

webinar



carbon4 finance

HOW TO ANTICIPATE CLIMATE-RELATED RISKS WITH DATA

AGENDA

- **INTRODUCTION**

Marie-Anne Vincent, Head of Business Development at Carbon4 Finance

- **WHAT ARE THE PHYSICAL AND TRANSITION CLIMATE RELATED RISK AND WHAT LESSONS CAN WE LEARN FROM THE CORONAVIRUS CRISIS FOR THE ANTICIPATION OF CLIMATE CHANGE IMPACTS?**

Jean-Marc Jancovici, Founding partner, Carbone 4 & Carbon4 Finance

- **HOW CAN CARBON AND CLIMATE DATA CAN HELP FINANCIAL ACTORS AVOID AND PREVENT THOSE RISKS?**

Jean-Yves Wilmotte, leader of the Finance practice at Carbone 4,

Head of Carbon Impact Analytics Methodology,

Member of the European Technical expert group on sustainable finance (TEG)

Member of the AMF Climate and Sustainable Finance Commission

Marie-Anne Vincent

- **Q&A SESSION**

INTERACT

**Please ask your questions directly in the chat box.
We will (try to) answer them at the end of the webinar**

Carbon4 Finance: who we are

A data provider specialized in metrics for the financial sector

Carbon4 Finance develops Climate Data Solutions for investors and lenders. The company's clients are asset managers, asset owners, banks and index providers wishing to report their climate performance or develop climate investment tools and policies based on custom data solutions.



Carbone 4
more than 13
years of
expertise



**Carbon4
Finance**
creation

OUR SERVICES



Climate data for portfolio carbon footprinting



Scope 1, 2 & 3: induced emissions and emissions savings



Assessment of assets' physical risks



State-of-the-art platform for climate scenario alignment

OUR APPROACH



An innovative bottom-up methodology



10 carbon data analysts specialized in different sectors



Global coverage (c.10,000 securities, corporate and sovereign)

A multi-sector approach



BUILDINGS



ENERGY and
MINING



AGRICULTURE,
FOOD and
WATER



TRANSPORT



FOREST, PAPER
and WASTE



HEAVY INDUSTRY
and MACHINERY



FINANCIAL

**WHAT ARE THE PHYSICAL AND TRANSITION
CLIMATE RELATED RISKS?**

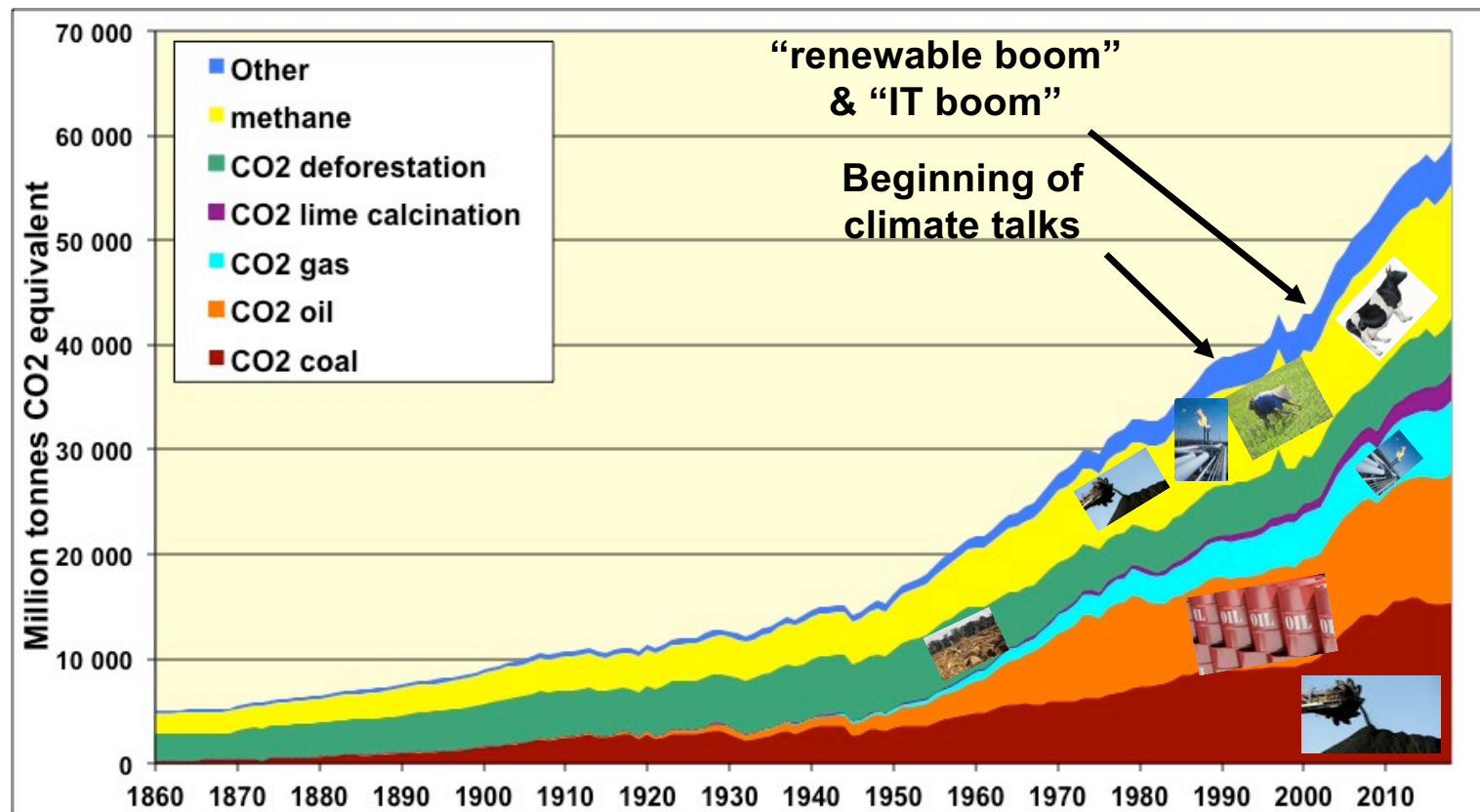
**WHAT LESSONS CAN WE LEARN FROM THE
CORONAVIRUS CRISIS FOR THE ANTICIPATION OF
CLIMATE CHANGE IMPACTS?**

Jean-Marc Jancovici,
Founding partner, Carbone 4 & Carbon4 Finance

**LET'S HAVE A LOOK AT THE GREENHOUSE
GASES EMISSIONS SINCE 1860:**

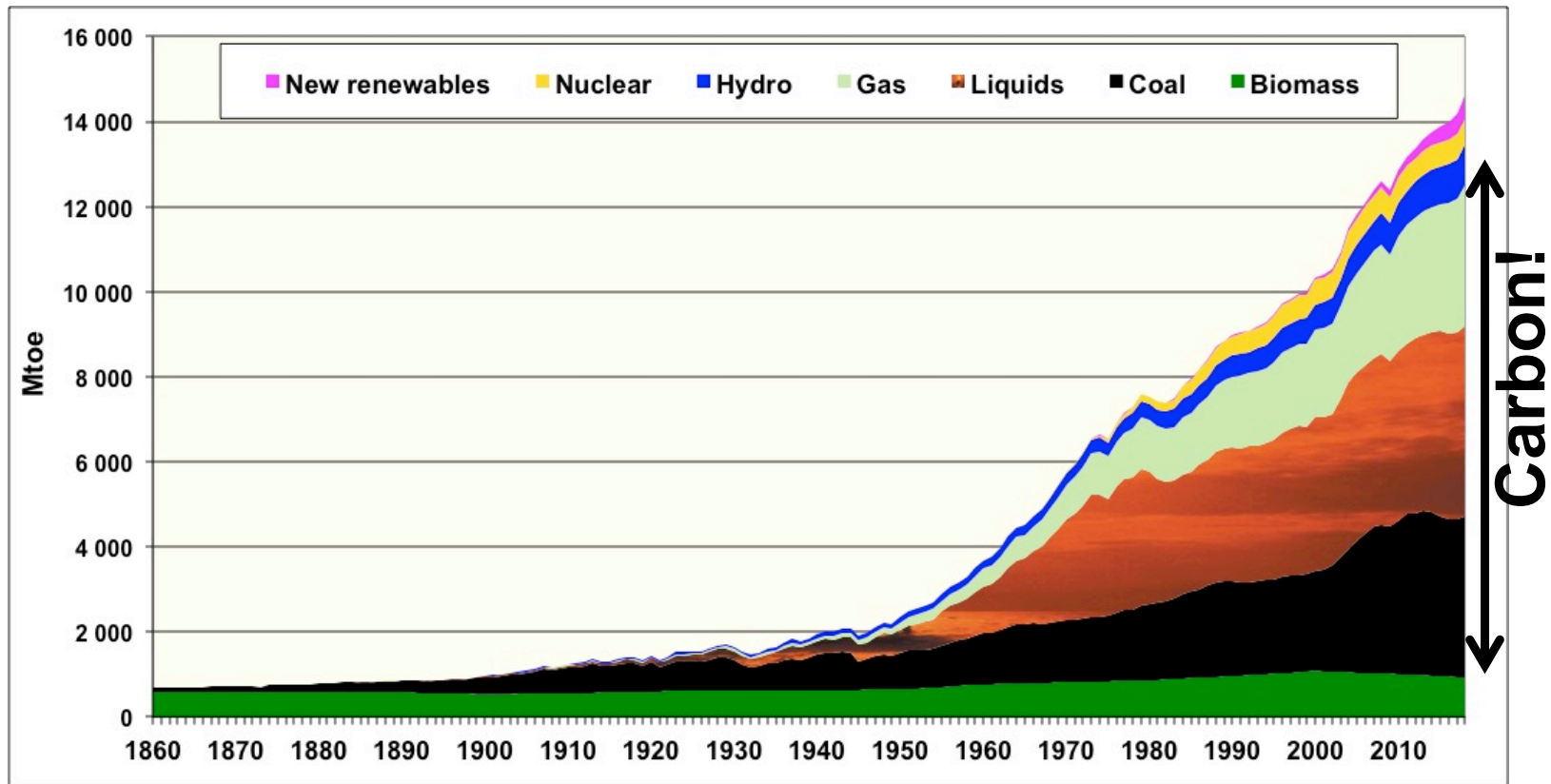
**THE FIRST SOURCE OF GHG IS CARBON
DIOXYDE (CO₂)
WHICH CAN COME FROM COAL, OIL, GAS,
LIME CALCINATION, OR DEFORESTATION**

More is more



Greenhouse gases emissions since 1860. primary data from Schilling et al. & BP Statistical Review (fuels); Houghton <http://cdiac.ornl.gov/trends> (deforestation); IPCC AR4 for cement

Yummy kWh

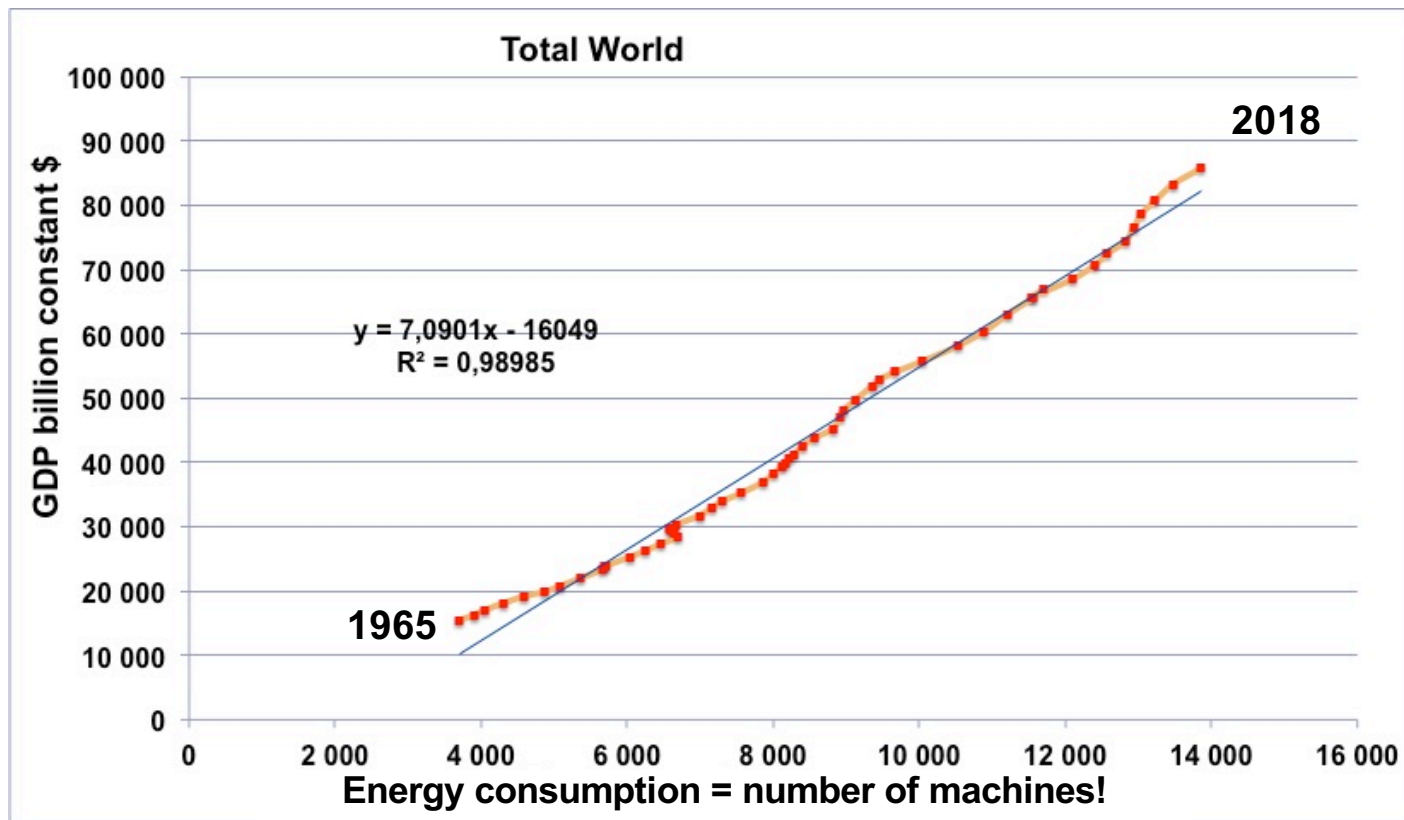


Food for machines in the world 1860-2018. Jancovici, 2019

Using energy? But what for?

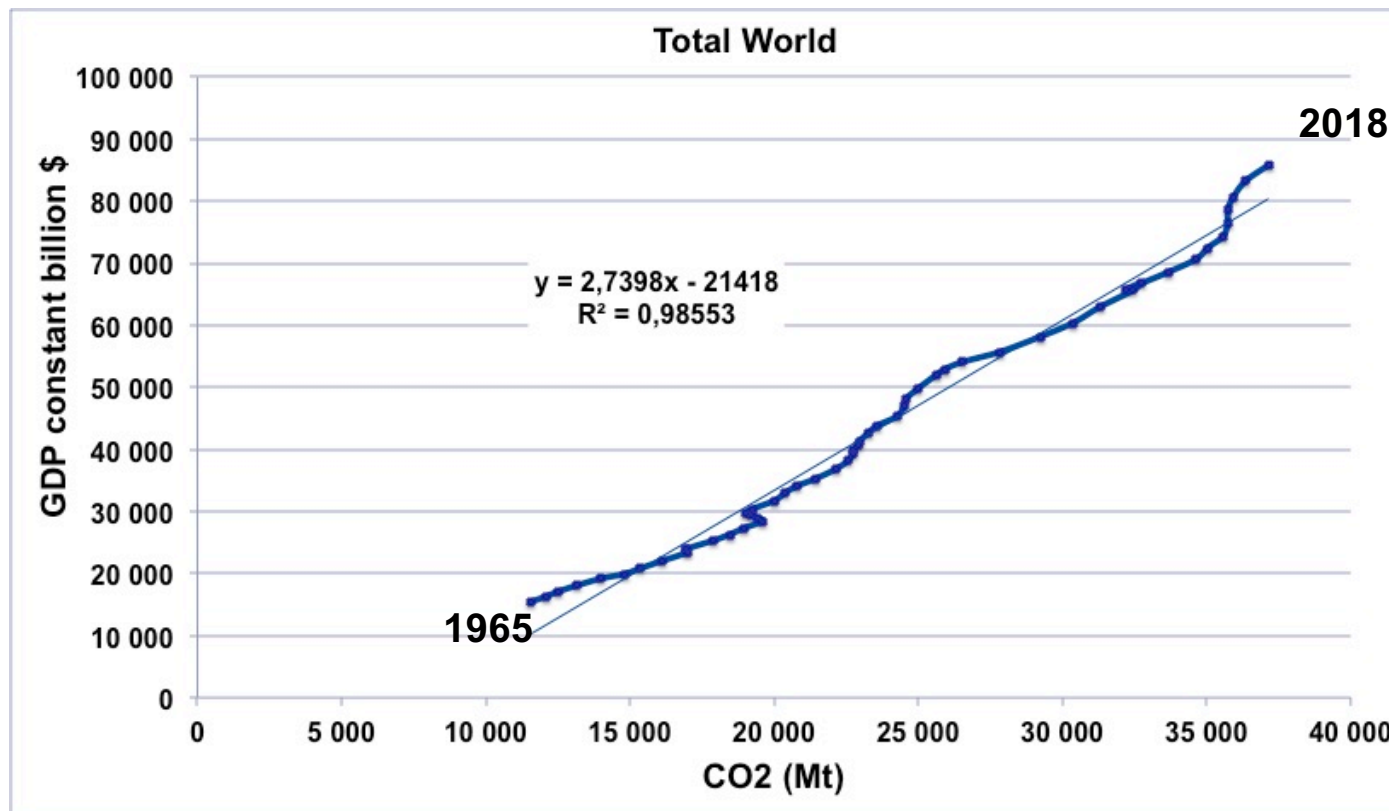


The best macroeconomic model in the world: a straight line



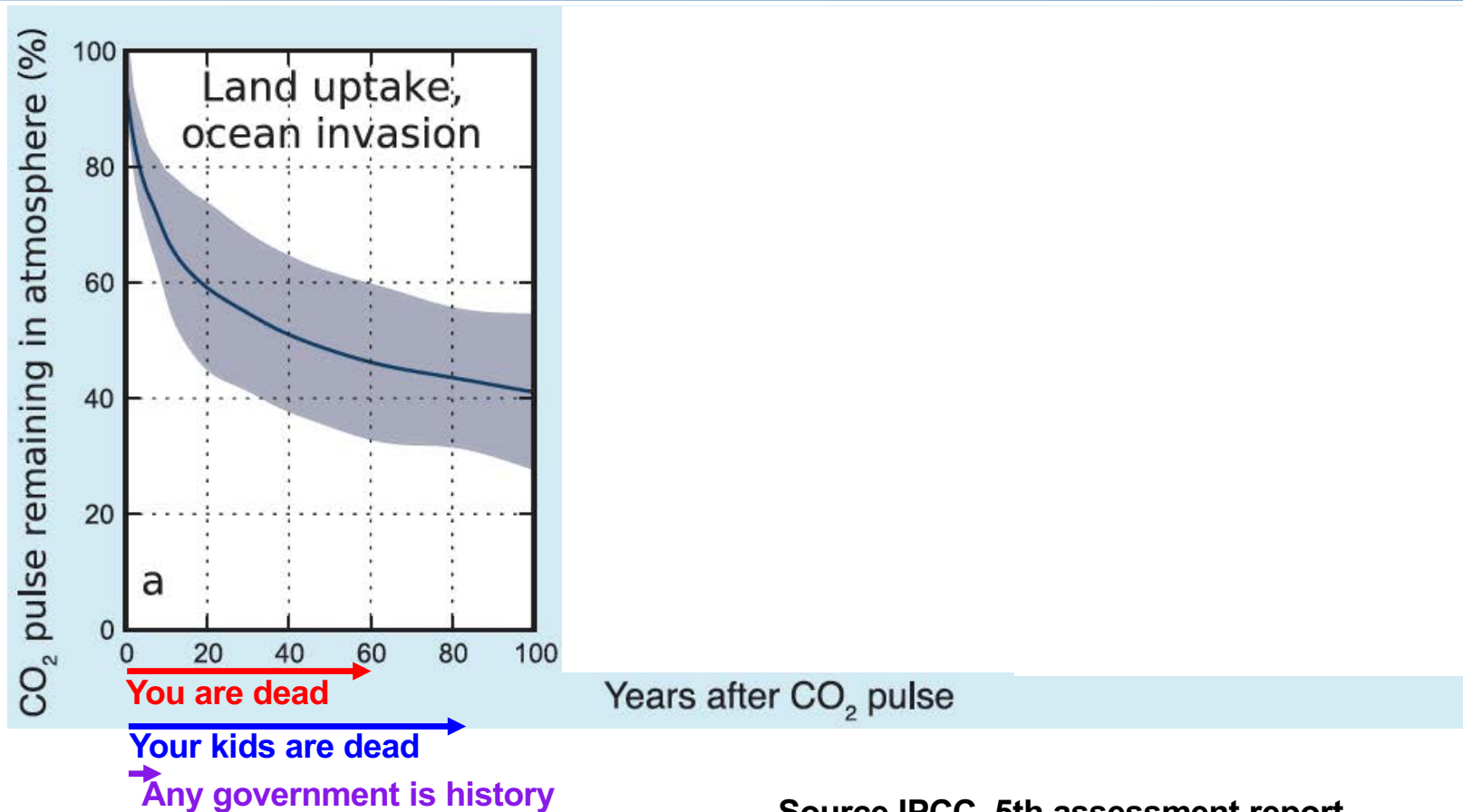
Energy consumption vs. GDP in constant \$, 1965 to 2018. Author's calculation on World Bank 2019 for GDP, BP Statistical Review 2019 for energy

Decoupling, a piece of cake?



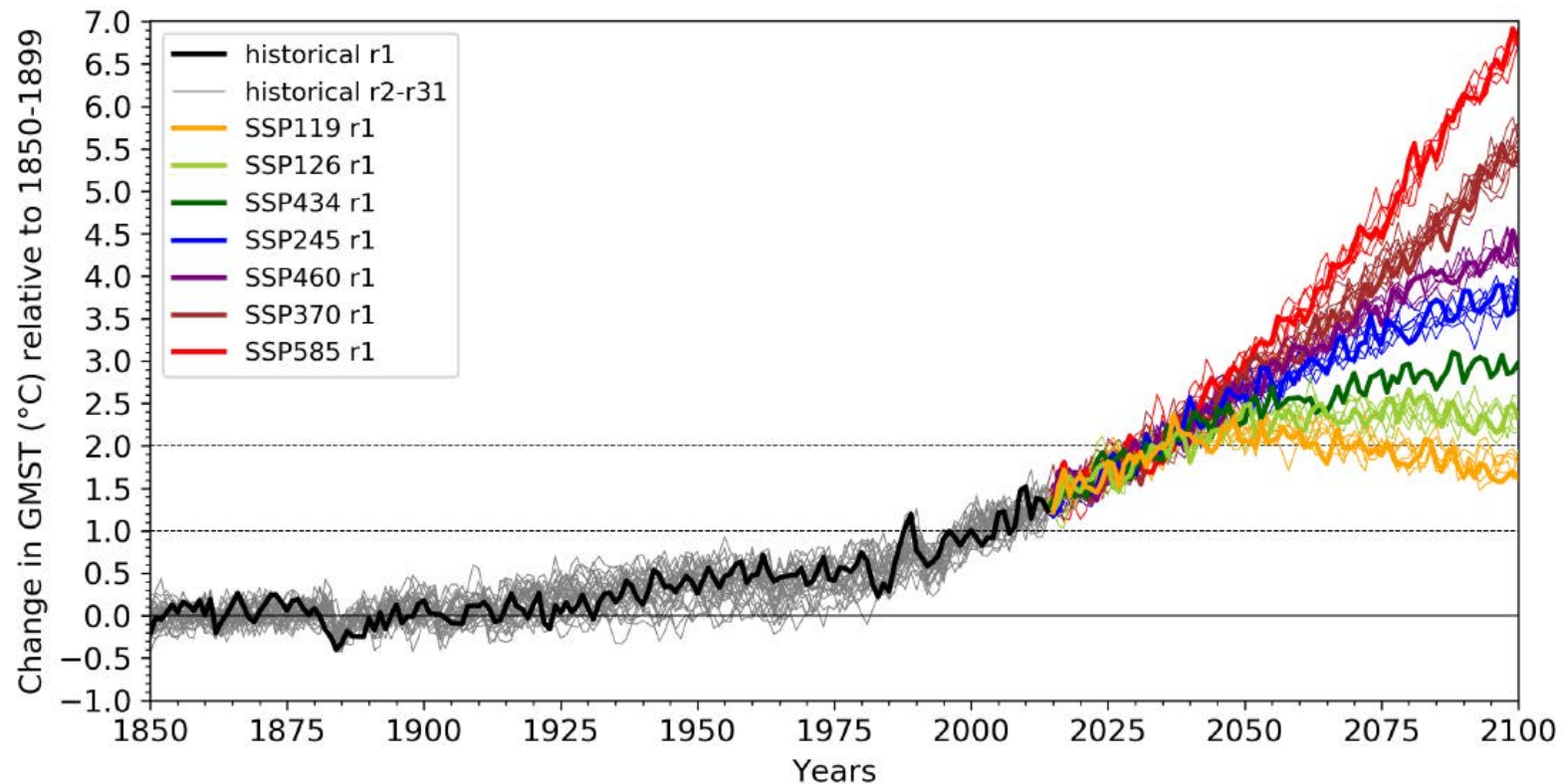
World CO2 emissions vs. world GDP. Jancovici, 2019

Help! Where is the reset button?



Source IPCC, 5th assessment report

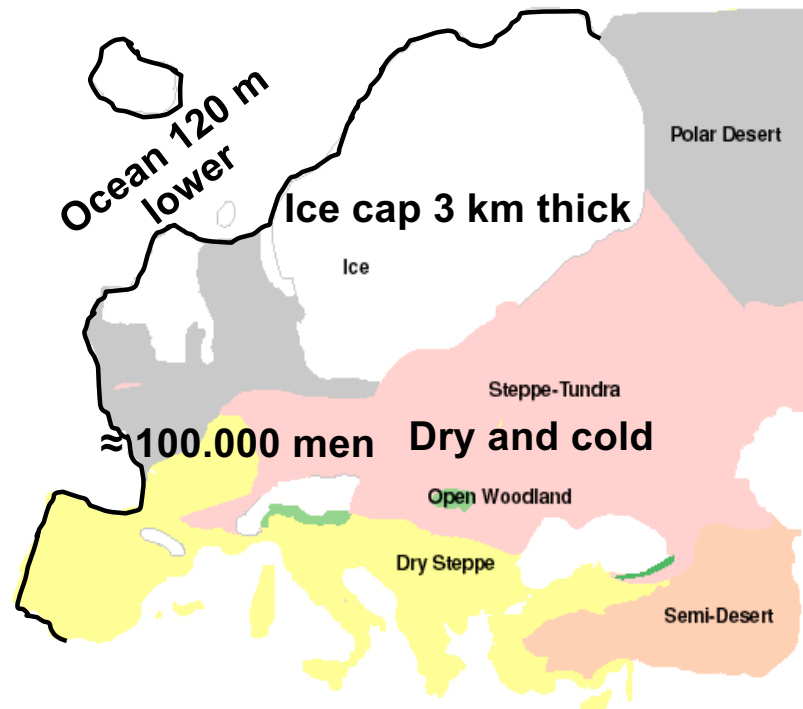
2° C compatible is not going to be a piece of cake



Climate model IPSL-CM6A-LR
1850-2014 historical - 2015-2100 simulations

Fancy triggering a new climate era?

22,000 – 14,000 ¹⁴C years ago



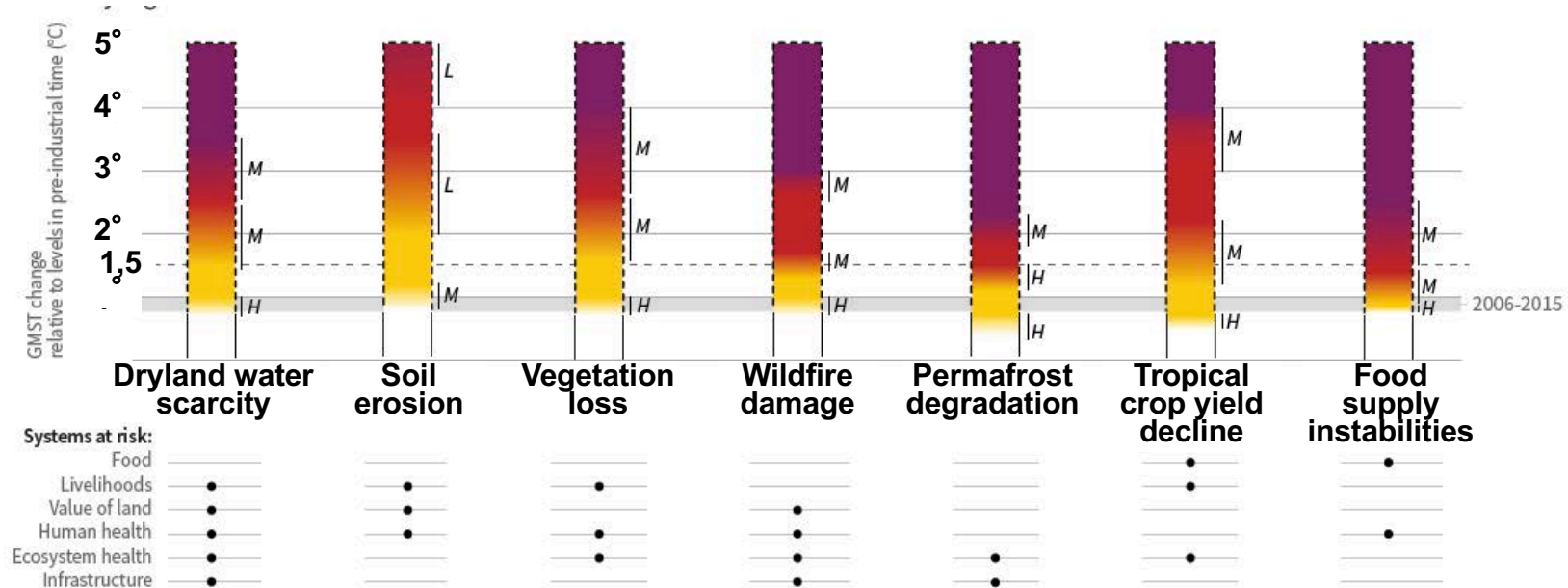
Present Potential Vegetation



+5° C !!!

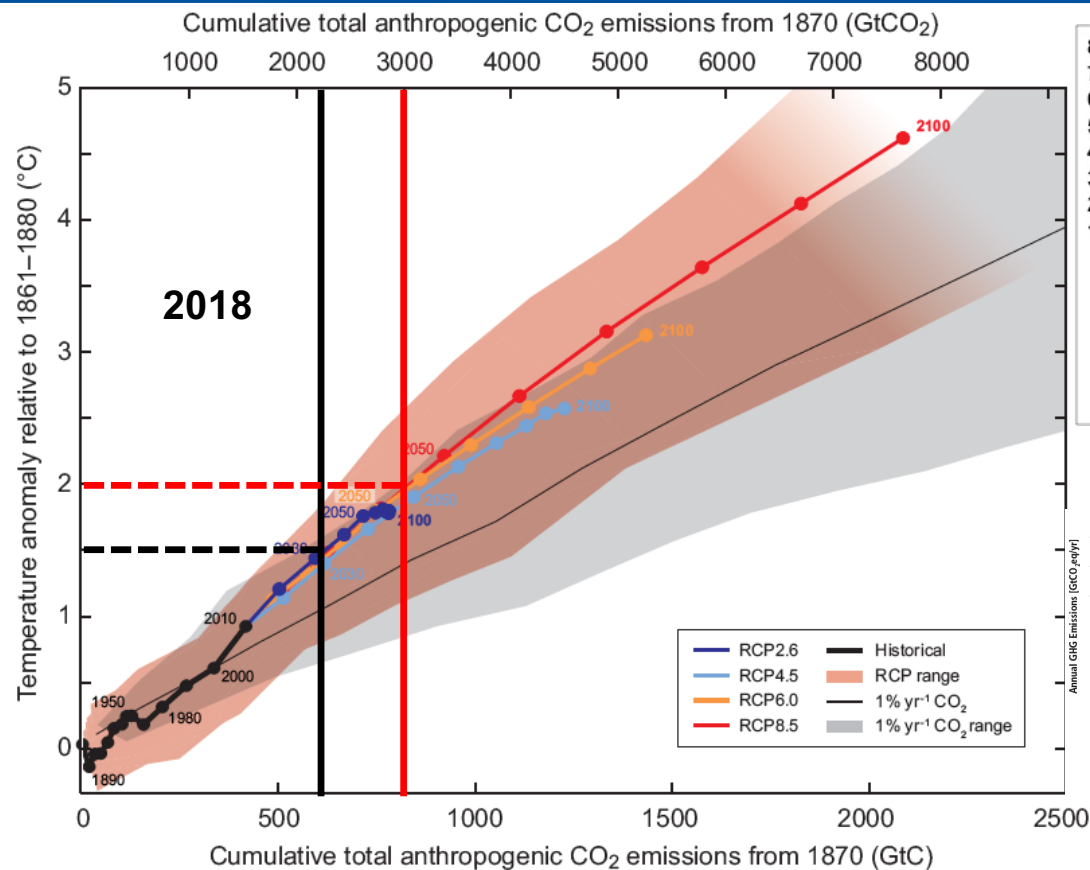
Source: Quaternary Environments Network

Adapting... to what exactly?

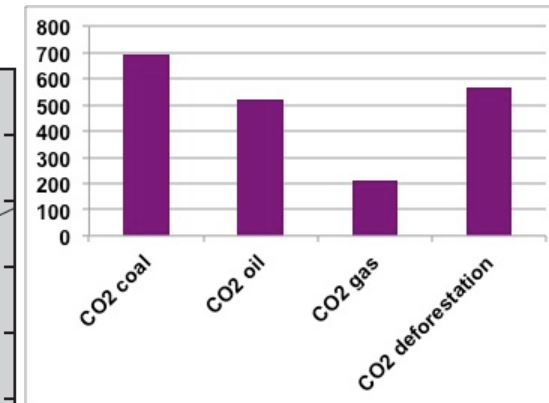


IPCC, 2019, Summary for policymakers of the report “climate change and land”

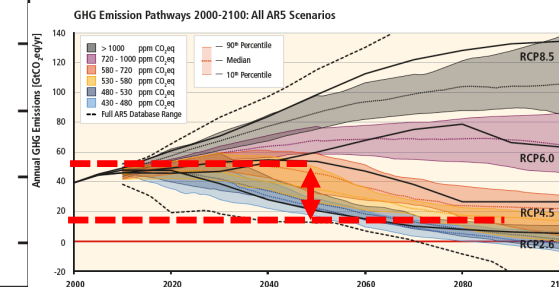
2° C, fingers in the nose?



Source IPCC, 2015

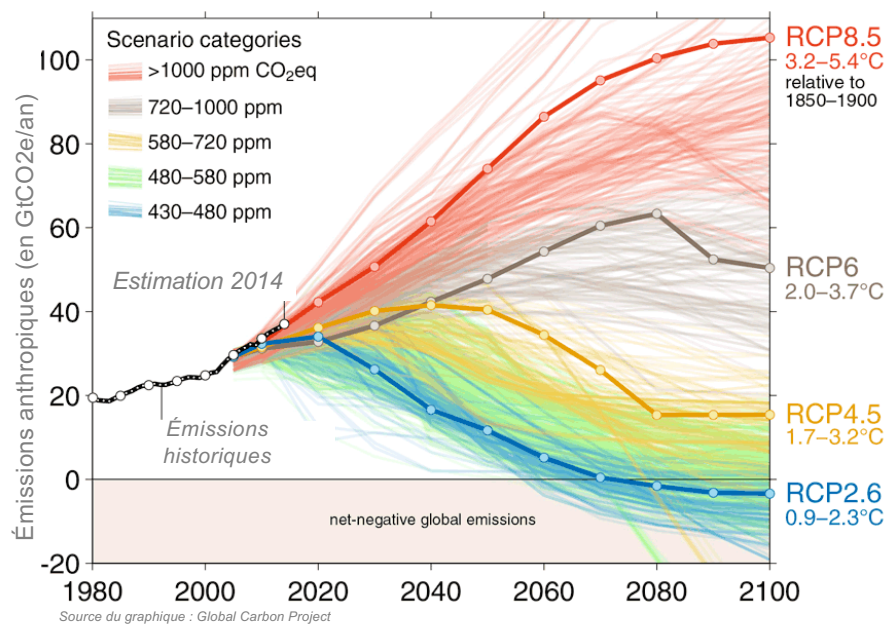


Cumulated CO₂ emissions since 1870 in Gt



÷ 3 in 2050

If you don't want a war economy, you'll get war



Physical risks

Transition risks

HOW CAN CARBON AND CLIMATE DATA CAN HELP FINANCIAL ACTORS AVOID AND PREVENT THOSE RISKS?

Carbon4 Finance is the first to offer the financial sector a complete climate risk analysis package



"With better information as a foundation, we can build a virtuous circle of better understanding of tomorrow's risks, better pricing for investors, better decisions by policymakers, and a smoother transition to a lower-carbon economy."

– Mark Carney, Financial Stability Board (FSB) Chair and Governor of the Bank of England

December 14, 2016: The **Task Force on Climate-related Financial Disclosures** (TCFD) issues its recommendations for disclosure of **2 major categories of climate-related risks**.

Two climate risks...



Transition Risk

The financial risks resulting from the process of adjustment towards a lower-carbon economy (policy changes, new technology, etc.)



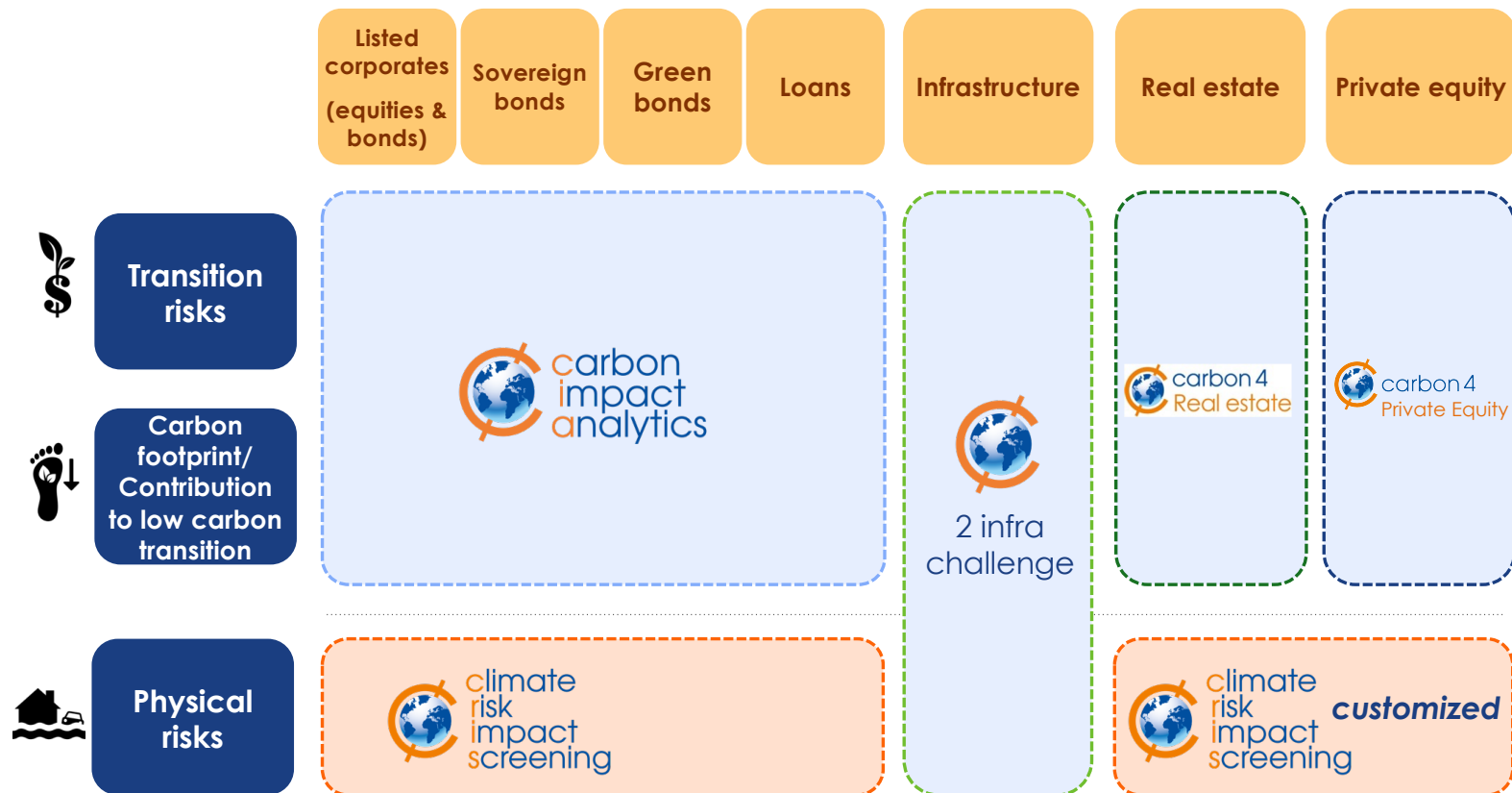
Physical Risk

Impacts on insurance liabilities and the value of financial assets that arise from climate- and weather-related events (floods, droughts, storms, etc.)

Two dedicated offers



.... With Common methodological principles for all asset classes



Common methodological principles for all asset classes: bottom-up logic, measurement of Scope 3 emissions and emissions savings, qualitative forward-looking assessment, etc.

Main outcome of these methodologies: scoring the risks

How? By identifying the main risk factors and compare the relative vulnerability of companies

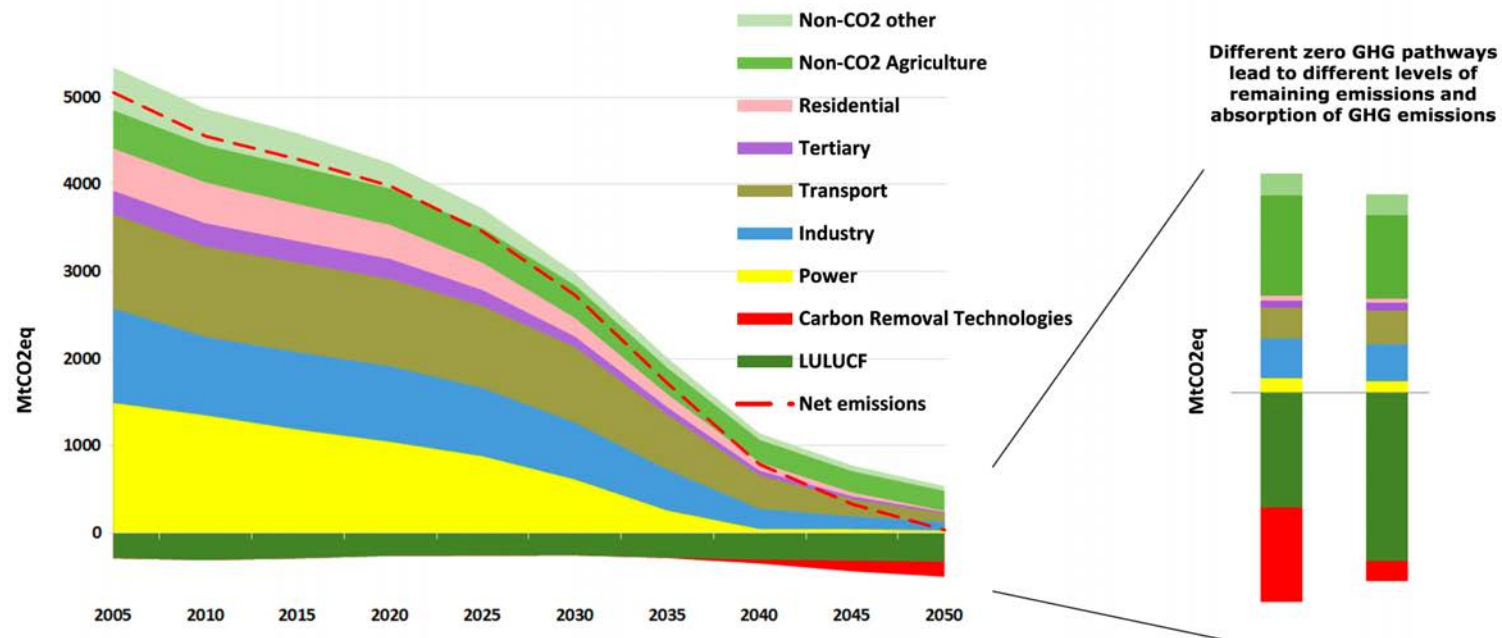
Two climate risks...

Two dedicated offers



The transition risk is linked to the GHG emissions...

Example of a 1.5° C scenario for the European Union



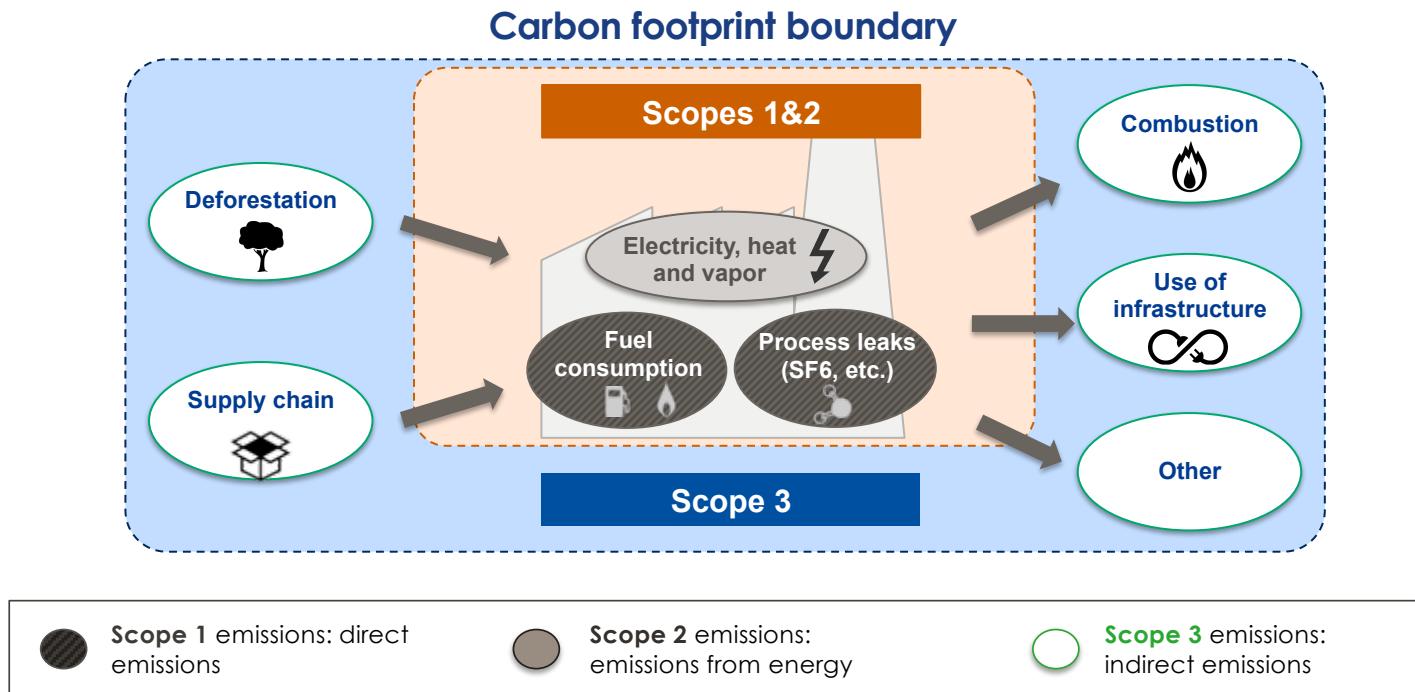
All sectors will need to decrease their emissions

Source: A Clean Planet for all, European Commission

The transition risk is linked to the GHG emissions...
...in the whole value chain



Carbon accounting basics



Accounting for scope 1, 2 and 3 emissions is the only way to capture climate challenges in an exhaustive way.

Do not forget the opportunities!

The companies that are exposed to opportunities in a low carbon transitioning world are those that:

**Manufacture efficient
products**

Provide efficient services

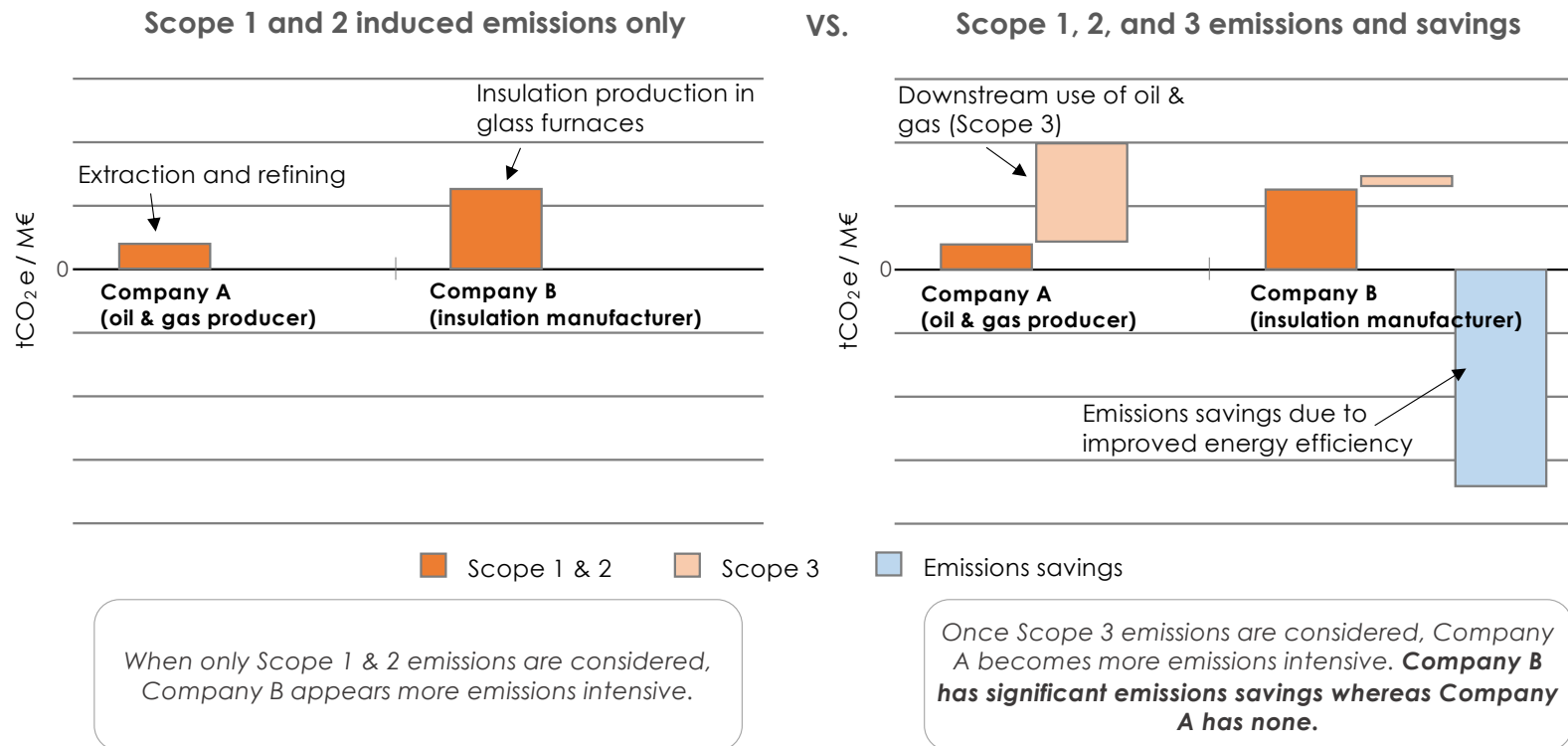


**Reduce their own
carbon intensity**



Let's assess for the emissions savings!

Scope 3 induced emissions and emissions savings are crucial to understanding true impact of issuers





Forward-looking analysis
Where is your portfolio headed?

Scoring the transition risk

Scale from A to E



A: High contribution to the low carbon transition



B: Significant contribution to the low carbon transition



C: Limited contribution, or systemic risk



D: Insufficient contribution to the low carbon transition



E: Incompatible

Regulators are taking up the subject

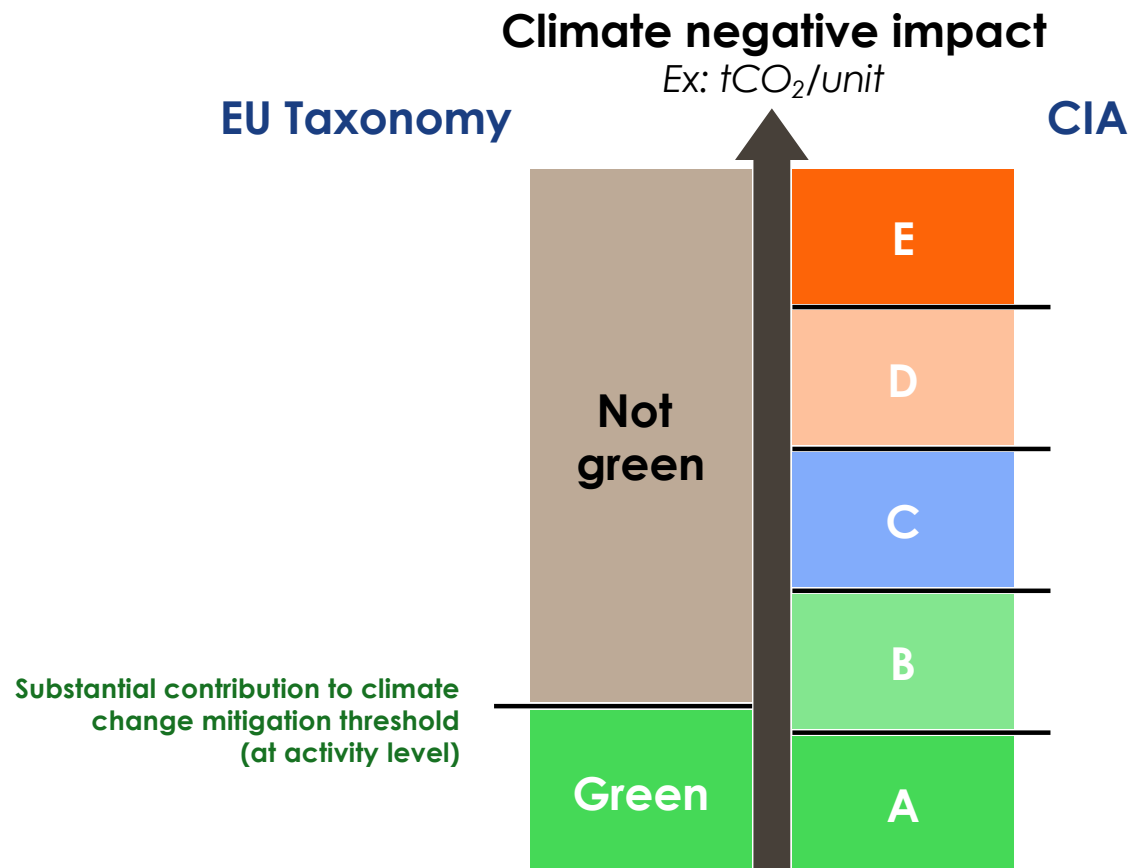


EU Taxonomy

Green bond
standard

Climate
benchmark

Main difference of use between the EU taxonomy and CIA



Climate benchmarks

	Climate Transition Benchmark (CTB)	Paris-Aligned Benchmark (PAB)
Baseline reduction of GHG intensity	-30%	-50%
Decarbonisation trajectory	7 % reduction of GHG intensity on average per annum	
Exposition to high stakes sectors	At least equivalent to the exposure of the underlying investable universe to those sectors	
Integration of scope 3 data	<ul style="list-style-type: none"> At the application: energy and mining sectors In 2 years : transportation, construction, buildings, materials and industrial In 4 years : all other sectors 	
Exclusions	-	ESG : controversial weapons, tobacco, UNGC Climate (% revenues) : <ul style="list-style-type: none"> coal (1%) oil (10%) gas (50%) Electricity production 100gCO₂/kWh (50%)

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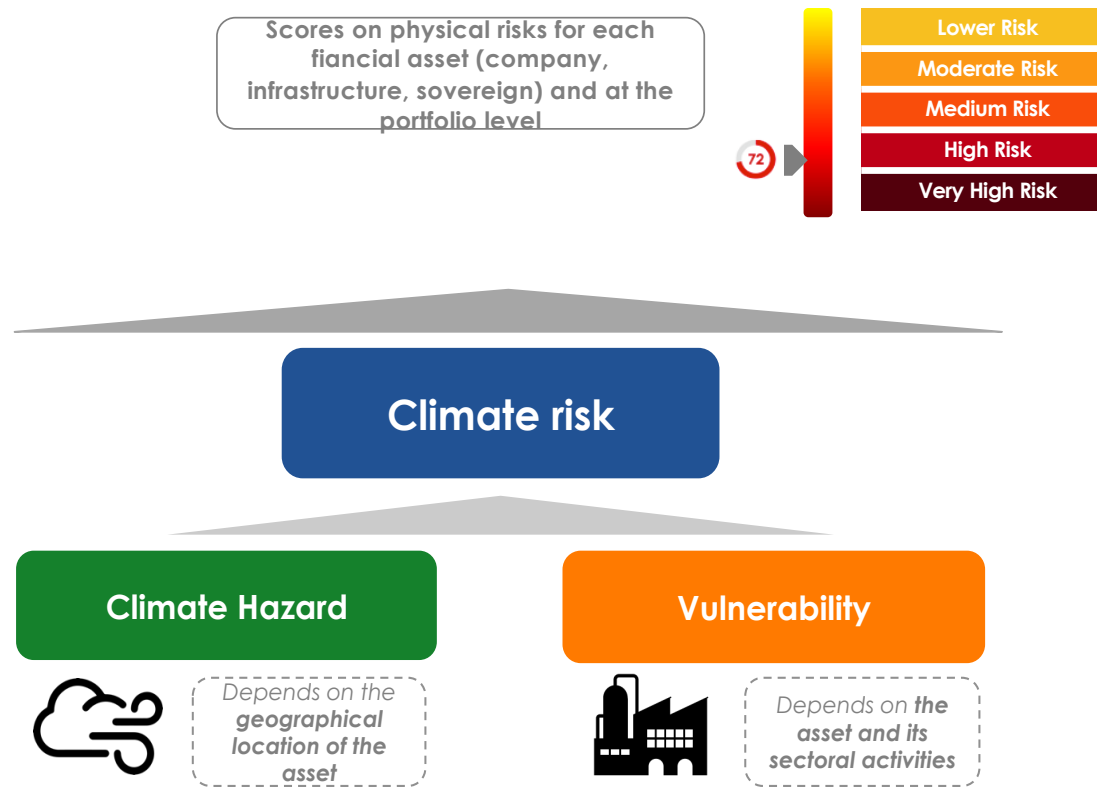


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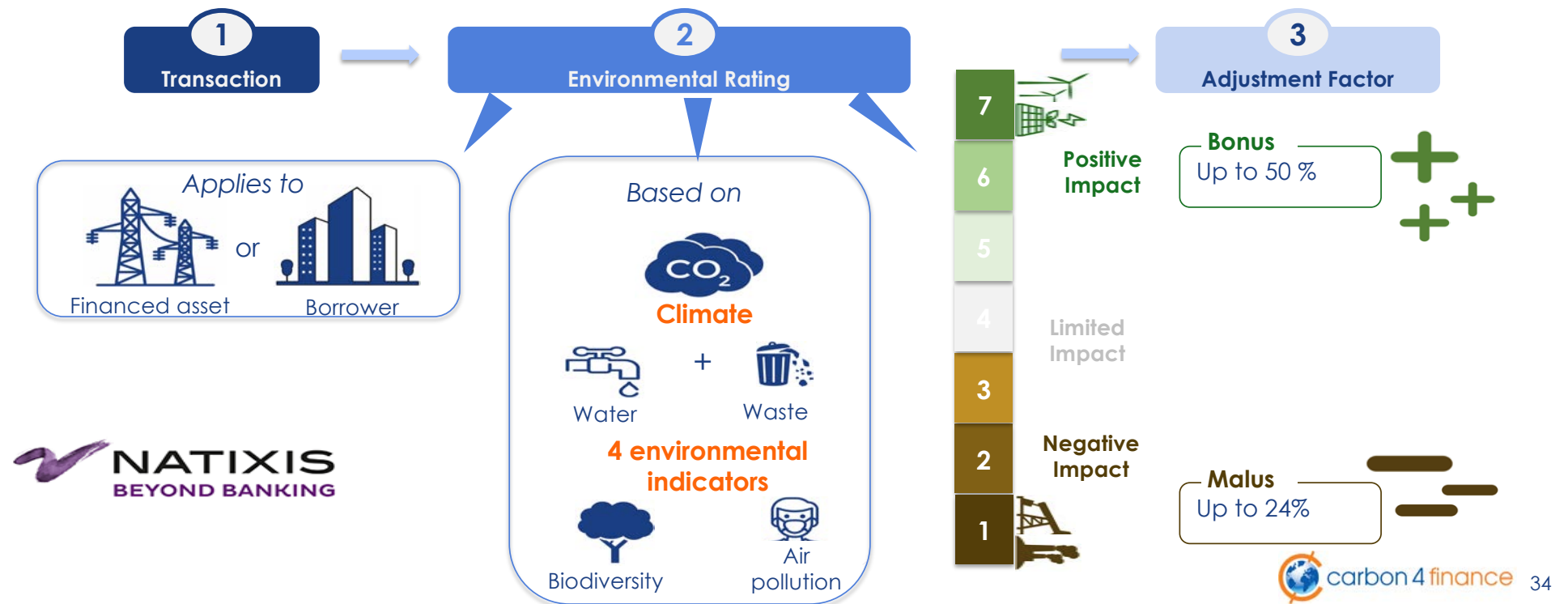
Physical risk score result from Climate hazard and vulnerability matrix



EXAMPLE 1 : THE GREEN WEIGHTING FACTOR

How to actively manage the climate impact of a bank's balance sheet

- Each financing transaction is assigned an environmental rating, on a seven-level scale corresponding to its impact on the climate and the environment.
- Under the mechanism, analytical risk-weighted assets (RWA) are reduced by up to 50% for green deals, while facilities that have a negative environmental and climate impact see their analytical RWA increased by up to 24%.



EXAMPLE 2 : THE EURONEXT LOW CARBON 100 INDICE

Resilience of the index towards the Coronavirus crisis

- **2008:** Euronext was the first stock exchange operator to launch a pan-European CO₂ emission index.
- **2015:** Euronext partnered with the firm **Carbone4** to renew the methodology, based on a more efficient approach to measuring corporate climate performance.
- **The Low Carbon index 100 Europe® :** the first index in the world built to reflect an **investment trajectory compatible with the 2 degrees pathway:**
 - Assess the carbon footprint of each company, assessed across the entire value chain.
 - Identify the companies which are making a positive contribution to the climate transition, not only through their operational performance, but also thanks to the products sold to their customers.
 - Take into account the level of emissions avoided thanks to their efforts to innovate products and services.

Historique base 100 du 24/04/2017 au 23/04/2020

1 an 3 ans 5 ans



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