

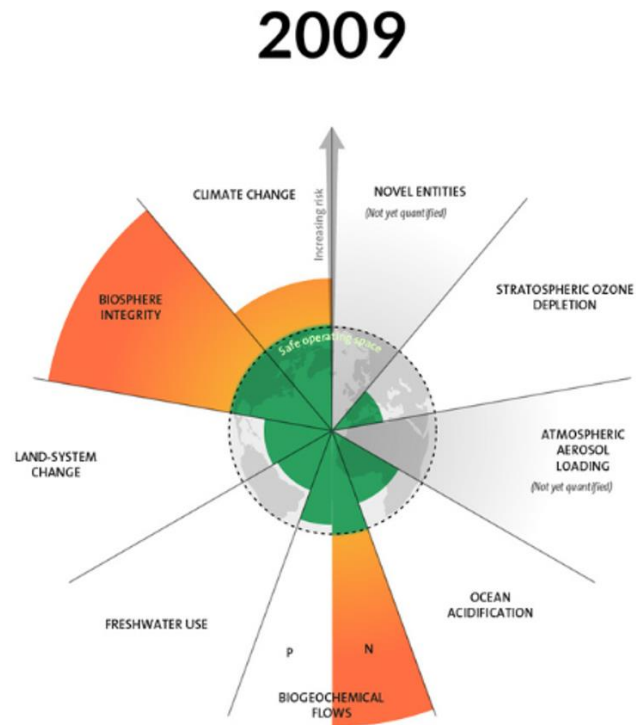


• Loading PTW Presentation |

HESSENMETALL ENERGIEEFFIZIENZKONGRESS

# CO<sub>2</sub>-BILANZIERUNG DER ETA-FABRIK – FOKUS SCOPE 3 EMISSIONEN

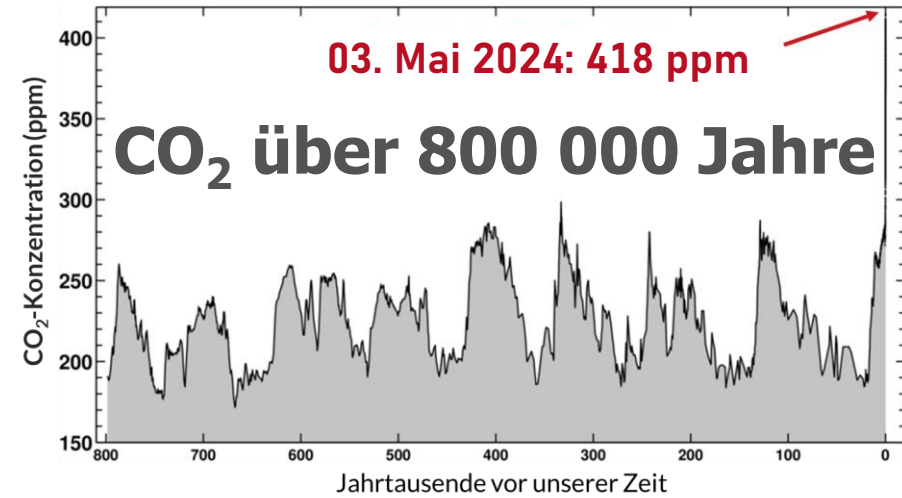
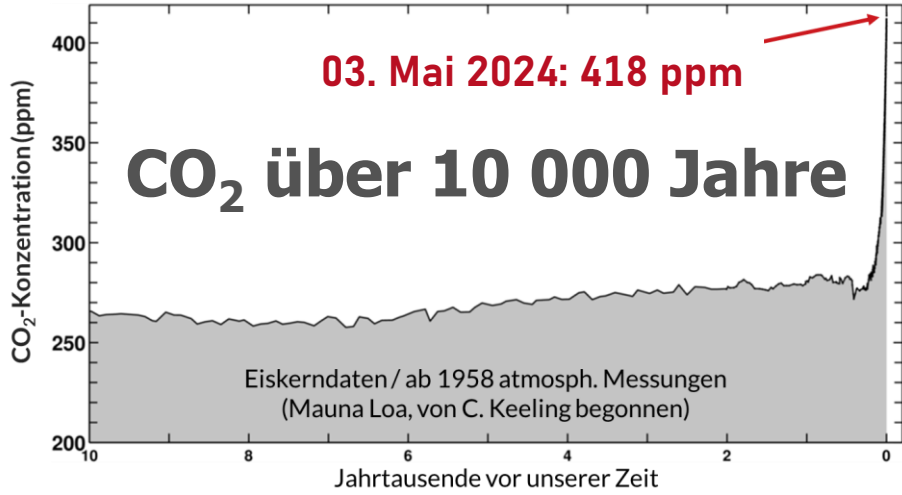
## PLANETARE GRENZEN



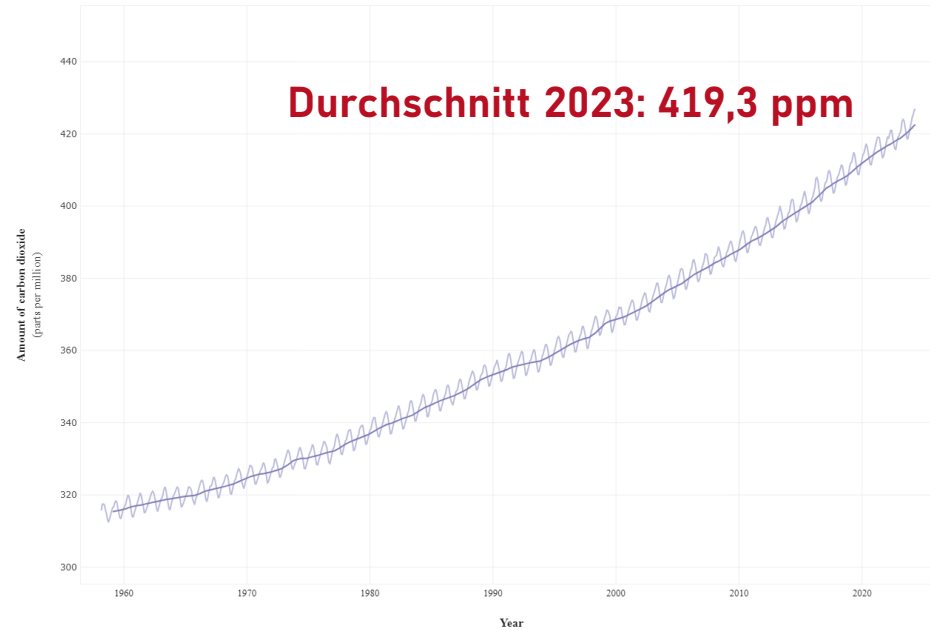
7 boundaries assessed,  
3 crossed

Quelle: Richardson, J., Steffen W., Lucht, W., Bendtsen, J., Cornell, S.E., et.al. 2023. Earth beyond six of nine Planetary Boundaries. [Science Advances, 9, 37.](#)

# ATMOSPHERISCHE CO<sub>2</sub>-KONZENTRATION



ATMOSPHERIC CARBON DIOXIDE



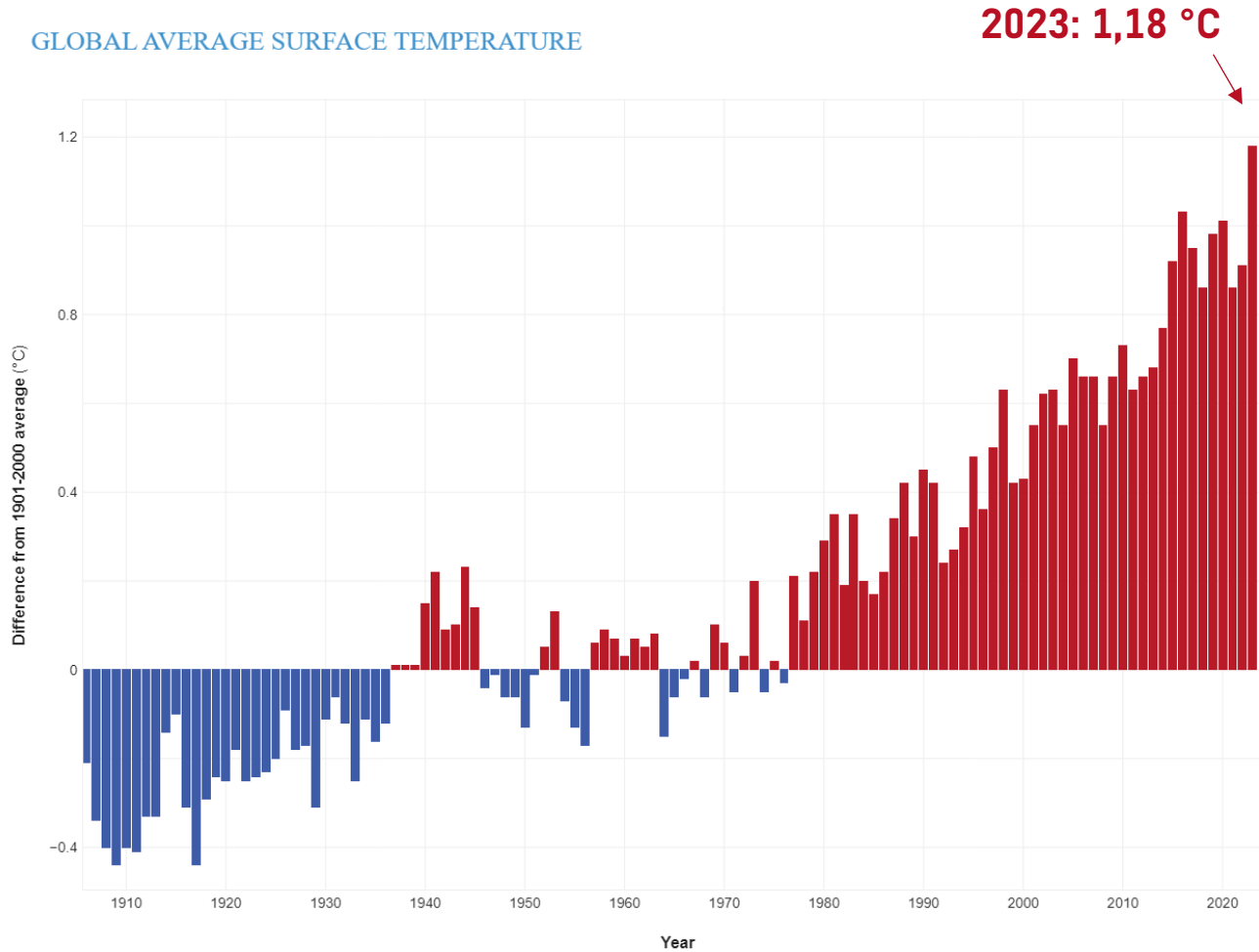
Quelle: adaptiert aus: Rebecca Lindsey, Apr 2024, Climate Change: Atmospheric Carbon Dioxide



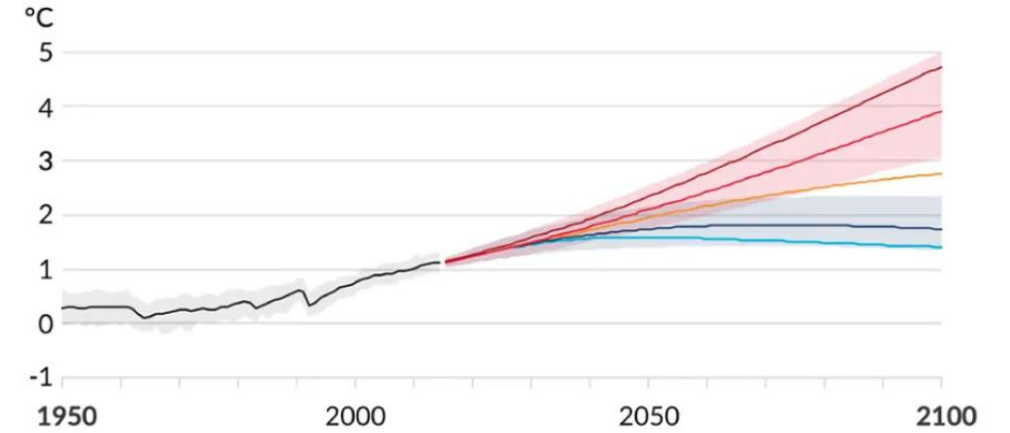
Quelle: Gregor Hagedorn, Scientists for Future, Foliensammlung Der Klimawandel

# GLOBALER TEMPERATURANSTIEG

GLOBAL AVERAGE SURFACE TEMPERATURE



Projected Temperature Increase (°C)



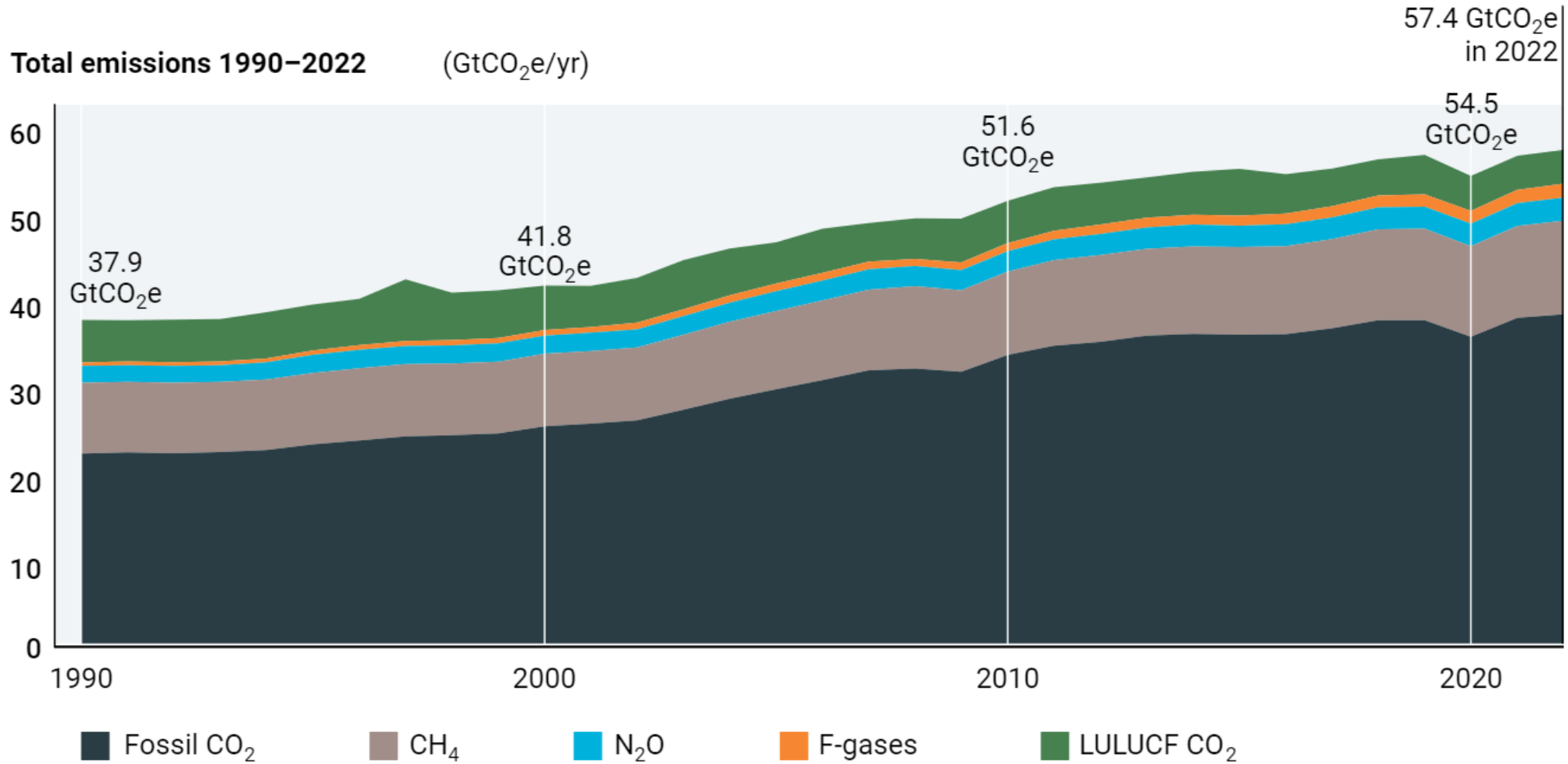
Five Scenarios of Fossil Fuel Burning

- Highest CO<sub>2</sub> amounts
- Medium to high CO<sub>2</sub> amounts
- Medium CO<sub>2</sub> amounts
- Smaller CO<sub>2</sub> amounts, then no increase in CO<sub>2</sub> late in the 21st century
- No increase in CO<sub>2</sub> beginning in 2050

Quelle: IPCC Working Group I, 2021

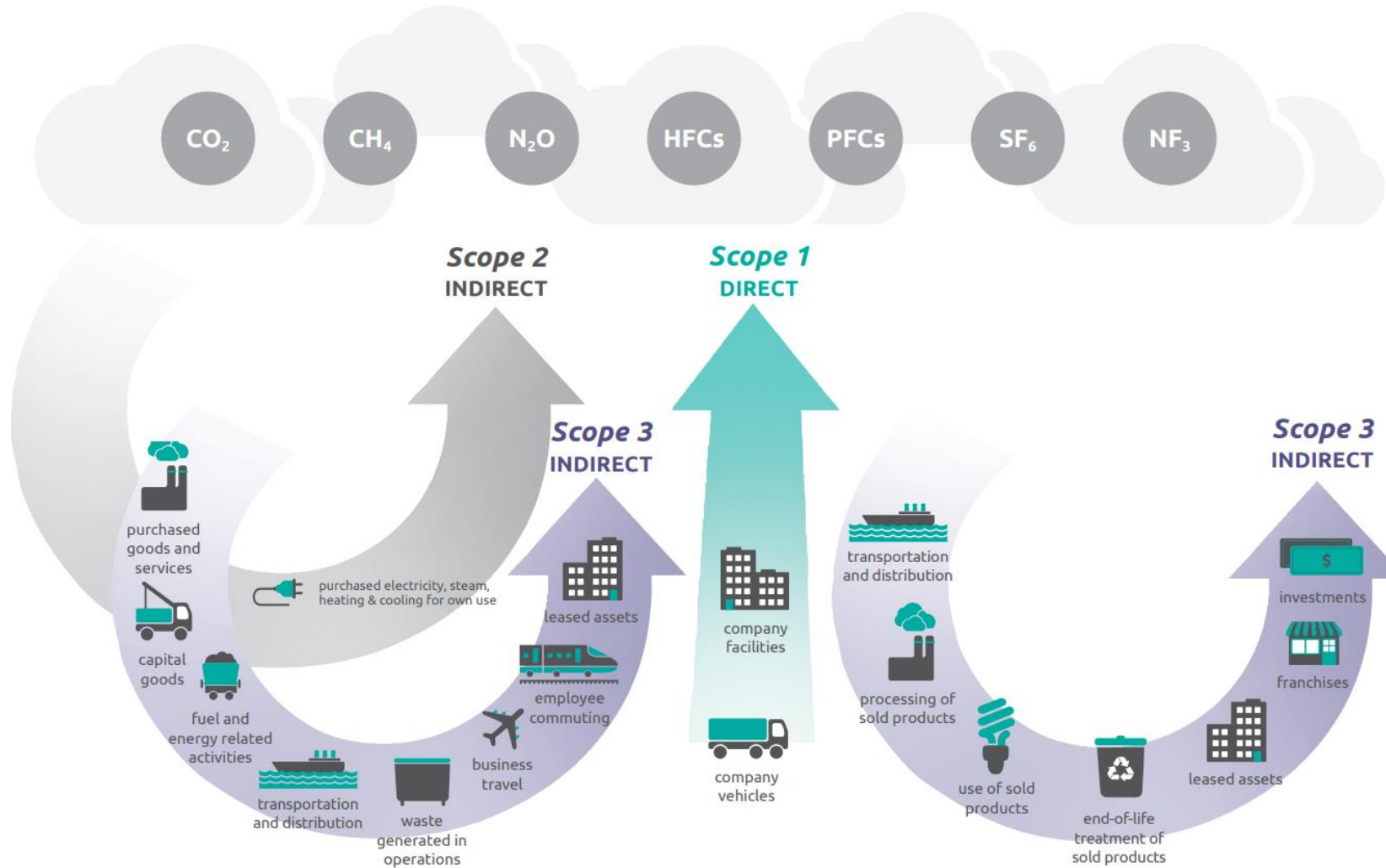
Quelle: Rebecca Lindsey, Jan 2024, Climate Change: Global Temperature

# ANTEILE DER TREIBHAUSGASE AN GESAMTEMISSIONEN



Quelle: UN Environment Programme, Emissions Gap Report 2023

# BILANZIERUNG ANHAND VON SCOPES NACH GHG-PROTOCOL



Quelle: Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions (version 1.0), Supplement to the Corporate Value Chain (Scope 3) Accounting & Reporting Standard

# SCOPE 1 EMISSIONEN

## Definition GHG-Protocol

Direkte Emissionen von Quellen, die die Firma besitzt oder kontrolliert.

Beispiele:

- Verbrennung von Erdgas zum Heizen
- Verbrennung von Kraftstoffen in Firmenfahrzeugen
- Chemische Prozesse, die Treibhausgase emittieren

## Erfassung in der ETA

- Verbrennung Erdgas (für Härteofen)
- Verbrennung Erdgas (für Gastherme)
- Verbrennung Erdgas (für BHKW)
- (Kein eigener Fuhrpark)



# SCOPE 2 EMISSIONEN

## Definition GHG-Protocol

Zugekaufte Elektrizität, Dampf, Hitze und Kühlung zur eigenen Nutzung:

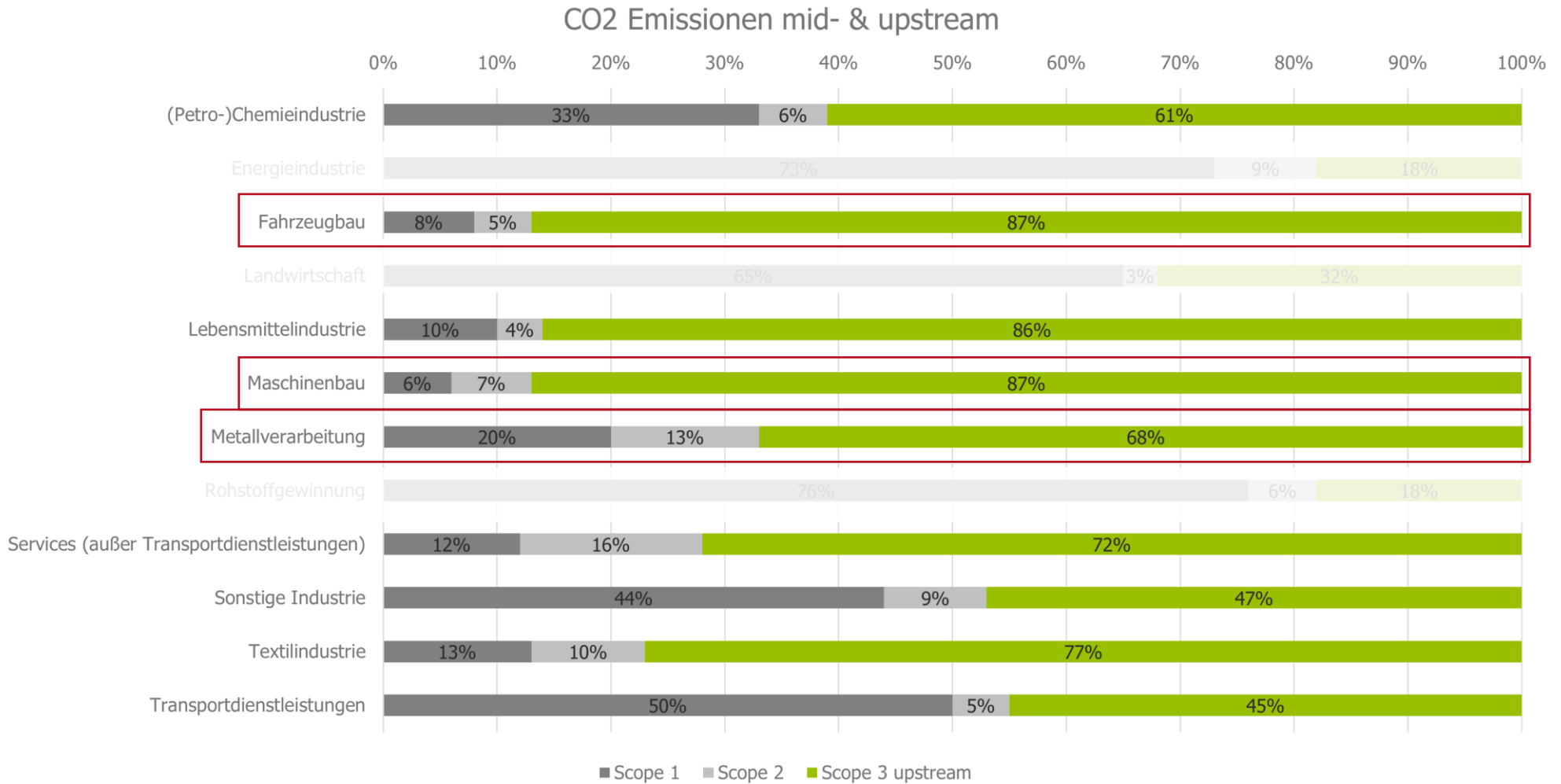
Beispiele:

- Strom aus dem Stromnetz
- Wärme aus einem Nah-/ Fernwärmenetz

## Erfassung in der ETA

- Strom (für Fabrikbetrieb und Büros)

# SCOPE 3 EMISSIONEN IN DER INDUSTRIE



Quelle: adaptiert aus: Schmidt, Nill, Scholz 2021 <https://doi.org/10.1002/cite.202100126>

# SCOPE 3 AKTIVITÄTEN NACH GHG PROTOCOL

## Table of Contents

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## CATEGORIES

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20

### 2: Capital Goods

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### 4: Upstream Transportation and Distribution

49

### 5: Waste Generated in Operations

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### 6: Business Travel

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### 7: Employee Commuting

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### 8: Upstream Leased Assets

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## SCOPE 3 IN DER ETA

- Reinigungsmittel
- Kühlschmierstoffe
- Maschinenöl
- **Rohlinge**
- Werkzeuge
- Prozessgase
- Arbeits-/Schutzkleidung
- Kaffee
- Papier

## CATEGORIES

<b>1: Purchased Goods and Services</b>	20
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## SCOPE 3 IN DER ETA

**Nicht erfasst**, da Investitionsgüter in vergangenen Jahren angeschafft wurden.

Mögliche Beispiele sind:

- Hallen und Gebäude
- Maschinen

### CATEGORIES

<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
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## SCOPE 3 IN DER ETA

- Transport der Gase und Brennstoffe
- Strombedarf im Home Office
- Wärmebedarf im Home Office

## CATEGORIES

<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
<b>3: Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2</b>	38
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## SCOPE 3 IN DER ETA

- Transport der Rohlinge
- Transport Hilfs- und Betriebsstoffe

<b>CATEGORIES</b>	
<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
<b>3: Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2</b>	38
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## SCOPE 3 IN DER ETA

- (Metall-)Späne
- Alt-KSS
- Alt-Öl
- Alt-Werkzeuge
- Wasser

<b>CATEGORIES</b>	
<b>1: Purchased Goods and Services</b>	20
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## SCOPE 3 IN DER ETA

- Transport (Transportmittel & Distanz)
- Energiebedarf am Unterkunftsart

## CATEGORIES

<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
<b>3: Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2</b>	38
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## SCOPE 3 IN DER ETA

- Transportmittel & Distanz

<b>CATEGORIES</b>	
<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
<b>3: Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2</b>	38
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## SCOPE 3 IN DER ETA

**Nicht erfasst**, da die ETA-Fabrik keine geleaste Assets nutzt.

Mögliche Beispiele sind:

- Fahrzeuge
- Maschinen

### CATEGORIES

<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
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## SCOPE 3 IN DER ETA

- Transport der Steuerscheibe (Transportmittel & Distanz)

<b>CATEGORIES</b>	
<b>1: Purchased Goods and Services</b>	20
<b>2: Capital Goods</b>	36
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## SCOPE 3 IN DER ETA

**Nicht erfasst**, da die ETA-Steuerscheibe nicht verkauft wird.

Dadurch keine Weiterverarbeitung und auch keine Nutzung.

Mögliche Beispiele sind:

- Verkauf an Veredler, z. B. zum Lackieren
- Verkauf an Endkunden für Nutzung (z. B. Fahren mit PKW)

## CATEGORIES

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## SCOPE 3 IN DER ETA

- Art der Endbehandlung der Produkte (hier: Recycling)

<b>CATEGORIES</b>	
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# SCOPE 3 IN DER ETA

**Nicht erfasst**, da die ETA keine Assets verleast, Franchise-Betrieb unterhält und auch keine Investments tätigt.

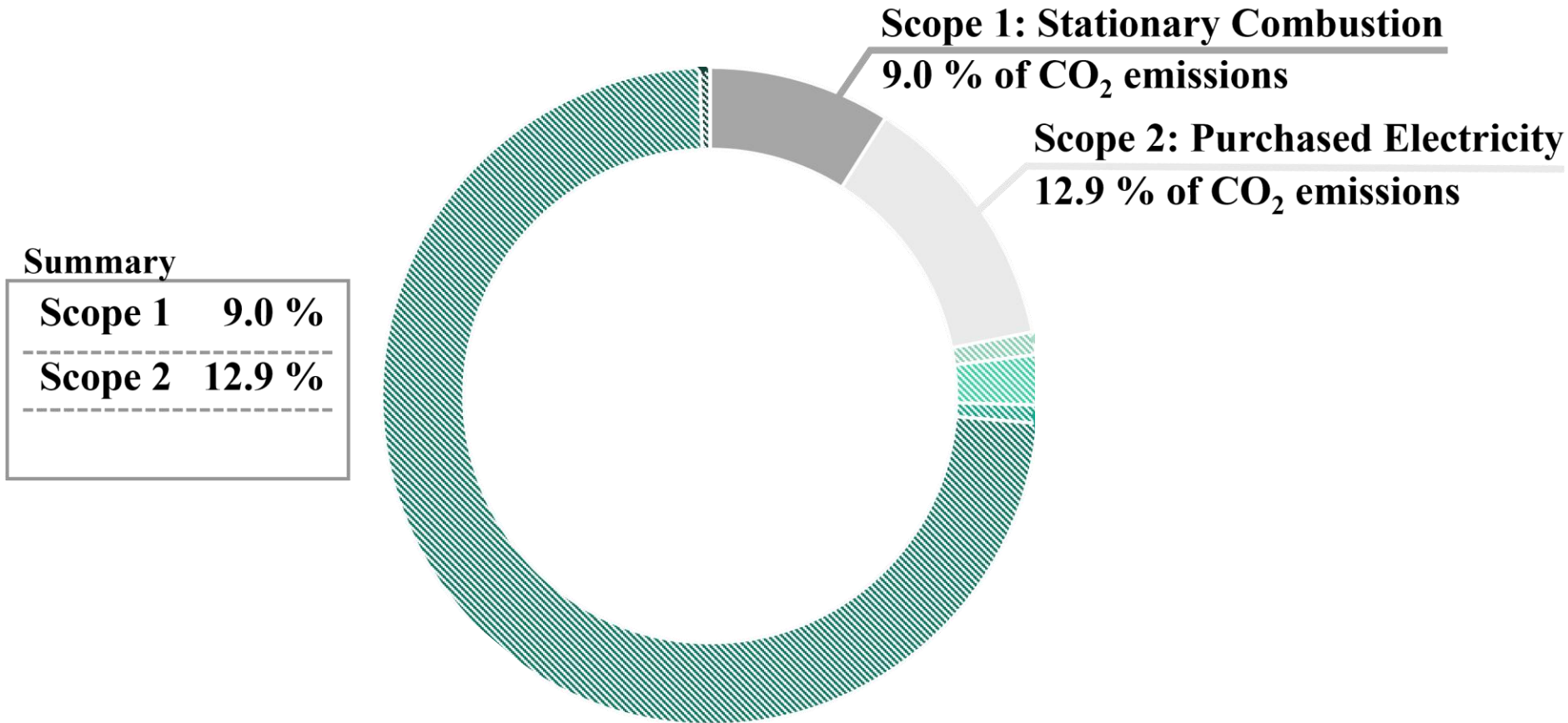
Mögliche Beispiele sind:

- Betrieb verleaster Maschinen
- Betrieb einer Franchise-Einrichtung
- Projektfinanzierungen

## CATEGORIES

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# CO<sub>2</sub>-BILANZ DER ETA 2023



Quelle: Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions (version 1.0), Supplement to the Corporate Value Chain (Scope 3) Accounting & Reporting Standard



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