



Integrated Sustainability Solutions Platform

January, 2020

Noam Gressel, Ph.D.

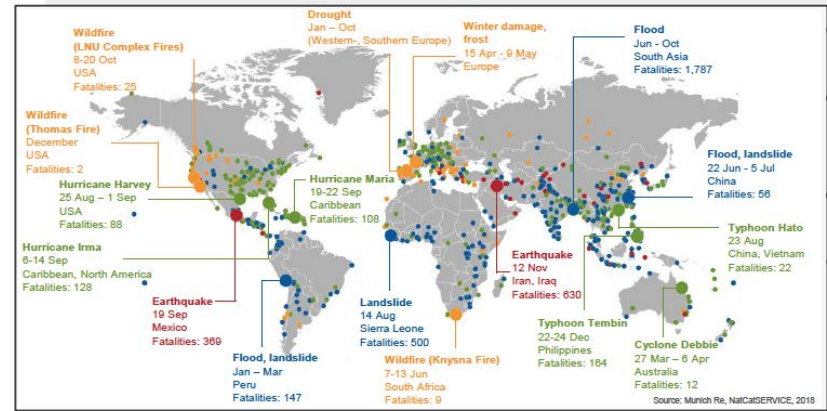
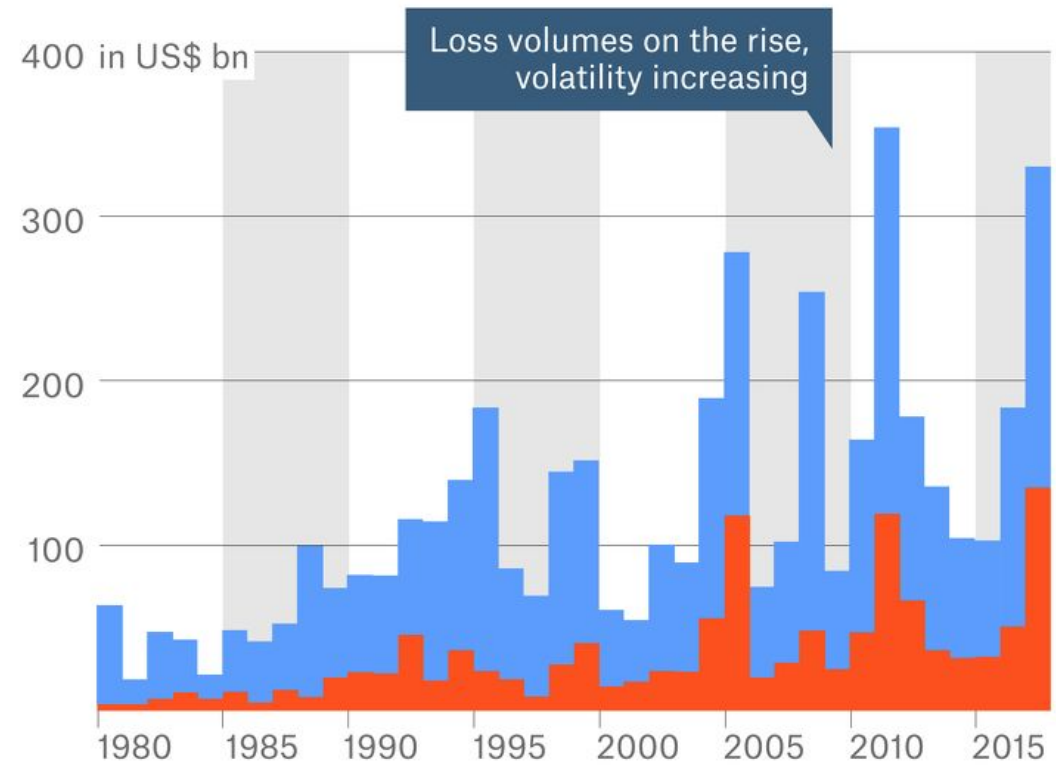
noam.gressel@ecoos.co

+972-52-341-4847





“2017 was the second-costliest year ever for natural disasters. Losses from weather-related disasters broke all previous records.”



■ Overall losses (in 2016 values)
■ Of which insured losses





JP Morgan economists warn of 'catastrophic' climate change

By Tom Espiner
Business reporter, BBC News

3 days ago | Business

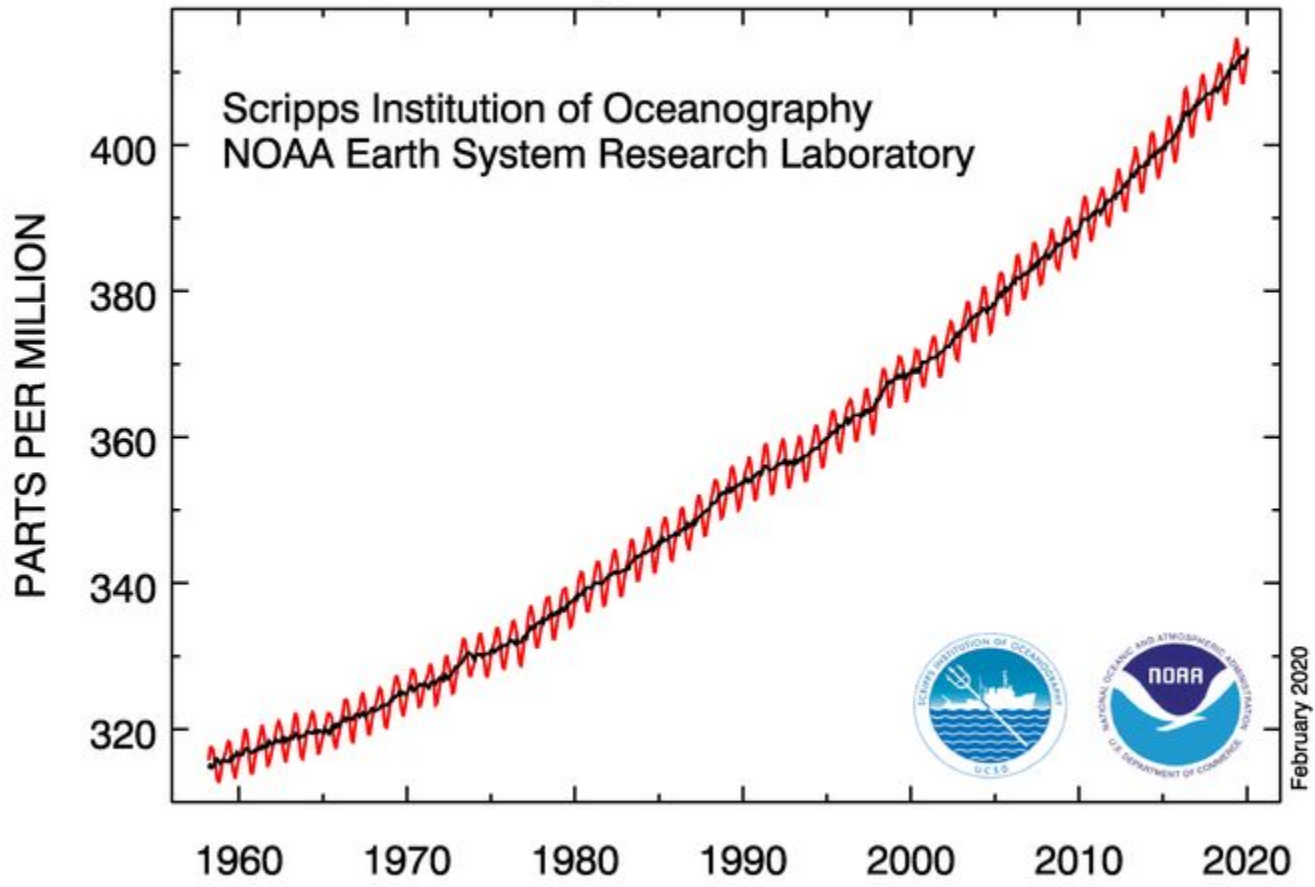
Human life "as we know it" could be threatened by climate change, economists at JP Morgan have warned.

UK steam engineer & amateur meteorologist Guy Stewart Callendar:

- **Data**: Kew, UK 1898-1901 vs. East USA 1936-1938
- **Results**: 274 ppmv vs. 310 ppmv CO₂
- **Conclusion**: CO₂ concentrations were rising due to anthropogenic emissions.

Source: Callendar, Guy Stewart (1938). "The artificial production of carbon dioxide and its influence on temperature". Quarterly Journal of the Royal Meteorological Society. 64 (275): 223–240.

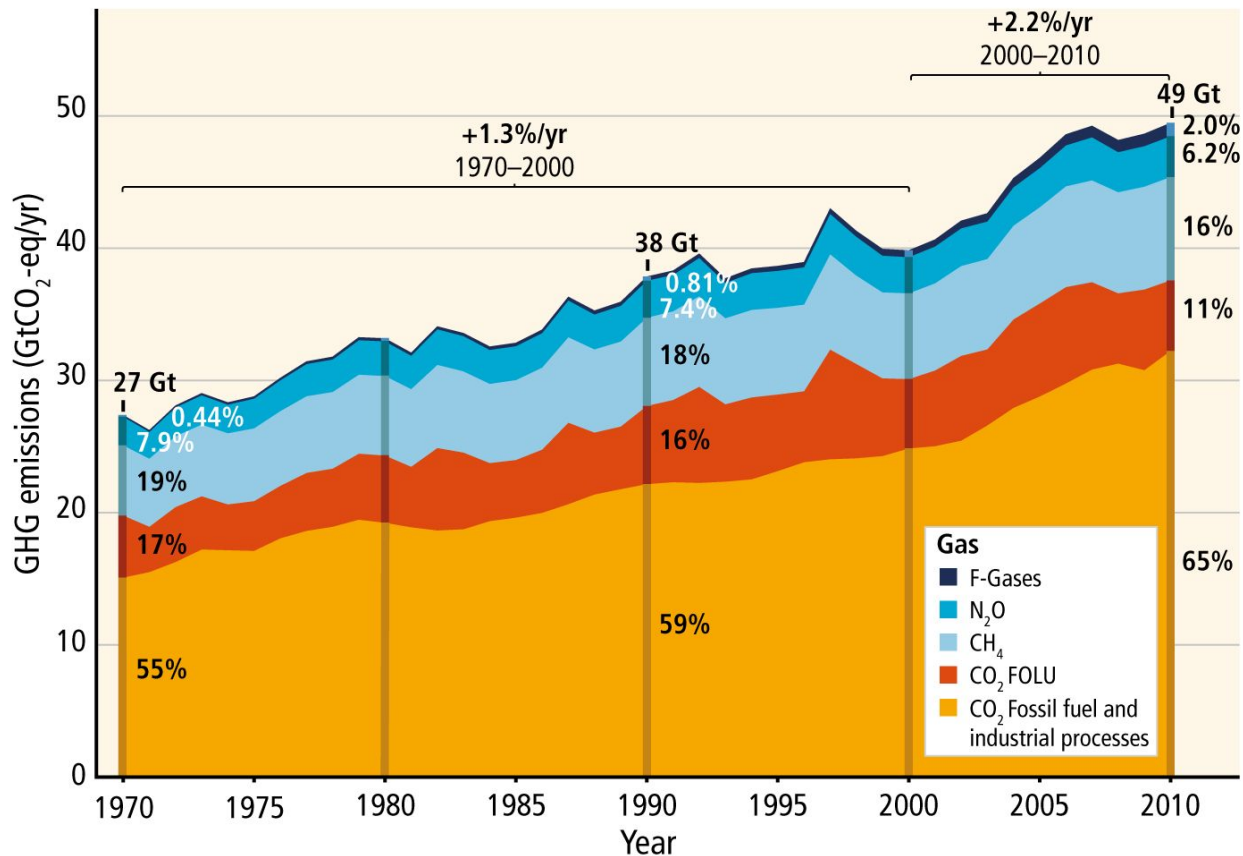
Atmospheric CO₂ at Mauna Loa Observatory



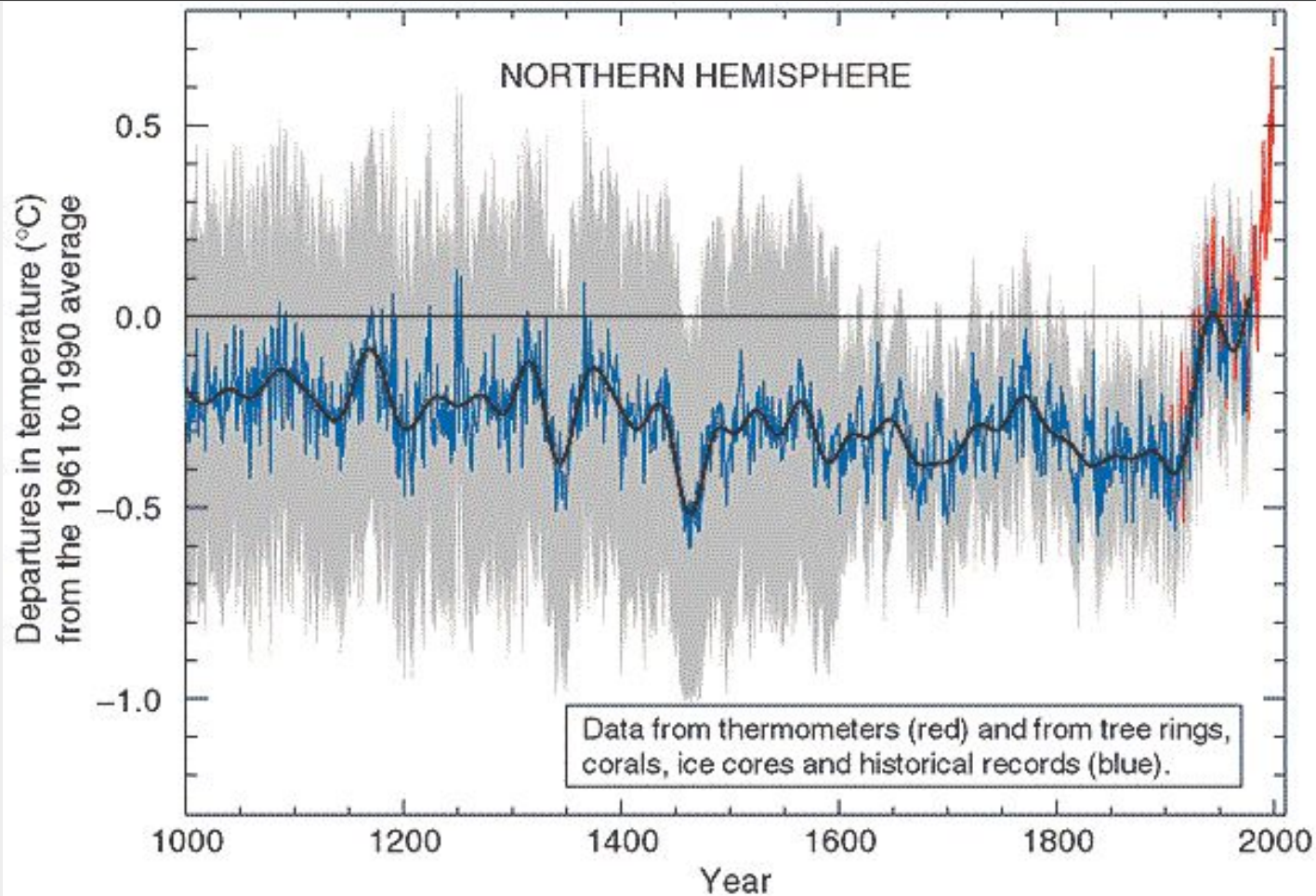


- Science & data
- Inventories & methodologies
- Assessments & scenarios
- Recommendations

Total annual anthropogenic GHG emissions by gases 1970–2010



"The Hockey Stick" (1998)



Original Sources:

“Global-scale temperature patterns and climate forcing over the past six centuries.”
Michael Mann, Raymond Bradley & Malcolm Hughes,
Nature, 1998

Carbon Offsets

Offsets represent emission reductions that have been achieved outside of the capped sector.

1 Company A needs to meet its emissions cap



2 Company A invests in an emission reduction project that produces carbon offsets



INVESTMENT



3 Company A receives carbon credits for its investment



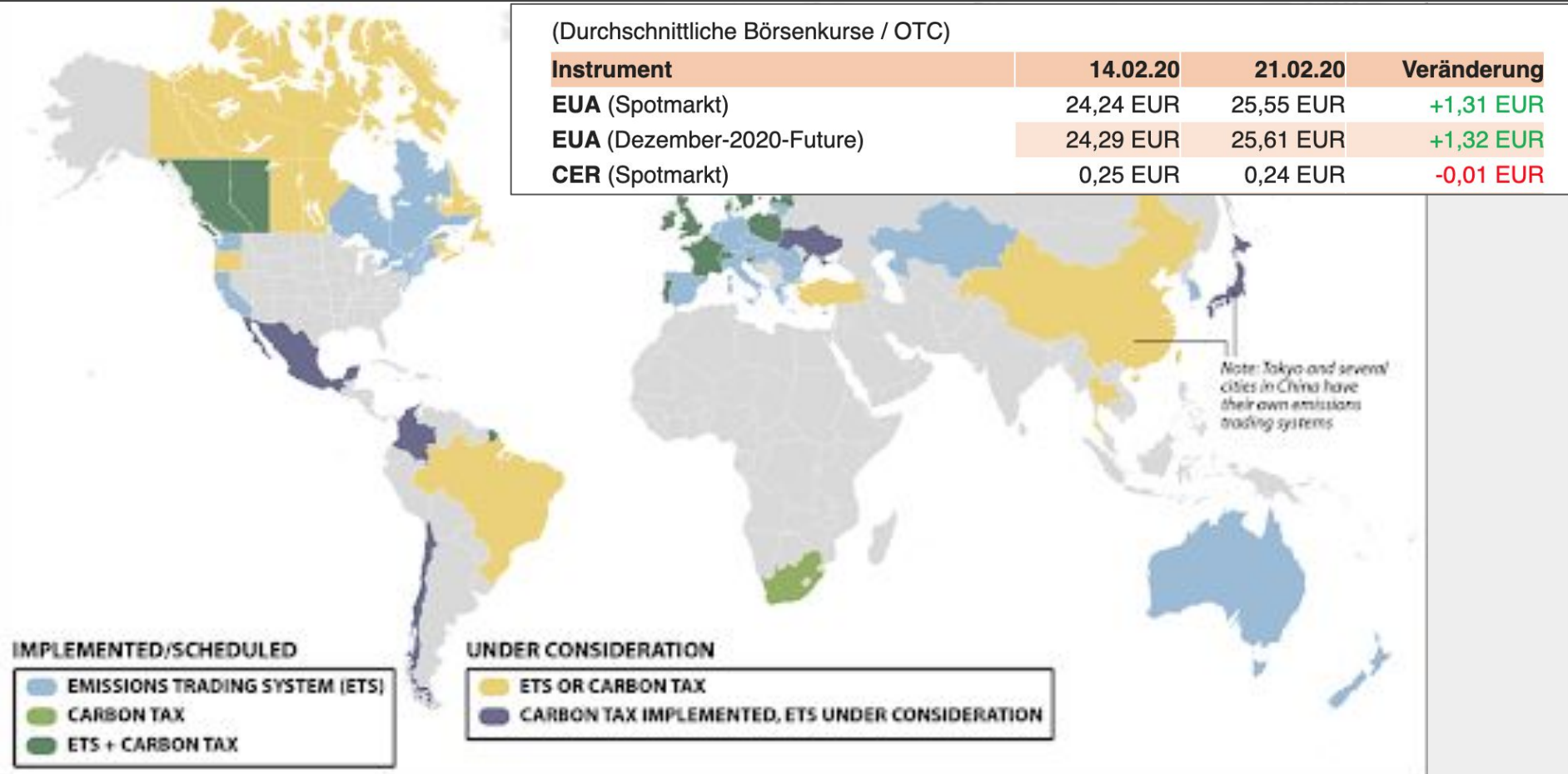
CARBON OFFSET

- Carbon offsets programs can include:
- Reforestation
 - Renewable energy
 - Methane capture/combustion

One carbon credit = One tonne of greenhouse gas emission reductions

(Durchschnittliche Börsenkurse / OTC)

Instrument	14.02.20	21.02.20	Veränderung
EUA (Spotmarkt)	24,24 EUR	25,55 EUR	+1,31 EUR
EUA (Dezember-2020-Future)	24,29 EUR	25,61 EUR	+1,32 EUR
CER (Spotmarkt)	0,25 EUR	0,24 EUR	-0,01 EUR



IMPLEMENTED/SCHEDULED

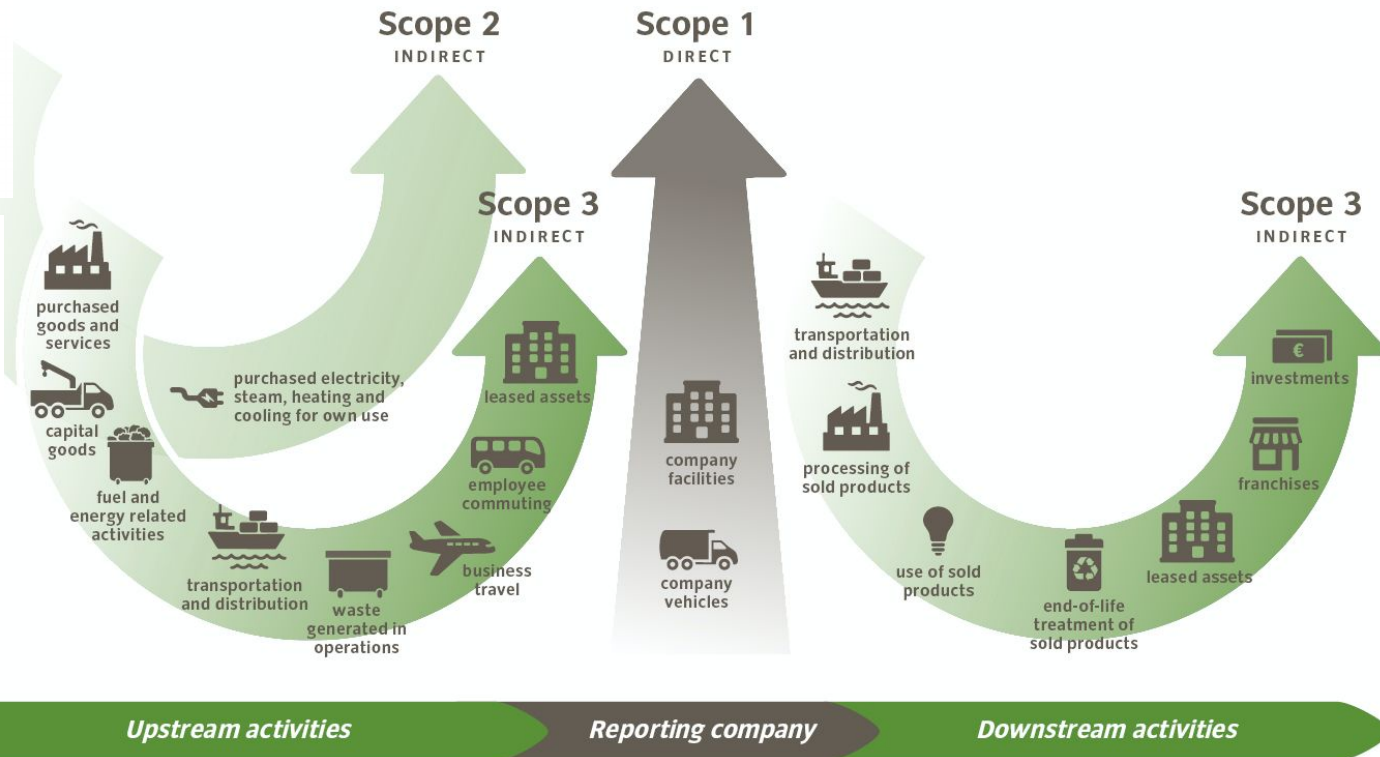
- EMISSIONS TRADING SYSTEM (ETS)
- CARBON TAX
- ETS + CARBON TAX

UNDER CONSIDERATION

- ETS OR CARBON TAX
- CARBON TAX IMPLEMENTED, ETS UNDER CONSIDERATION



GREENHOUSE GAS PROTOCOL





איכות אוויר

שינויי אקלים

ניהול משאבים

אמות מידה בינלאומיות

יעדים

מאזן אקולוגי

דוח אחריות תאגידית 2018 < חוסן סביבתי שינויי אקלים

השוואת ביצועי פליטת גזי חממה

> ממוצע עולמי
838

> ממוצע EU-28
813

נשר
811

פחמן דו-חמצני
(ק"ג לטון קלינקר)

Gross CO₂ emissions
(kg per tonne clinker)

> ממוצע עולמי
642

> ממוצע EU-28
627

נשר
622

פחמן דו-חמצני
(ק"ג לטון שווה ערך מלט)

Gross CO₂ emissions
(kg per tonne cementitious products)

מחוז לישראל	ישראל	גלובלי	
1,100,266	2,222,551	3,322,817	סך פליטות גזי חממה
541,726	1,735,940	2,277,666	מכלול 1 (אלפי טונות CO ₂ e)
552,848	399,192	952,040	מכלול 2 מבוסס שוק (אלפי טונות CO ₂ e)
5,692	87,420	93,111	מכלול 3 (אלפי טונות CO ₂ e)

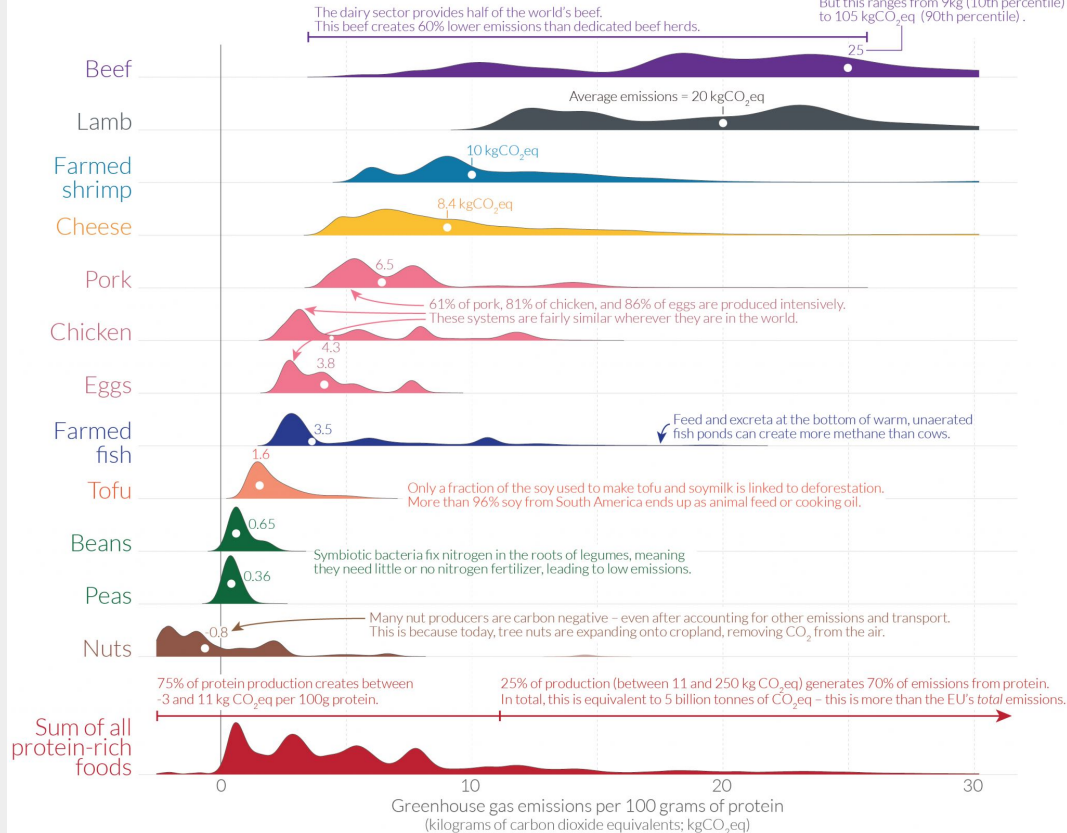
מדרכי פחמן (carbon footprint) של מוצרים

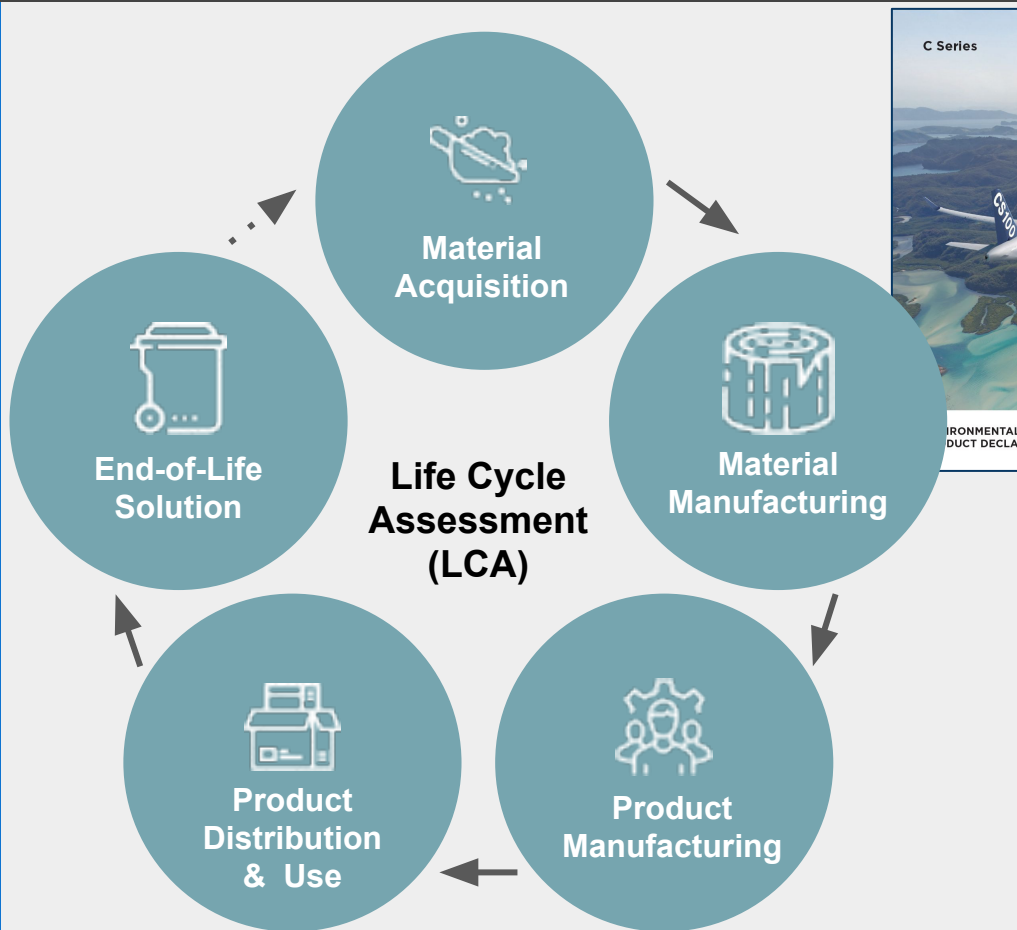
How does the carbon footprint of protein-rich foods compare?



Greenhouse gas emissions from protein-rich foods are shown per 100 grams of protein across a global sample of 38,700 commercially viable farms in 119 countries. The height of the curve represents the amount of production globally with that specific footprint. The white dot marks the median greenhouse gas emissions for each food product.

Producing 100 grams of protein from beef emits 25 kilograms of CO₂eq, on average. But this ranges from 9kg (10th percentile) to 105 kgCO₂eq (90th percentile).





	Raw material production	Milling	Packaging production	Pasta production	Distribution	Primary packaging end of life	from field to distribution	Cooking phase
ECOLOGICAL FOOTPRINT	6.1	0.2	0.4	0.5	0.1	<0.1	7.3 global m ² /kg	1.6 4.1
CARBON FOOTPRINT	434	60	-8	205	56	9	757 gCO ₂ eq/kg	607 1594
VIRTUAL WATER CONTENT	1 330	<1	14	1	<1	<1	1 345 liters/kg	11 18

ECOOS

מערכת משולבת

- תובנות יישומיות
actionable Insights
- בנצ'מרקים
זיהוי סיכונים
- דיווחים ומבדקים



ייעוץ יישומי ואסטרטגי



גופי התעדה ודירוג




מערכות תאגידיות ותוכנות דיווח





Green Key Report 2018

Hotel, Beirut Lebanon GK04494

Energy Consumption 

Water Consumption 

Waste Production 

Carbon Footprint 

Screenshot

Green key report 2018 | Garden Hotel, GK00001

Energy Consumption

Total Energy Consumption



Note: Solid circles indicate a year with complete data, empty circles indicate there may be incomplete data.

Energy Consumption per Guest-night



Note: Solid rectangle indicate a year with complete data, empty rectangle indicate there may be incomplete data.

Energy Consumption per Guest-night compared to country average



Screenshot



Green key report 2018 | Garden Hotel, GK00001

Water Consumption

Total Water Consumption



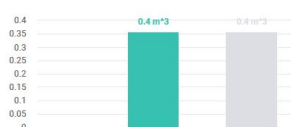
Note: Solid circles indicate a year with complete data, empty circles indicate there may be incomplete data.

Water Consumption per Guest-night



Note: Solid rectangle indicate a year with complete data, empty rectangle indicate there may be incomplete data.

Water Consumption per Guest-night compared to country average

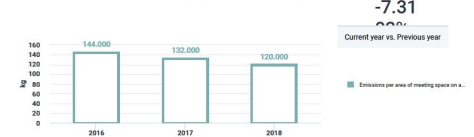


Screenshot



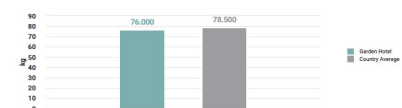
Green key report 2018 | Garden Hotel, GK00001

Emissions per area of meeting space on an hourly basis



Note: Solid rectangle indicate a year with complete data, empty rectangle indicate there may be incomplete data.

Emissions per occupied room on a daily basis compared to Hotel & Hostel in Denmark



שותפים



פרוטוקולים בשימוש התעשייה הישראלית

- מרשם פליטות לסביבה (מפלי"ס - PRTR)
 - מחשבוני שיטות חישוב מיטביות (שח"מ)
- חוק אוויר נקי - דיווחים תקופתיים
- היתרי הזרמה - דיווחים תקופתיים
- מערך לרישום ולדיווח פליטות גזי חממה ("מנגנון הדיווח הוולונטרי")
- דירוג מעלה - שאלון שנתי

פרוטוקולים גנריים

- מאזני מים, פחמן ואנרגיה למוצרים/שירותים
- מחשבון פחמן לתאגידים
- קטלוג הפסולת האירופאי
- מבדק מערכת ניהול סביבה אירופאי (EMAS)
- דוח אחריות תאגידית/קיימות שנתי
 - כלי לניתוח מהותיות
 - שאלון יעדים לפיתוח מקיים (SDGs)

לוחות זמנים אופייניים

Service Definition

- Task ↔ Protocol review week 1
- Historic data review week 2
- Scope and proposal week 3

Following proposal authorization:

- Site accounts setup week 0-1
- Historic data upload week 2-4
(optional)
- Launch & training week 5-6
- Initial operations week 7-12
- Add/finalize customized protocols (optional) week 12
- Launch of aggregated (corporate) accounts week 15





Integrated Sustainability Solutions Platform

January, 2020

Noam Gressel, Ph.D.

noam.gressel@ecoos.co

+972-52-341-4847