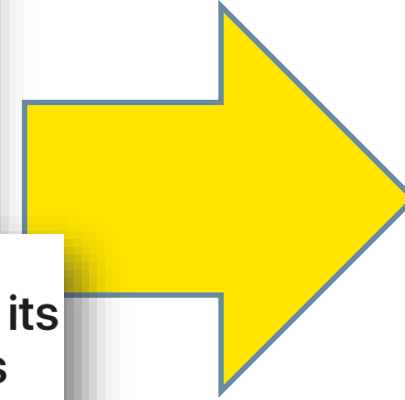
2015



2020



Apple commits to be 100 percent carbon neutral for its supply chain and products by 2030

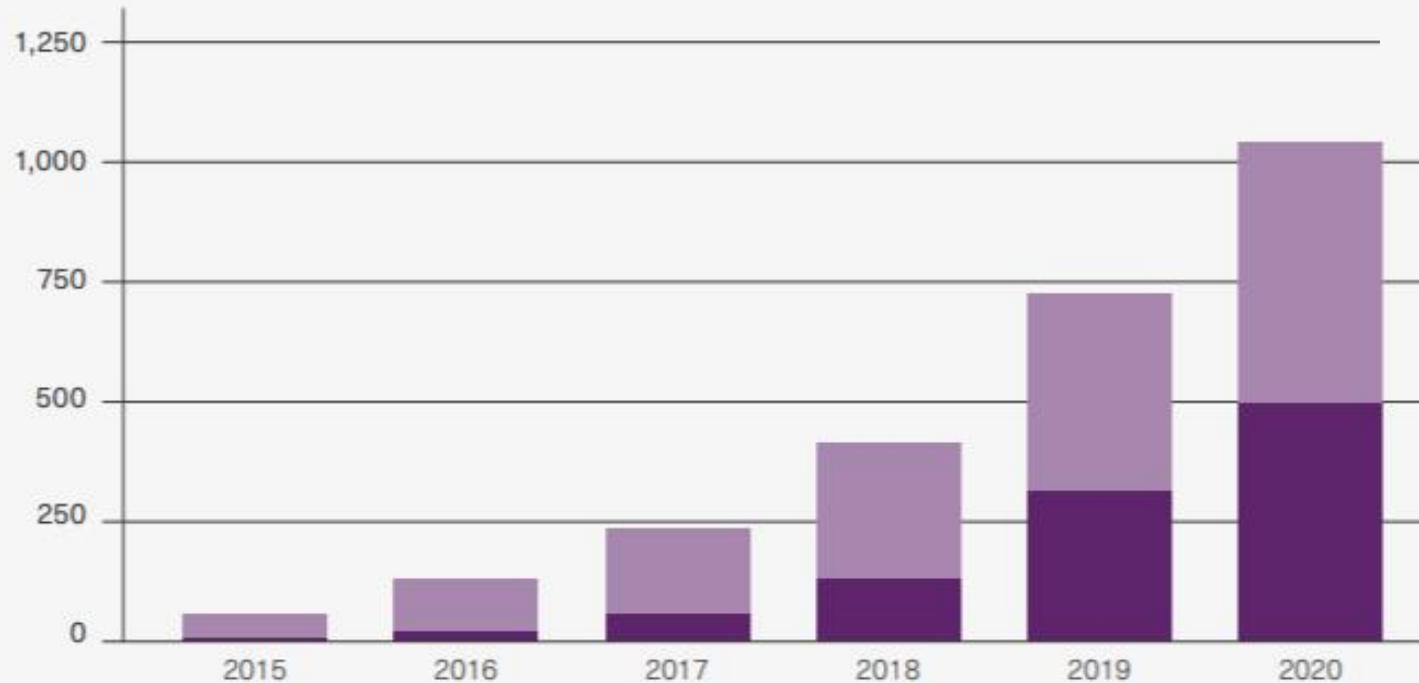


?
2035

THE RISE OF SBTS

INCREASING MOMENTUM

- Cumulative companies with approved targets
- Cumulative committed companies



The total number of companies that have committed to the SBTi and the total number of companies that have set targets. Data from this graph represent company activity from 28th May 2015 to 31st October 2020⁷.



GROWING SCRUTINY / RISK OF GREENWASHING?

Opinion Climate change

Climate plans of big companies need substance

Distant emissions pledges will ring hollow unless boards are held to account for progress now

ANDREW EDGECLIFFE-JOHNSON [+ Add to myFT](#)



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“Today’s CEOs will all be retired or dead by 2050.”

“Give me interim targets. Give me the narrative and then tell me what is the logic behind why you’re going to get to x per cent by 2030 and y per cent by 2040.”

Friends of the Earth International
mobilise resist transform.

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You are here: [Home](#) > [Resources](#) > Chasing Carbon Unicorns: The deception...

Chasing Carbon Unicorns: The deception of carbon markets and “net zero”

22 February, 2021

CHASING CARBON UNICORNS:

THE DECEPTION OF CARBON MARKETS AND “NET ZERO”

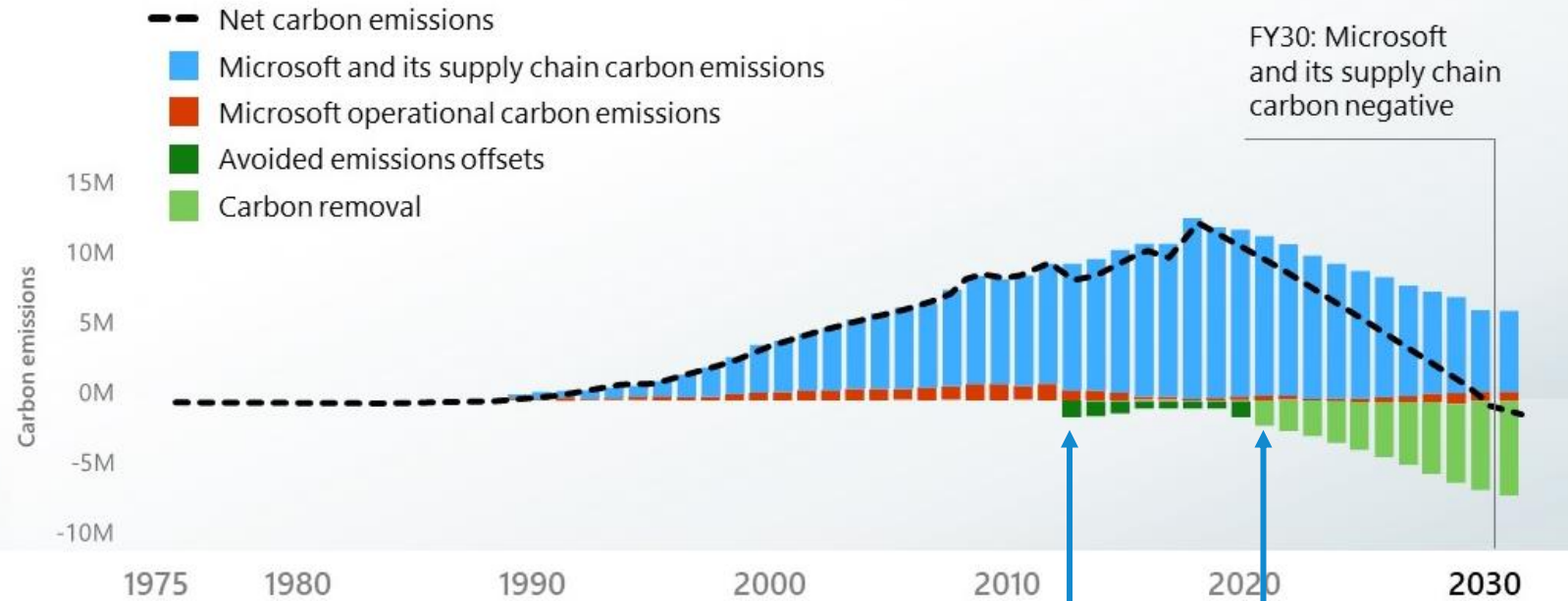


“Until we have the technologies that at scale can put our emission to minus, we must forget about net zero. We need real zero.”

EXAMPLE: MICROSOFT

Microsoft's pathway to carbon negative by 2030

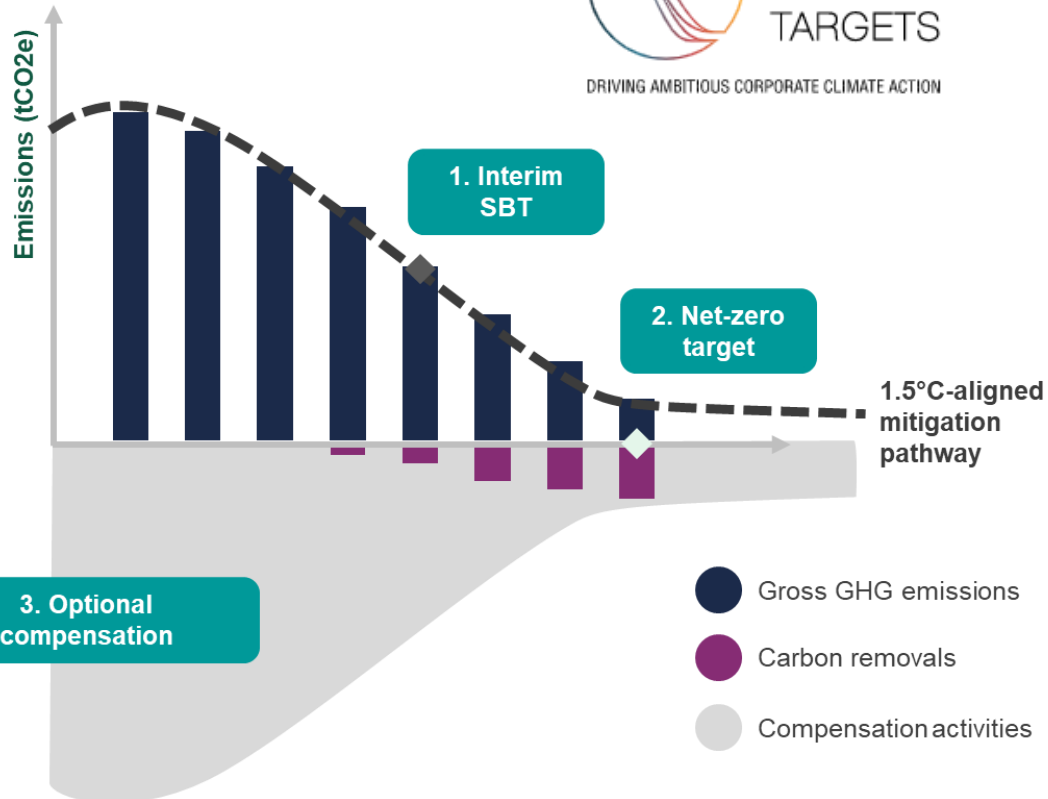
Annual carbon emissions



WHAT ARE OFFSETS?

- Offsets are a financial instrument representing “a unit of carbon dioxide-equivalent (CO₂e) that is reduced, avoided, or sequestered to compensate for emissions occurring elsewhere” (WRI)
- They are increasingly used as part of corporate GHG reduction strategies
- There is an emerging distinction between:
 - **Compensation** (avoidance/reduction) = offsets that avoid or reduce GHG emissions (e.g. preventing a forest from being cut)
 - **Removal** (sequestration) = offsets that are actively capturing Carbon from the atmosphere & storing it (e.g. planting a new forest or Direct Air Carbon Capture & Storage)

HOW SHOULD OFFSETS BE USED?



“Purchasing and retiring (that is, not re-selling) high-quality offsets can be a useful component (..) **once internal abatement opportunities have been realized**”



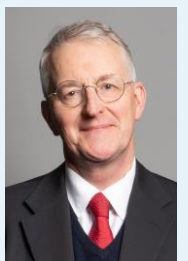
“use offsetting only as the final part of a three-pronged approach known as ‘**avoid, reduce, then offset**’”



“Ideally carbon offsets are used **after a company has reduced its emissions by internal action as far as possible.**”



“[T]he **first thing they should do is find ways to reduce their carbon footprint.** [For] emissions that can’t or won’t be avoided, offsetting can play an important role.”



RISKS OF GREENWASH WITH OFFSETS

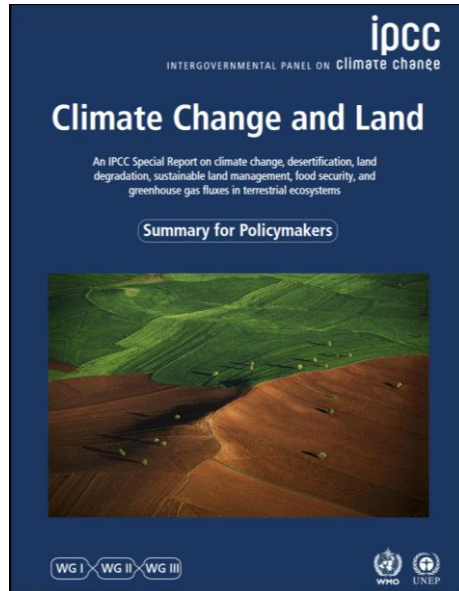
- The price is low (\$2.79/tCO₂e on average in 2020)
- To meet Paris Agreement, price needed = \$40-80/tCO₂e now and >\$50-100 by 2030.
- Can be criticised as “paying your way out of trouble”
- Focus needed on actual emission reductions

Table 1. Transacted Voluntary Carbon Offset Volume, Value, and Weighted Average Price by Project Category, 2019

	2019		
	VOLUME MtCO ₂ e	AVERAGE PRICE	VALUE
RENEWABLE ENERGY	42.4	\$1.4	\$60.1 M
FORESTRY AND LAND USE	36.7	\$4.3	\$159.1 M
WASTE DISPOSAL	7.3	\$2.5	\$18.0 M
HOUSEHOLD DEVICES	6.4	\$3.8	\$24.8 M
CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING	4.1	\$1.9	\$7.7 M
ENERGY EFFICIENCY/ FUEL SWITCHING	3.1	\$3.9	\$11.9 M
TRANSPORTATION	0.4	\$1.7	\$0.7 M

Source: Forest Trends State of the Voluntary Carbon Markets 2020

WHY DOES THIS MATTER FOR PUBLISHING?



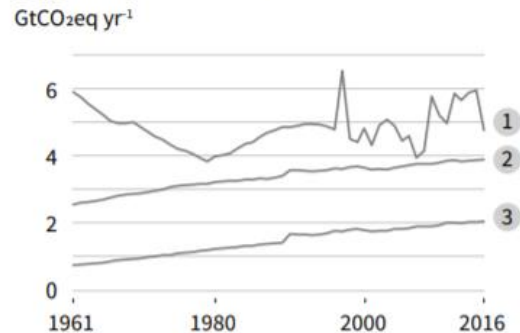
Paper and pulp industry is the fourth most energy-intensive in Europe. Reducing its energy consumption could play a big role in Europe's transition to a low carbon economy. ©AdobeStock, hxdyl

B. GHG emissions

An estimated 23% of total anthropogenic greenhouse gas emissions (2007-2016) derive from Agriculture, Forestry and Other Land Use (AFOLU).

CHANGE in EMISSIONS since 1961

- 1 Net CO₂ emissions from FOLU (GtCO₂ yr⁻¹)
- 2 CH₄ emissions from Agriculture (GtCO₂eq yr⁻¹)
- 3 N₂O emissions from Agriculture (GtCO₂eq yr⁻¹)



- Paper & pulp is 4th most energy intensive in Europe (5th worldwide)
- Emissions from land use are key driver of climate change
- Products from natural sources -> biodiversity & local environmental pollution