



SGH

Warsaw School
of Economics



ESG IN PROPERTY VALUATION

8th September 2023

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INTRODUCTION - Jolanta Panas



➤ **Involved in Real Estate since 2006, in Sustainability 2011**

➤ **Job Experience**

the SGH Warsaw School of Economics
STRABAG BRVZ / Real Estate Management
ERNST & YOUNG Real Estate
WESTDEUTSCHE IMMOBILIEN BANK

➤ **PhD studies in Management**

at the SGH Warsaw School of Economics (Poland)

➤ **MSc studies in Finance**

at the SGH Warsaw School of Economics (Poland) &
Johannes Gutenberg University in Mainz (Germany)
/ Double Diploma Program

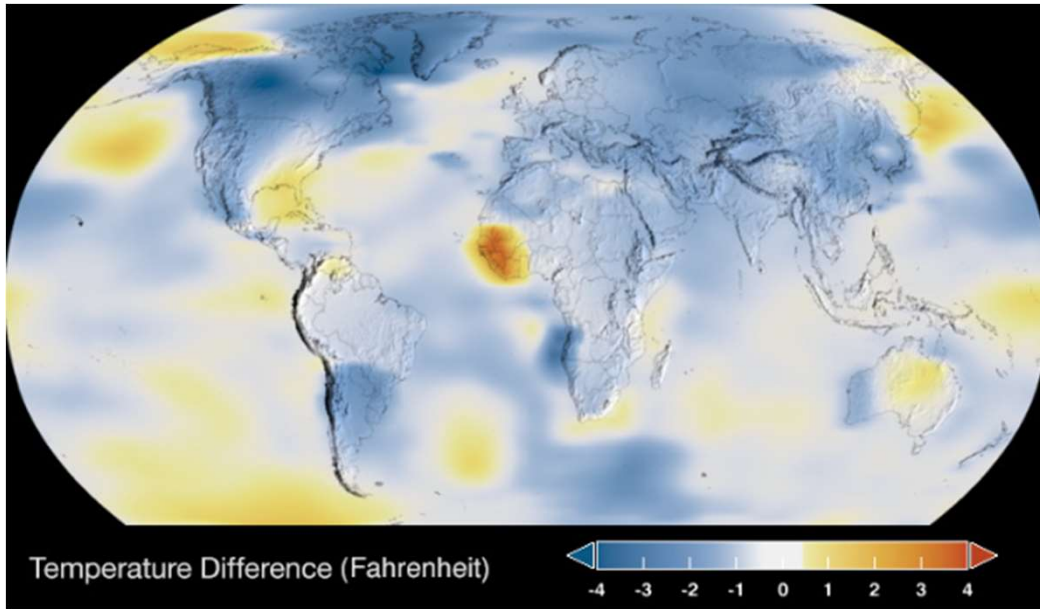
AGENDA

- CLIMATE ISSUE
- IMPORTANCE OF REAL ESTATE FOR ENERGY and CO2 EMISSIONS
- MILESTONES OF SUSTAINABLE DEVELOPMENT
- THE IMPACT OF SUSTAINABILITY ON REAL ESTATE VALUATION
- ESG vs. SUSTAINABILITY
- THE COMPLEXITY OF EU ESG REGULATION
- SELECTED ESG FRAMEWORKS FOR REAL ESTATE
- ESG FROM THE PERSPECTIVE OF REAL ESTATE FUNDS IN POLAND
- ESG in PROPERTY VALUATION - SELECTED SURVEY RESULTS
- CONCLUSIONS

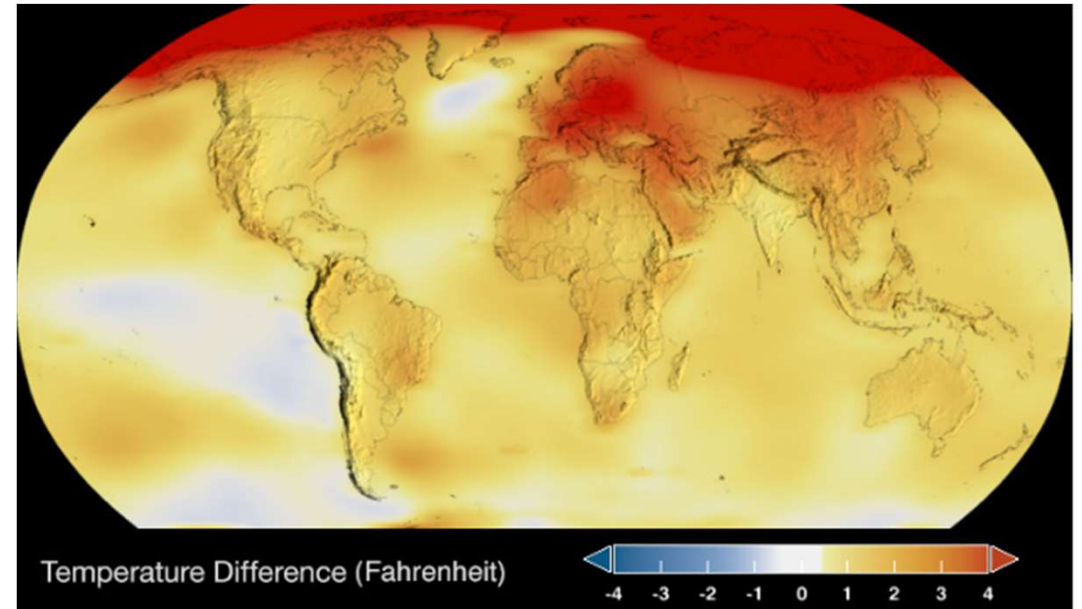


CLIMAT ISSUE - Temperature Difference

1884



2022



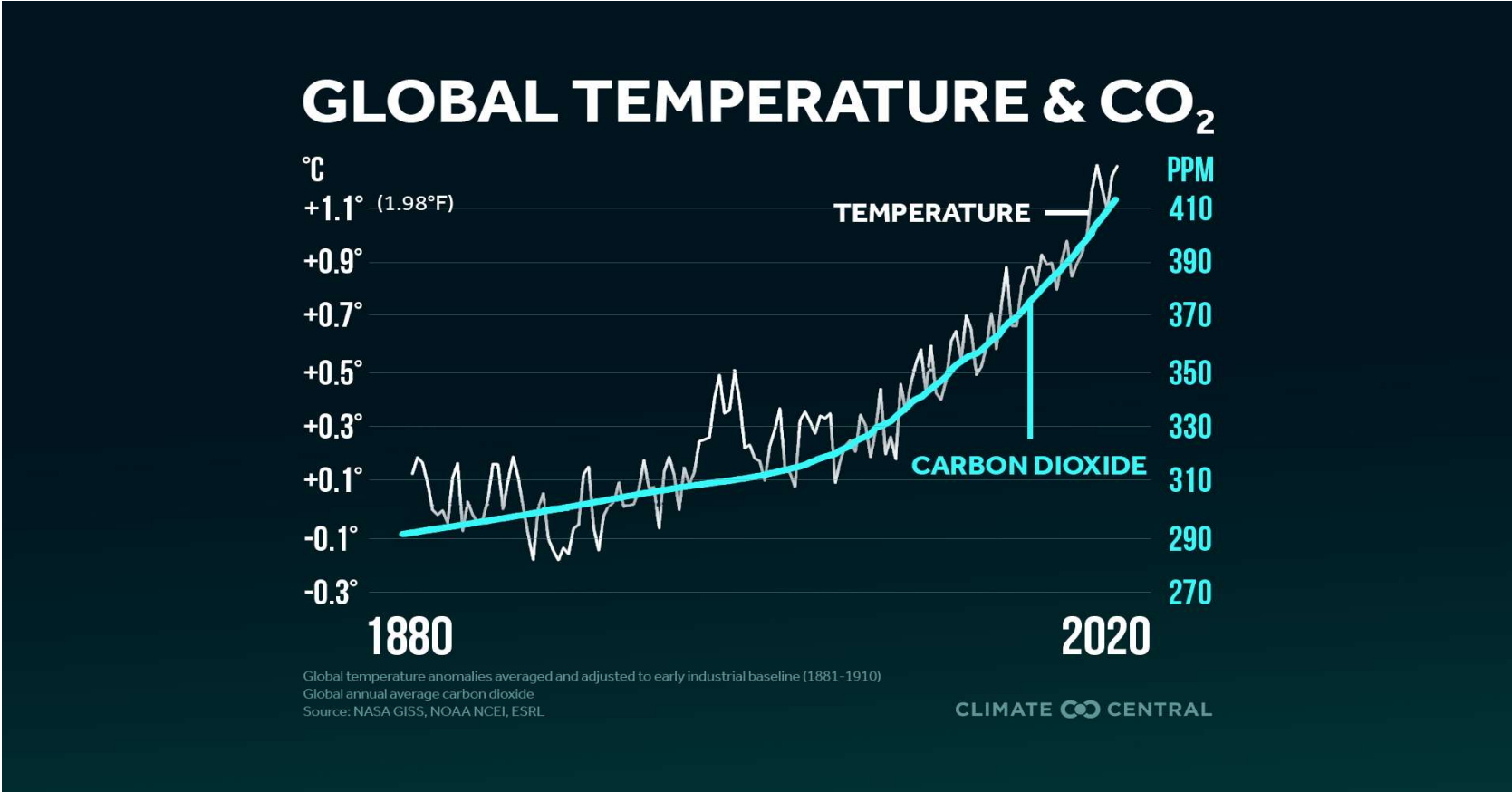
🕒 1884 ————— 2022

🕒 1884 ————— 2022

Source: NASA / GISS, [Global Temperature | Vital Signs – Climate Change: Vital Signs of the Planet \(nasa.gov\)](https://climate.nasa.gov/evidence/)

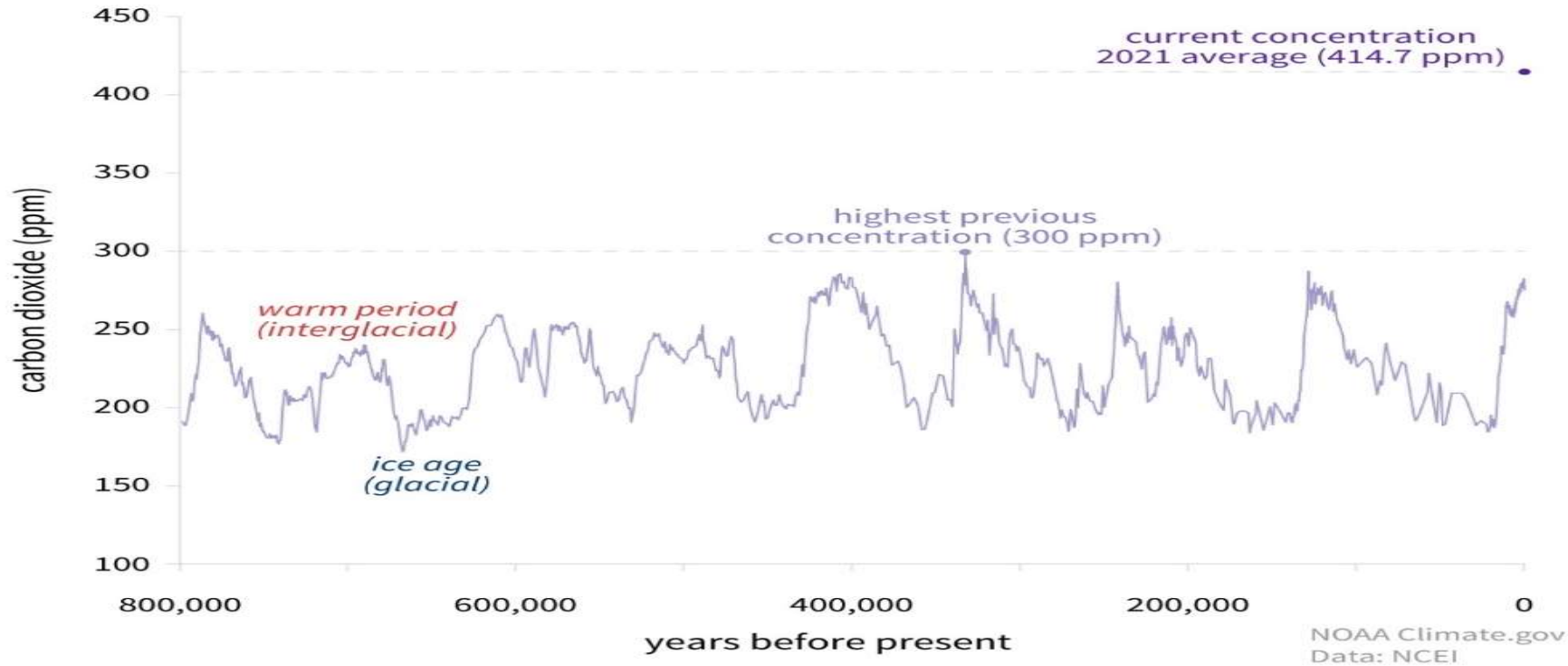
The change in global surface temperatures, dark blue shows areas cooler than average, dark red shows areas warmer than average.

CLIMAT ISSUE - GLOBAL TEMPERATURE vs. CARBON DIOXIDE



Source: <https://www.climatecentral.org/graphic/yearly-carbon-dioxide-peak?graphicSet=Global%20Temperature%20%26%20CO2>

CLIMAT ISSUE - CARBON DIOXIDE OVER 800,000 YEARS



Source: National Oceanic and Atmospheric Administration Climate.gov, [ClimateDashboard_1400px_paleo-graph_20230829.png | NOAA Climate.gov](#) (2022-05-01)

National Centers for Environmental Information (NCEI) maintains one of the most significant archives on Earth, with comprehensive oceanic, atmospheric, and geophysical data.

Parts per million (PPM) is a unit of measurement used when expressing a very dilute concentration level of pollutants in the air, water and other fluids.

EFFECTS OF GLOBAL WARMING

Floods in Western Europe 2021



Floods in China 2021



Fires in Canada 2021



2019/2020 Australian bushfire season



2023 Wildfires in Rhodos

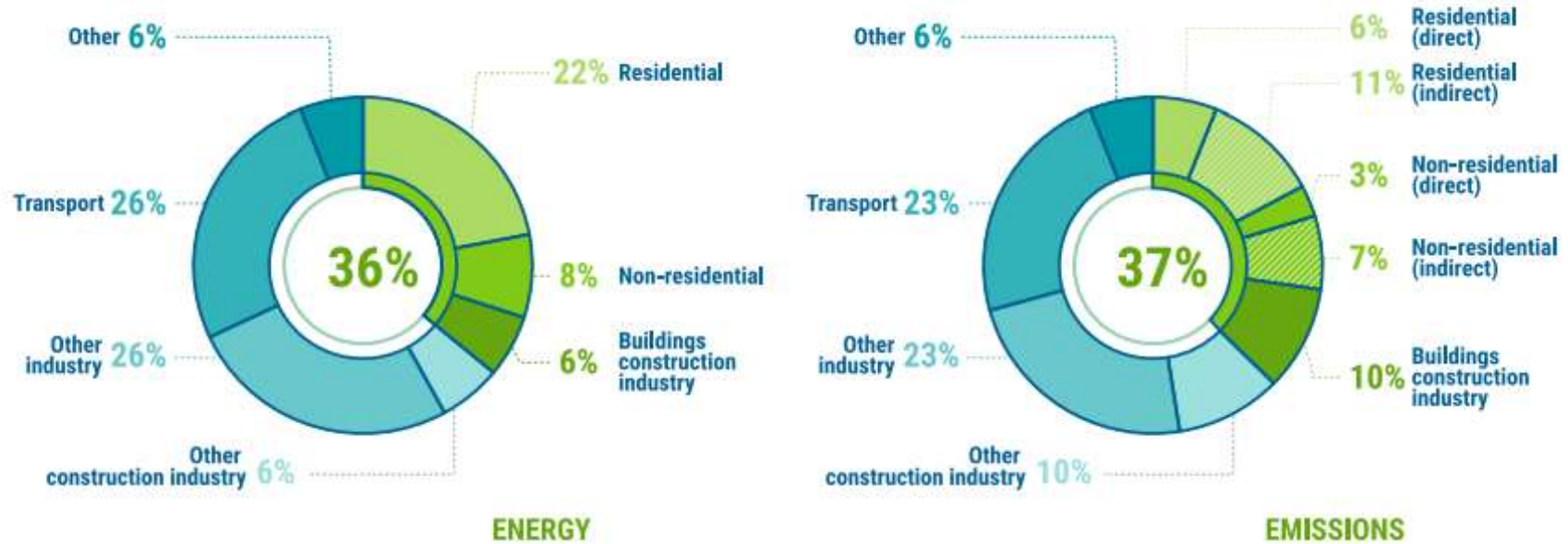


Climate change implicates serious threats to sustained economic growth

- Climate change implicates serious threats to sustained economic growth and quality of life, poverty reduction and political stability in the world.
- The scale and importance of climate change is growing, which is emphasized, among others, by Intergovernmental Panel on Climate Change (IPCC).
- The temperature of the Earth's surface and the concentration of greenhouse gases in the atmosphere reach the highest levels in history, therefore, as a carbon-intensive sector, property market must take action aimed at the leading goal of reducing greenhouse gas emissions*
- Thus, we **MUST** act in every area of our activity towards sustainable development

* IPCC, *AR6 Synthesis Report: Climate Change 2023*, <https://www.ipcc.ch/report/sixth-assessment-report-cycle/> (dostęp: 14.04.2023).

IMPORTANCE OF REAL ESTATE FOR ENERGY and CO2 EMISSIONS



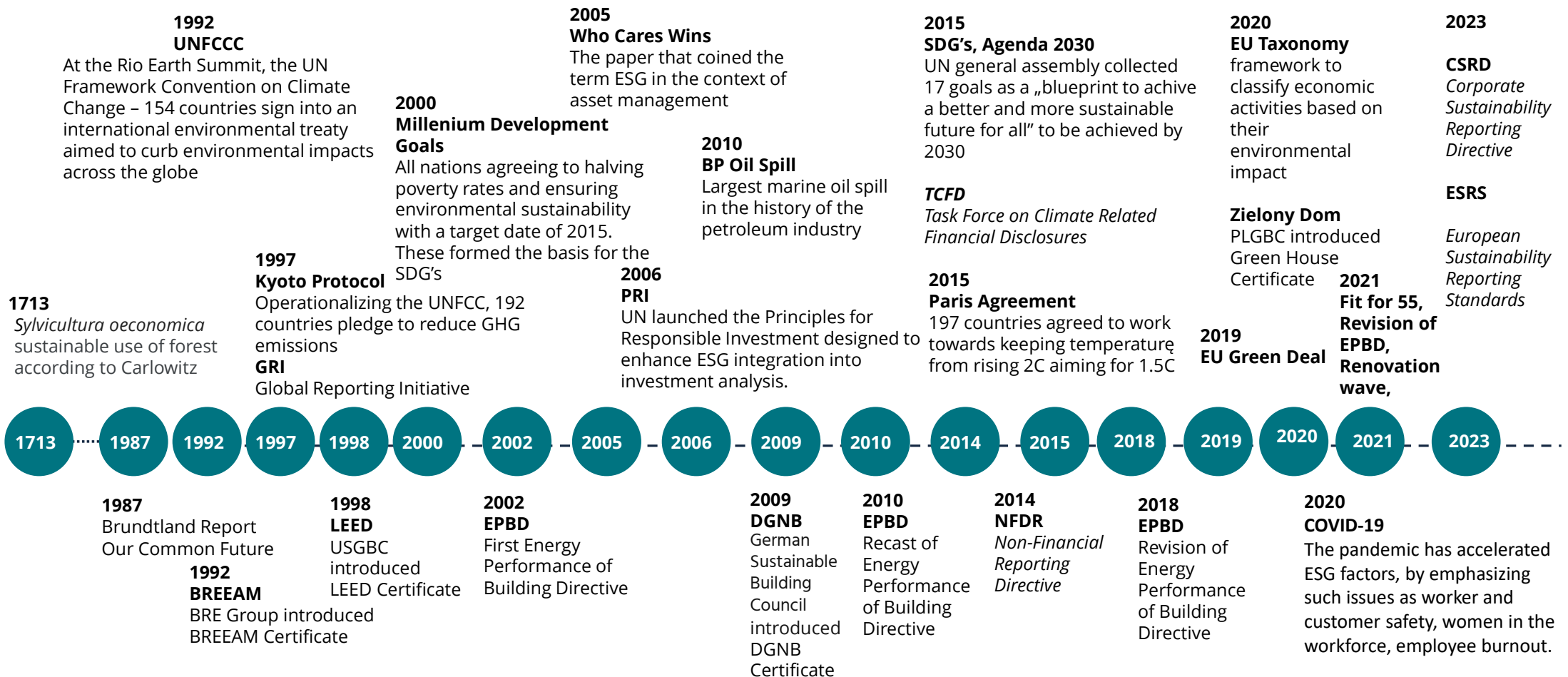
Note: "Buildings construction industry" is the portion (estimated) of overall industry devoted to manufacturing building construction materials such as steel, cement and glass. Indirect emissions are emissions from power generation for electricity and commercial heat.

Source : United Nations Environment Programme (2021). 2021 Global Status Report for Buildings and Construction: Towards a Zero-emission, Efficient and Resilient Buildings and Construction Sector. Nairobi, p.15.

SUSTAINABLE DEVELOPMENT

- **Sustainable development requires an integrated approach that takes into consideration environmental concerns along with economic development.**
- **In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”**

MILESTONES OF SUSTAINABLE DEVELOPMENT



How the issues of
sustainable development
look like in real estate
valuation



Selected empirical evidence on the economic benefits of buildings with sustainable credentials

Study/authors	City/country	Property type	Sustainable credentials	Observed impact on ...	±	Magnitude
Eichholtz <i>et al.</i> (2010)	US	Office buildings	LEED	Selling price	+	11.1%
				Rental price	+	5.9%
			Energy Star	Selling price	+	13%
				Rental price	+	6.6%
Fuerst and McAllister (2010)	US	Office buildings	LEED	Occupancy rates	+	8%
			Energy Star	Occupancy rates	+	3%
Fuerst and McAllister (2008)	US	Office buildings	LEED, Energy Star	Selling price	+	31–35%
				Rental price	+	6%
Griffin <i>et al.</i> (2009)	Portland, OR/ Seattle, WA, US	Residential homes	Built Green, Earth Advantage, Energy Star, or LEED	Selling price	+	3–9.6%
				Selling/marketing time	–	18 days

Source: Luetzkendorf, T., & Lorenz, D. (2011). Capturing sustainability-related information for property valuation. *Building Research and Information*, 39(3), 256–273.

Selected empirical evidence on the economic benefits of buildings with sustainable credentials

Study/authors	City/country	Property type	Sustainable credentials	Observed impact on ...	±	Magnitude
Pivo and Fischer (2010)	US	Office buildings	Energy Star, close distance to transit, location in redevelopment areas	Net operating income	+	2.7–8.2%
				Rental price	+	4.8–5.2%
				Occupancy rates	+	0.2–1.3%
				Market value	+	6.7–10.6%
				Income returns (cap rates)	–	0.4–1.5%
Salvi <i>et al.</i> (2008)	Switzerland	Residential homes	MINERGIE Label	Selling price	+	7%
		Residential flats		Selling price	+	3.5%
Salvi <i>et al.</i> (2010)	Switzerland	Residential flats	MINERGIE Label	Rental price	+	6%

Source: Luetzkendorf, T., & Lorenz, D. (2011). Capturing sustainability-related information for property valuation. *Building Research and Information*, 39(3), 256–273.

SUSTAINABILITY IN PROPERTY VALUATION STANDARDS

- RICS 2009 - Sustainability and commercial property valuation - Valuation Information Paper VIP 13

- RICS 2011 – Sustainability and residential property valuation - information paper

This document recommended that property valuers, when inspecting properties, note the specifications and characteristics of the property with respect to both energy efficiency and carbon emissions

- Appraisal Institute & Institute for Market Transformation 2012 - Recognition of Energy Costs and Energy Performance in Real Property Valuations, Considerations and Resources for Appraisers (Chao i in., 2012)

- RICS 2014 – Sustainability issue included in Red Book

- TEGOVA – EVS 2016 – European Valuation Information Papers 1 - Sustainability and Valuation

Already EVS 2016 emphasized the growing business importance around net-zero carbon targets for both businesses and their assets. Therefore, property appraisers cannot be indifferent to the changes taking place in the economic environment, as well as in relation to the prepared real estate valuations.

- TEGOVA – EVS 2020 - EVS 6 Valuation and Energy Efficiency + Chapter III Valuation and Sustainability

ESG vs. SUSTAINABILITY

SUSTAINABILITY
we know
but
what is ESG



ESG vs. SUSTAINABILITY

- The meanings of the terms “Sustainability” and “ESG” are evolving and it’s important to understand the difference.
- The beginning of ESG dates back to 2004, when a group of 20 financial institutions, thanks to the UN Global Compact initiative, published the report *“Who Cares Wins: Connecting Financial Markets to a Changing World”*, which is a series of recommendations on the integration of environmental, social and governance factors addressed to various entities of the financial sector (UN Global Compact, *Who Cares Wins: Connecting Financial Markets to a Changing World*, 2004). ESG criteria became incorporated in the financial evaluations of companies.
- ESG term has recently become synonymous with the term “sustainability”.
- ESG and Sustainability are starting to be used interchangeably, Sometimes this is OK. Sometimes it causes confusion.

Source: UN Global Compact, *Who Cares Wins: Connecting Financial Markets to a Changing World*, 2004, [04-37665.global.compact_final\(uneppi.org\)](https://04-37665.global.compact_final(uneppi.org)); <https://greenbusinessbureau.com/esg/esg-vs-sustainability-whats-the-difference/>



ESG and Sustainability Confusion

- ESG at its core is both a corporate governance framework and an investment framework. Companies that adopt ESG principles will define a vision, mission, strategy, tactics and values that consider, measure, and report the environmental, social, and governance aspects of their business.
- When comparing Sustainability and ESG, it becomes clear that the letters ESG map almost exactly to the 3 pillars of sustainability. Hence the recent tendency to use the terms interchangeably. In other words, ESG which has been historically used to reference an investment rating and framework, is now being used as a shortcut acronym for sustainability.
- For example, we might hear a company say we've put together an ESG team and program. This might refer to either a team focused on reporting sustainability aspects publicly or it may refer to a team focused on driving the company to be more sustainable. In fact, in many cases, it means both. The ESG program captures both the strategy and initiatives to become more sustainable as well as the strategy and initiatives to properly measure and report on sustainability results.

Source: <https://greenbusinessbureau.com/esg/esg-vs-sustainability-whats-the-difference/>

As the property valuer mostly assess the value of the property and not the value of the company, can we remain indifferent to ESG factors?



We (property valuers)
have to
adjust to ESG
as the other industries do!

EU as a pioneer in the global ESG transformation

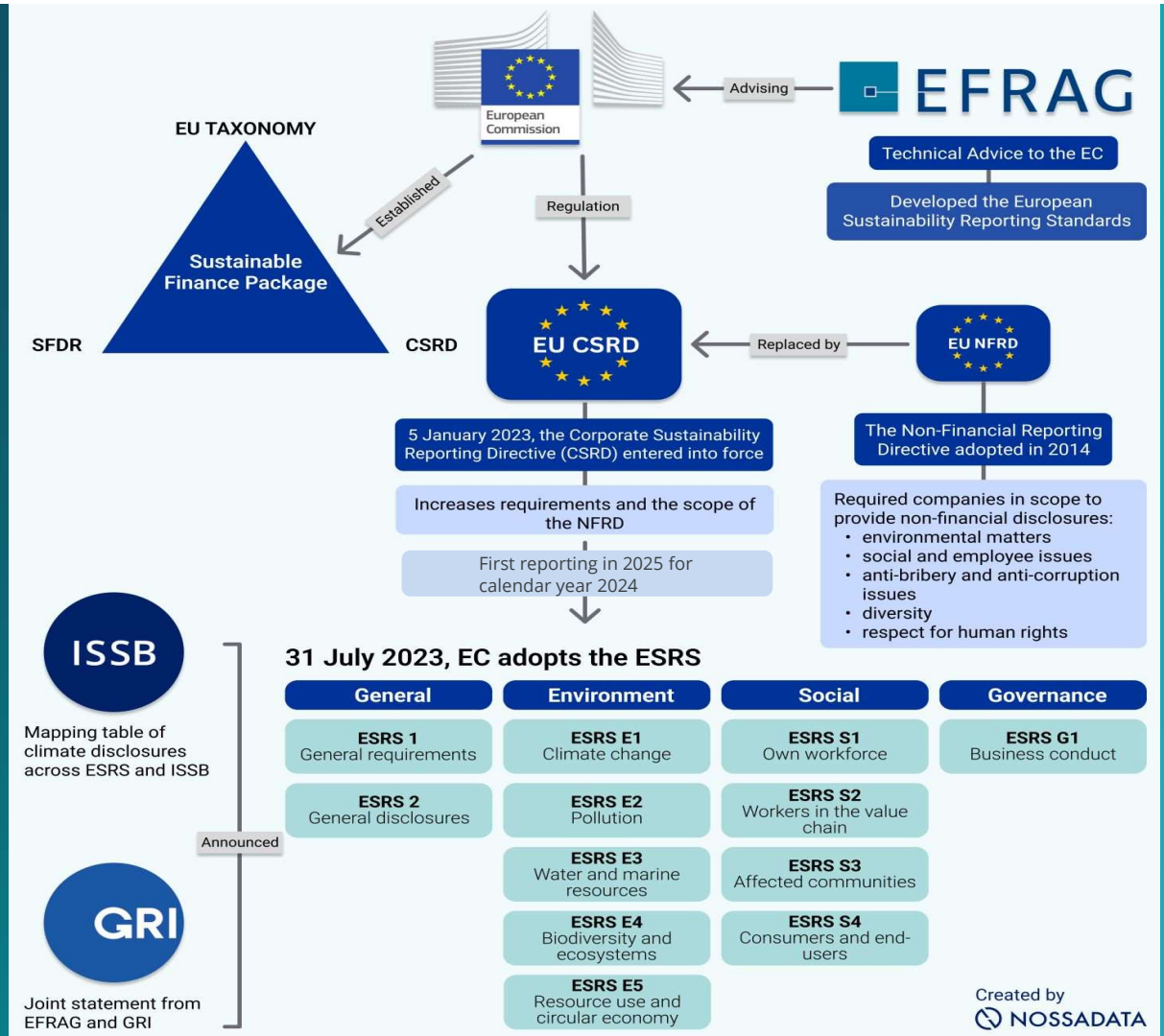
- The European Union is a pioneer in the global ESG transformation, taking into account the scope and scale of the planned reforms
- According to the assumptions of the European Green Deal, by 2030 greenhouse gas emissions in the EU are to be reduced by approx. 55% compared to 1990 emissions, and by 2050 the EU economy is to achieve climate neutrality* and limit the global temperature increase to below 2°C (target to 1.5°C) compared to the pre-industrial era (as part of the implementation of the objectives from the Paris Agreement)
- Buildings consume approx. 40% of the energy produced and are responsible for approx. 36% of greenhouse gas emissions**
- Therefore, the ESG transformation in the real estate market is very important. The pursuit of climate neutrality requires not only the transformation of the real estate industry, but also the redirection of capital flows to finance the renovation and thermal modernization of buildings and enabling sustainable investments, which is why property valuers should be open to these changes***

*) European Council , Fit for 55: how the EU will turn climate goals into law, 2023, <https://www.consilium.europa.eu/pl/infographics/fit-for-55-how-the-eu-will-turn-climate-goals-into-law/> (dostęp: 9.04.2023).

***) European Commission, *Energy efficiency in buildings*, 2020, https://commission.europa.eu/system/files/2020-03/in_focus_energy_efficiency_in_buildings_en.pdf (dostęp: 14.04.2023).

****) J.Panas, G. Główska, A. Grygiel-Tomaszewska, Transformacja ESG rynku nieruchomości – wyniki badań przeprowadzonych wśród funduszy nieruchomości, [w:] B. Ocicka, K. Gemra (red.), *Zrównoważona transformacja – stan i uwarunkowania w kontekście ESG. Przedsiębiorstwa - instytucje finansowe - jednostki samorządu terytorialnego*, Oficyna Wydawnicza SGH – Szkoła Główna Handlowa w Warszawie, Warszawa, 2023, (ahead-of-print).

EU ESG REGULATIONS



Source: <https://www.nossadata.com/blog/fashioning-a-greener-future-exploring-esg-in-textiles>

ESG frameworks and standards

ESG framework

A framework is broad in its scope, giving a set of principles to guide and shape understanding of a certain topic. In this case, we're referring to ESG. An ESG framework will guide the direction of ESG reporting, but will not provide a methodology for the collection of information, data, or the reporting itself. Frameworks are useful to use alongside ESG standards, or when a well-defined standard does not exist.

ESG standard

Standards are specific in their focus. They contain detailed criteria explaining what needs to be reported. In the context of ESG, this means standards dictate how information and data are collected, and how a report needs to be produced (what topics and business areas to include). Standards make frameworks more actionable by ensuring comparable, consistent, and reliable disclosure.

Source: <https://greenbusinessbureau.com/esg/esg-reporting-esg-frameworks/>

SELECTED VOLUNTARY DISCLOSURE FRAMEWORKS FOR ESG CRITERIA in REAL ESTATE MARKET

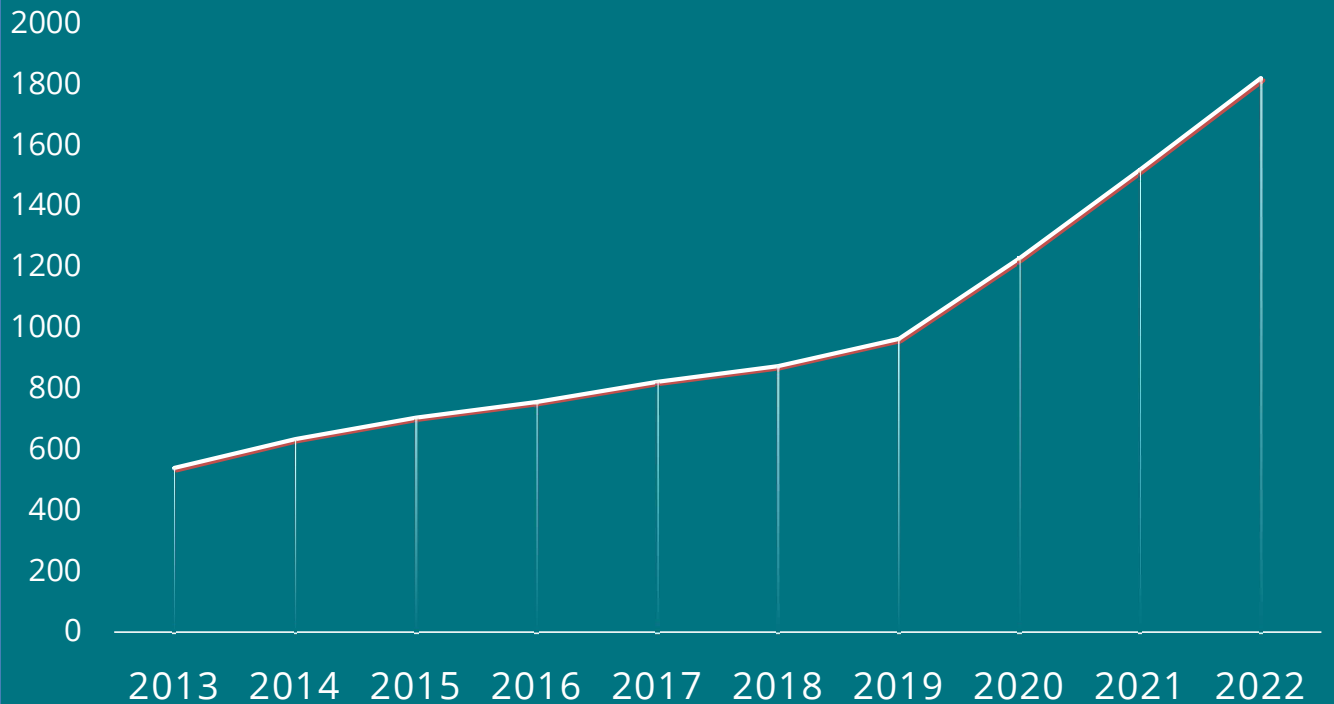
- Under these frameworks, a company actively discloses its sustainability-related policies, practices, performance data, and information related to ESG criteria. It's common for these frameworks to take the form of a questionnaire. Below are identified the most popular voluntary disclosure frameworks in real estate market:
- Based on the uniform ESG criteria catalogue, a score is calculated that creates transparency for stakeholders (including tenants, investors, etc.) across all providers as to where the properties or portfolios are on the path to CO2 neutrality.
- Investors, banks and insurance companies are enabled to classify real estate products in terms of their sustainability in the overall market within the framework of investment and financing processes.



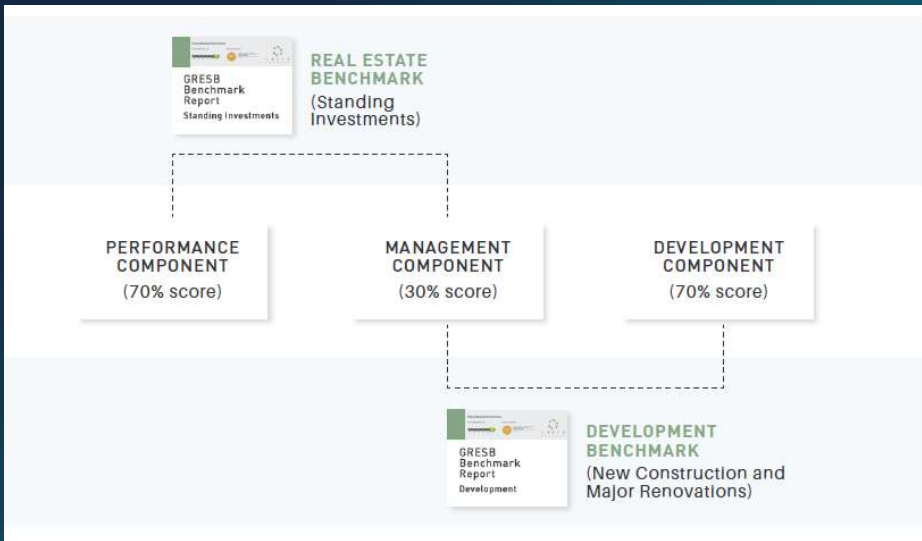
GRESB – ESG Benchmark

- in 2009 a group of real estate fund (APG, PGGM and USS) in the Netherlands has created the GRESB (Global Real Estate Sustainability Benchmark) assessment system
- the aim of GRESB is to develop a uniform scheme enabling measurement providing comparable data in the field of environmental, social and management areas
- GRESB bases its assessment on the principles of responsible investing (PRI) and non-financial reporting standards (GRI)
- Between 2013 and 2022, the number of investors interested in having their investments assessed by GRESB more than tripled – from less than 600 to over 1,800
- According to GRESB, in 2022 the largest increase (by 20%) in the number of entities participating in this assessment was recorded. In total, as at the end of 2022, 1,820 entities from 74 countries applied for it, about half of which were entities from Europe.

NUMBER OF PARTICIPANTS UNDERTAKING IN THE GRESB ASSESSMENT 2013 - 2022



GRESB – scoring model



The score breakdown by the E, S, G dimensions within each component is presented below.

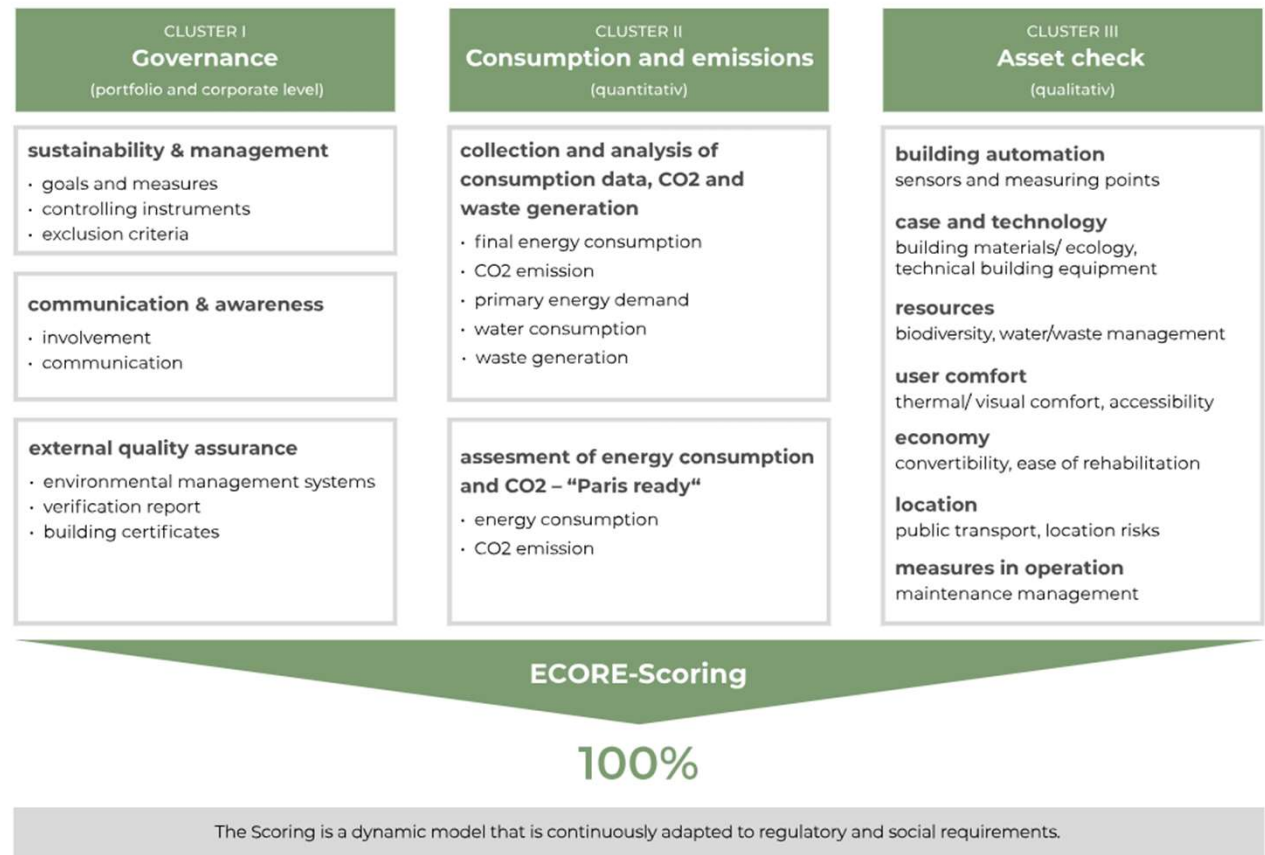
	E	S	G
Management	0%	35%	65%
Performance	89%	11%	0%
Development	73%	21%	6%

Component	Aspect	# Points	% Component	% Overall Score
Management	Leadership	7	23%	7%
	Policies	4.5	15%	5%
	Reporting	3.5	12%	4%
	Risk Management	5	17%	5%
	Stakeholder Engagement	10	33%	10%
Total		30	100%	30%
Performance	Risk Assessment	9	13%	9%
	Targets	2	3%	2%
	Tenants & Community	11	16%	11%
	Energy	14	20%	14%
	GHG	7	10%	7%
	Water	7	9.5%	7%
	Waste	4	5.5%	4%
	Data Monitoring & Review	5.5	8%	6%
	Building Certifications	10.5	15%	11%
	Total		70	100%
Development	ESG Requirements	12	17%	12%
	Materials	6	9%	6%
	Building Certifications	13	19%	13%
	Energy	14	20%	14%
	Water	5	7%	5%
	Waste	5	7%	5%
Total		70	100%	70%

Source: https://documents.gresb.com/generated_files/real_estate/2023/real_estate/reference_guide/complete.html#assessment_and_reference_guide_structure

ECORE – ESG Circle of Real Estate

- German industry initiative for ESG conformity in real estate portfolios
- founded in 2020
- „younger German brother“ of GRESB



Source: <https://www.ecore-scoring.com/en/ecore-scoring-homepage/>

CRREM – Carbon Risk Real Estate Monitor

- CRREM is an Excel-based, open-access tool, that aims to assess the risks associated with poor energy efficiency and high emissions at the individual property level so that strategies can be developed to decarbonize the portfolio.
- supported by the Framework Programme of the European Union Horizon 2020 for risk analysis and management of stranded assets at individual asset and portfolio level;
- It offers the possibility to determine country- and building-type-specific CO₂ levels and to show energy reduction pathways until 2050, aiming at limiting global warming to 1.5°C or 2°C.



Sources: Spanner, M., Wein, J. (2020). Carbon risk real estate monitor: making decarbonization in the real estate sector measurable. Journal of European Real Estate Research, Vol. 13, 3, 277–299.

ESG from the perspective of real estate funds in Poland

- Within the three-year research project (2022-2024) at the SGH Warsaw School of Economics entitled Management quality of ESG aspects and resilience to crises. Enterprises - financial institutions - local government focused on getting to know the achievements to research date on the management of ESG aspects, as well as on the diagnosis of the way of understanding this issue and its meaning in various types of activity by representatives of entities from the private and public sectors.
- As part of this project, in 2022, structured interviews were conducted with selected representatives of the real estate investment fund industry in Poland to gain insight into how environmental, social and governance (ESG) factors can affect the investments in real estate funds.
- The aim of the study was to present the determinants and scope of sustainable transformation in the context of ESG in the investment processes taking place in real estate funds in Poland.
- The study was conducted in the form of interviews.

ESG from the perspective of real estate funds in Poland

The selected quotes and conclusion from these interviews:

“The ESG factor integrity process is imposed from the start. At the moment, there is probably no possibility that any construction investment will take place without an assessment of risks for sustainable development.”

IPOPEMA Towarzystwo Funduszy
Inwestycyjnych

“We analyze investments based on standard fund policy selection criteria and add ESG elements that may or will potentially affect the value of investments in the future.”

Investors Towarzystwo Funduszy
Inwestycyjnych S.A.

“A new element in the due diligence process is that we expect the developer or owner will provide us with its own ESG reports - if any. What we are looking for in these reports is for example, information or confirmation that a given property will meet all the assumptions taxonomy of the European Union, for example when it comes to zero-emissions in 2050.”

DEKA IMMOBILIEN INVESTMENT GMBH sp. z o.o. Oddział
w Polsce

In the case of social and governance areas, the assessment of sustainability regarding real estate investments is still quite a challenge with attention to the difficulty in finding and defining appropriate measures and in identification of evaluation standards.

Environmental aspect is the most important and dominant. Social factors - we also pay attention to this. They are harder to find at the moment in the case of real estate, for example, but also we're looking at it.

IPOPEMA Towarzystwo Funduszy
Inwestycyjnych

The results of the research will be published in October this year in

B. Ocicka, K. Gemra (eds.), Sustainable transformation - state and conditions in the context of ESG. Enterprises - financial institutions - local government units, Oficyna Wydawnicza SGH - Warsaw School of Economics, Warsaw, 2023, (ahead-of-print) / Polish edition

Chapter 10 of this book is devoted to the approach of real estate funds in Poland to the ESG factors
written together by J.Panas, G. Główka, A. Grygiel-Tomaszewska.

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Coorganizer of the conference: <https://www.sgh.waw.pl/transformacja-esg>



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Warszawy



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GRESB



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Club



PLGBC
Polskie Stowarzyszenie
Budownictwa Ekologicznego



Izba Zarządzających Funduszami i Aktywami



Sektorowa Rada
ds. Kompetencji
Finanse



POLSKA FEDERACJA STOWARZYSZEŃ
RZECZOZNAWCÓW MAJĄTKOWYCH



Polska Izba Nieruchomości Komercyjnych



IMI. PAWŁA ADAMOWICZA

ESG in PROPERTY VALUATION - SELECTED SURVEY RESULTS

- In the first half of the year 2023 I have conducted surveys among property valuers on the Polish market regarding implementing ESG factors in real estate valuation proces
- My HUGE THANK YOU to those who made to the end of the survey and sent their answers !

ESG in PROPERTY VALUATION - SELECTED SURVEY RESULTS

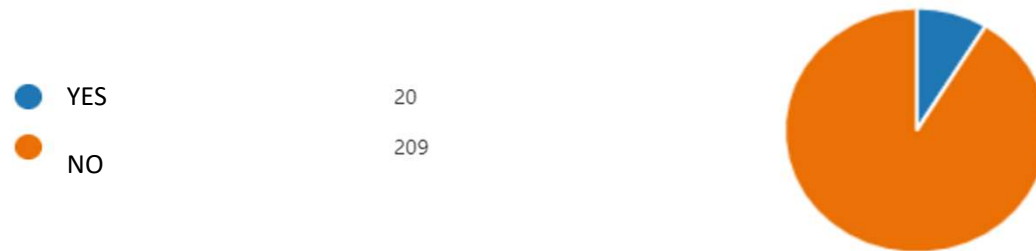
How many years of experience do you have in real estate valuation?

 < 5 years	23
 5 - 10 years	55
 11 - 20 years	91
 21 - 30 years	48
 > 30 years	12

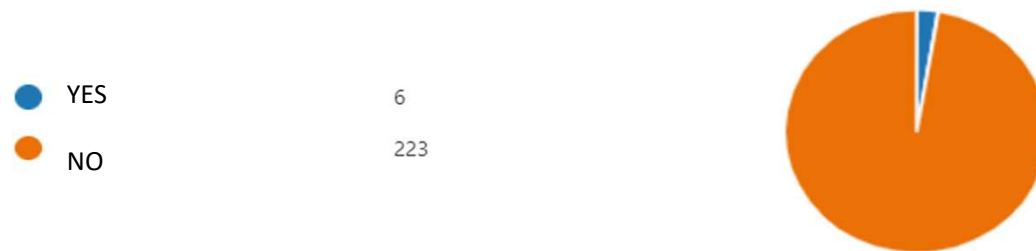


ESG in PROPERTY VALUATION - SELECTED SURVEY RESULTS

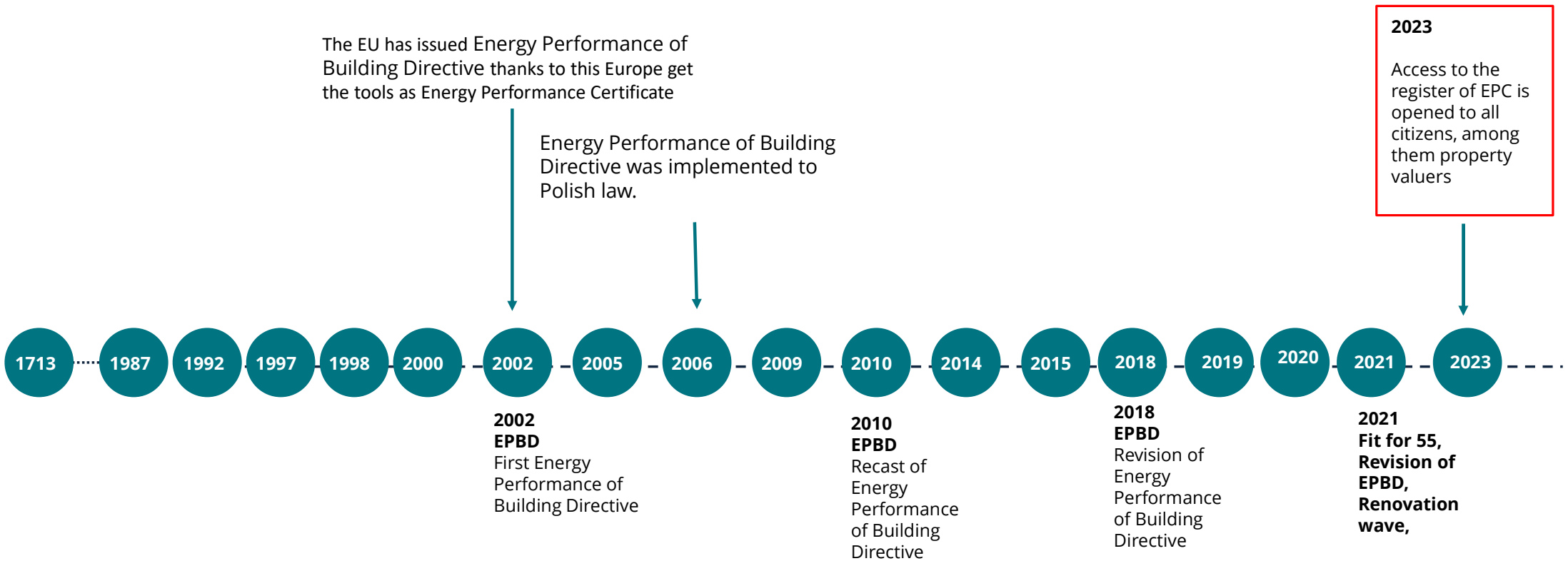
In your professional practice, have you considered the indicator of the annual energy demand of the subject of valuation expressed in kWh/m2/year as a comparative feature?



In your professional practice, have you considered the CO2 emission factor of the object of valuation as a comparative feature?



TIMELINE OF EPBD eg. IN POLAND



If you do not have access to data on a given feature of the object of valuation, it cannot be compared !

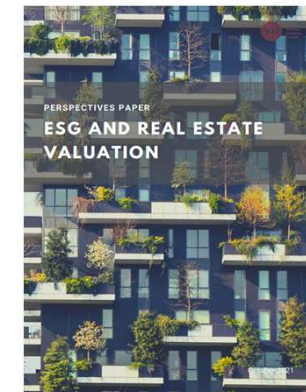
ESG guidelines for consistent instructions for valuers

- 2023, [UK commercial secured lending – draft ESG framework \(rics.org\)](#)



The framework compliments [Red Book Global Standards](#), the [Red Book UK Supplement](#) and [Sustainability and ESG in commercial property valuation and strategic advice](#), and does not replace any part of them.

- 2023, Transition Risk Assessment Guidelines, ULI,
- RICS 2022 - GUIDANCE NOTE - Sustainability and ESG in commercial property valuation and strategic advice
- IVSC 2021, ESG and Real Estate Valuation



CONCLUSIONS

“The reason why we established GRESB is simple. Ten years ago there was no uniform or consistent way to measure the sustainability performance of real estate companies and funds across countries, across regions and across private and publicly traded investment structures. And if you can’t measure and compare, it is difficult to engage with a manager on how to improve.”

**Patrick Kanters,
Managing Director Global Real Estate &
Infrastructure at APG Asset Management**

GRESB, 10 Years of GRESB , December 2019,
<https://www.gresb.com/wp-content/uploads/resources-10-years-of-gresb.pdf>

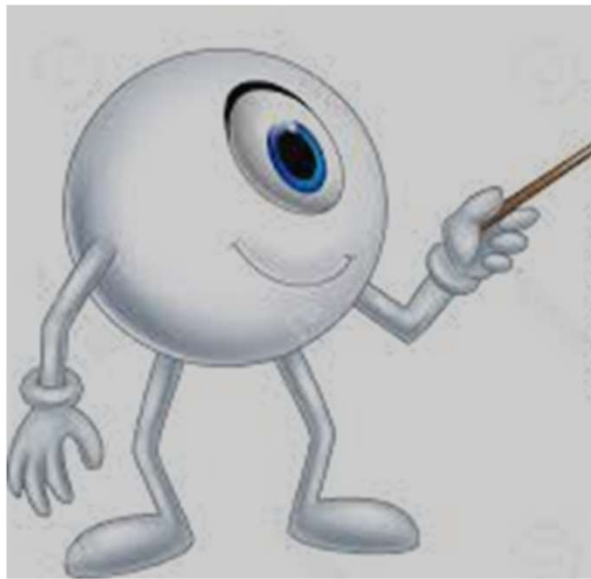
- ***The impact of ESG will evolve over time as both it becomes increasingly more evident in a world-built market and is better understood by those active in the market***
- ***The professional bodies, namely IVSC, RICS, TEGOVA should be assisting in providing further guidance in transparent and easy way***
- ***There should be STANDARD for implementing ESG factors in property valuation process,***
- ***We have no time to wait another 20 years, to understand that ESG is very important issue, and that is not only E***
- ***We cannot neglect the S and G area, thus we have to start learning to look at the property through ESG lens***

Environmental, social, and governance (ESG) factors have become a necessity rather than a trend across industries, including real estate.

As more investors demand responsible and sustainable investments, companies are taking ESG into account when making decisions related to their real estate.

As a result, the significance of ESG in the realm of real estate is increasingly gaining attention.

CONCLUSIONS



We have to start learning to look at the property through ESG lens

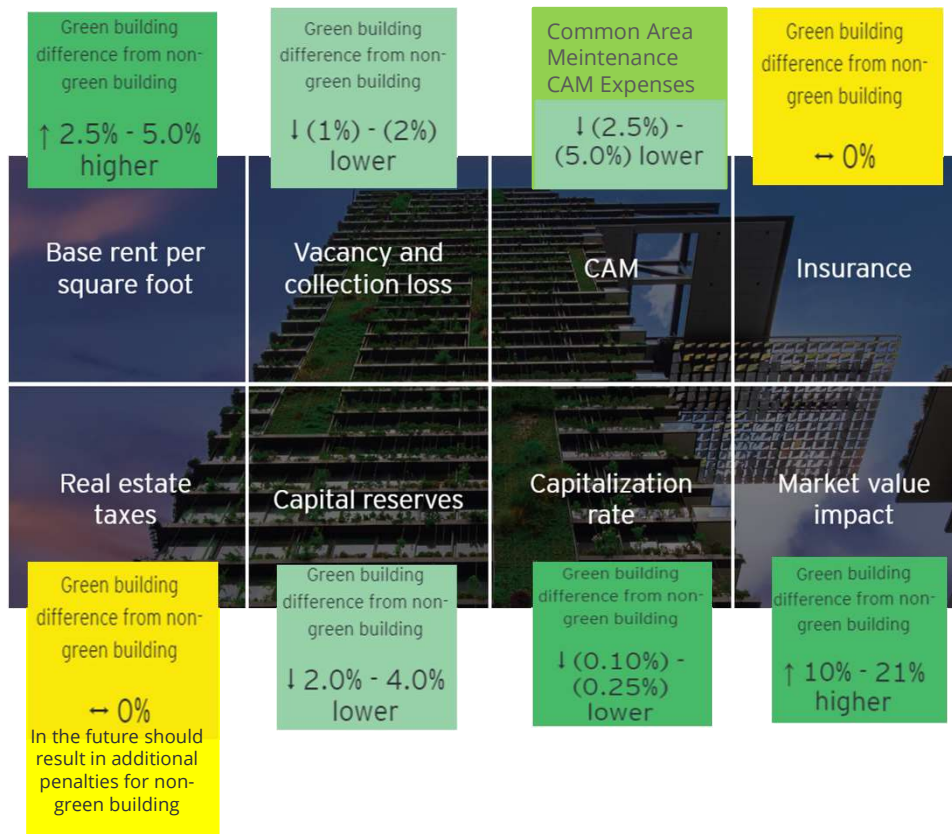
Thank you for your attention !



jolanta.panas@gmail.com⁴²
jpanas@sgh.waw.pl

ESG IMPACT ON PROPERTY VALUES

- EY US in 2022 conducted a hypothetical case study to analyze and quantify the impact of ESG on property valuations.
- They compared two office buildings in Chicago
- EY US looked at the key assumptions used in the income approach to highlight the areas where ESG (sustainability) has an impact on property value.



Source: https://www.ey.com/en_us/real-estate-hospitality-construction/looking-at-esg-s-positive-impact-on-property-values

The EY study's green building yielded between a 10% to 21% increase in market value compared to the non-green building.

https://www.ey.com/en_us/real-estate-hospitality-construction/looking-at-esg-s-positive-impact-on-property-values