

European Standardization Organizations

Webinar

'The role of standardization in climate change adaptation'





**Els SOMERS**

Project Manager

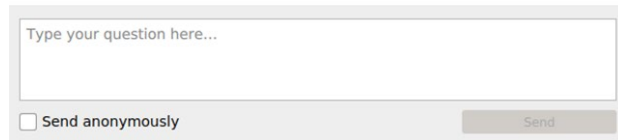
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# Get the most out of the webinar today

- ▶ You are muted
- ▶ Use the Q&A panel to submit your questions



- ▶ Talk about us on X [#training4standards](#) [@Standards4EU](#)

# Your speakers today



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- DIN: German Institute for Standardization = CEN Member
- DKE: German Commission for Electrotechnical, Electronic, and Information Technologies = CENELEC Member
- VDI: Association of German Engineers
- DWD: German Meteorological Service
- ACC: adaptation to climate change
- CWA: CEN Workshop Agreement

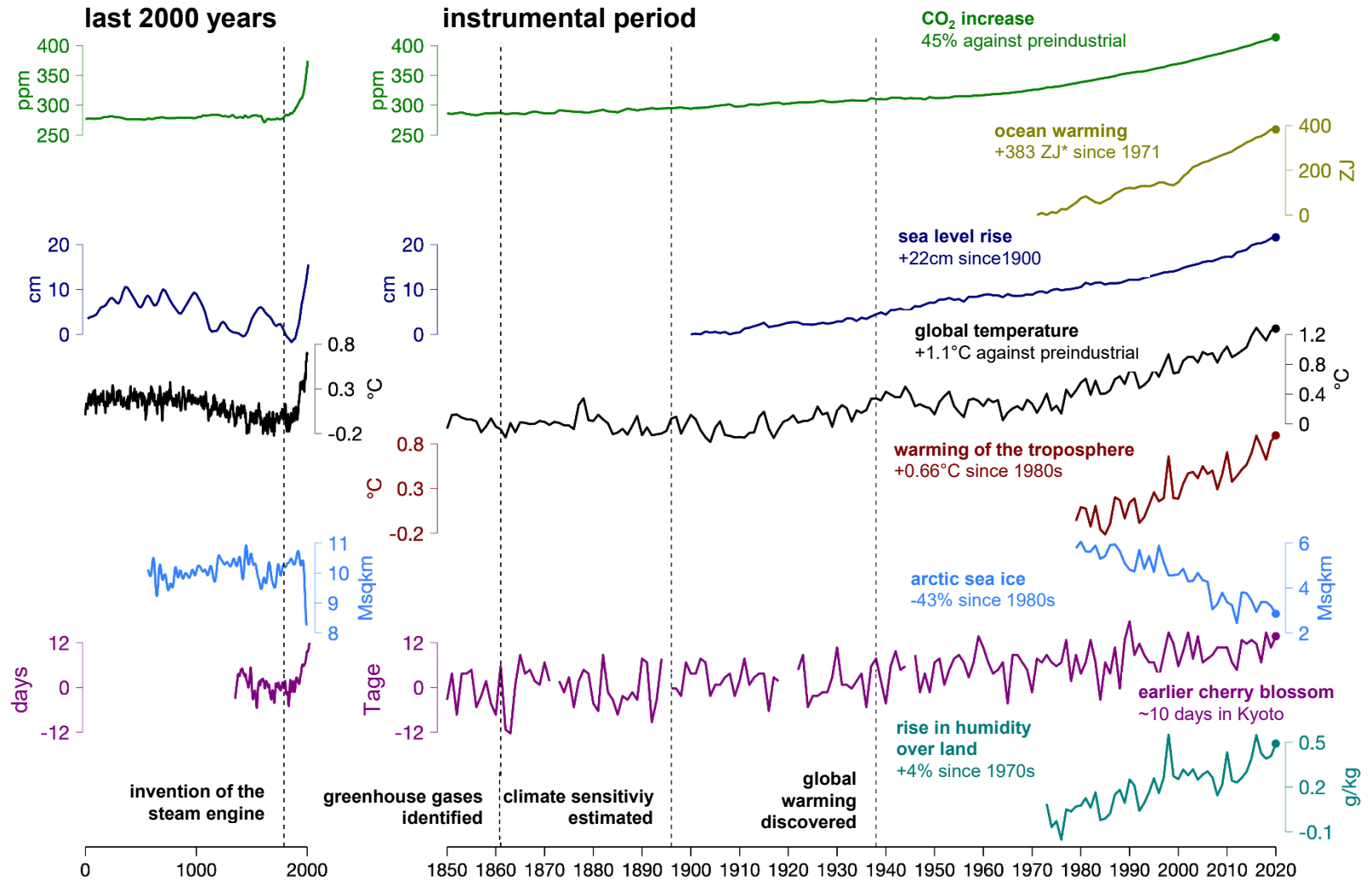


- ▶ Our stakeholders' own interests
  - ▶ Climate risk analysis for companies
  - ▶ Climate resilient infrastructure
  - ▶ ...
- ▶ But:
  - ▶ Which scenario should we be prepared for?
  - ▶ DIN/DKE/VDI Workshop "Which climate scenario do we need to be prepared for precautionary reasons?"

# Possibilities and limitations using climate projection data in standardization



# changes in key variables of the climate system

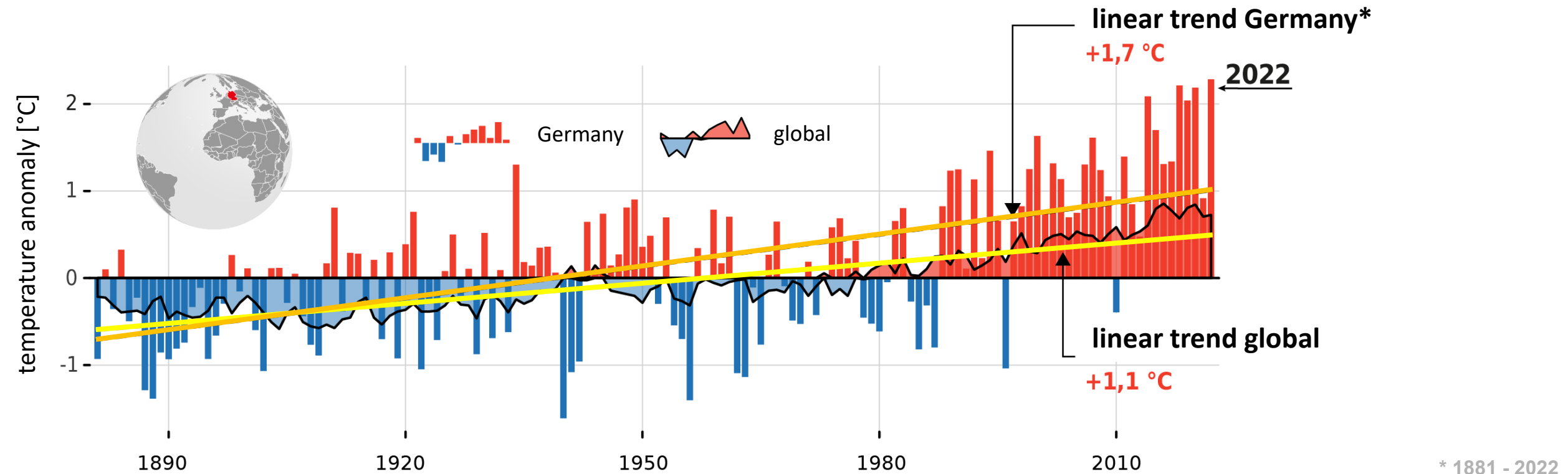


source: @ed\_hawkins



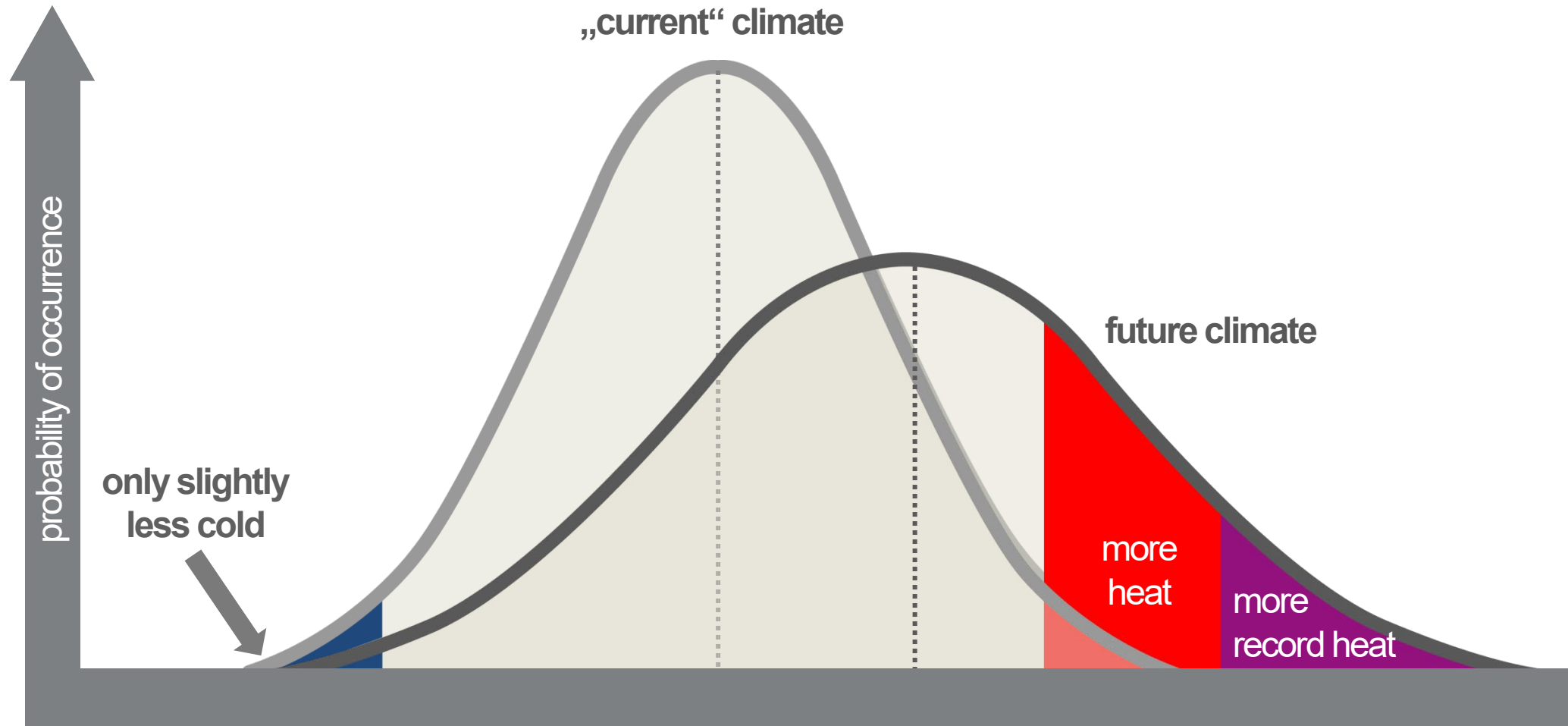


# conditions in some regions change even faster than global averages



\* 1881 - 2022

➔ with changing averages we see increasing variability → more extreme values



➔ **Green Deal** → Sustainability is becoming a criterion of risk management in the financial sector

➔ **Taxonomy** → An activity is considered taxonomy-compliant activity if it makes a significant contribution to the achievement of at least one environmental objectives\* and does not significantly impair any of the other objectives.



**COMMISSION DELEGATED REGULATION (EU) 2021/2139**

\*e.g.:  
mitigation of climate change  
adaptation to climate change

# COMMISSION DELEGATED REGULATION (EU) 2021/2139



Official Journal  
of the European Union

EN

Series L

2023/2485

21.11.2023

## COMMISSION DELEGATED REGULATION (EU) 2023/2485

of 27 June 2023

amending Delegated Regulation (EU) 2021/2139 establishing additional technical screening criteria for determining the conditions under which certain economic activities qualify as contributing substantially to climate change mitigation or climate change adaptation and for determining whether those activities cause no significant harm to any of the other environmental objectives

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 <sup>(1)</sup>, and in particular Articles 10(3) and 11(3) thereof,

Whereas:

- (1) Regulation (EU) 2020/852 establishes the general framework for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable. That Regulation applies to measures adopted by the Union or by Member States that set out requirements for financial market participants or issuers in respect of financial products or corporate bonds that are made available as environmentally sustainable, to financial market participants that make available financial products, and to undertakings that are subject to the obligation to publish a non-financial statement pursuant to Article 19a of Directive 2013/34/EU of the European Parliament



# COMMISSION DELEGATED REGULATION (EU) 2021/2139 – Appendix A

## Appendix A

### GENERIC CRITERIA FOR DNSH TO CLIMATE CHANGE ADAPTATION

#### I. Criteria

The physical climate risks that are material to the activity have been identified from those listed in the table in Section II of this Appendix by performing a robust climate risk and vulnerability assessment with the following steps:

- (a) screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime;
- (b) where the activity is assessed to be at risk from one or more of the physical climate risks listed in Section II of this Appendix, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity;
- (c) an assessment of adaptation solutions that can reduce the identified physical climate risk.

The climate risk and vulnerability assessment is proportionate to the scale of the activity and its expected lifespan, such that:

- (a) for activities with an expected lifespan of less than 10 years, the assessment is performed, at least by using climate projections at the smallest appropriate scale;
- (b) for all other activities, the assessment is performed using the highest available resolution, state-of-the-art climate projections across the existing range of future scenarios ( <sup>43</sup> ) consistent with the expected lifetime of the activity, including, at least, 10 to 30 year climate projections scenarios for major investments.

The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports ( <sup>44</sup> ), scientific peer-reviewed publications, and open source ( <sup>45</sup> ) or paying models.

For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly.

For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations.

The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions ( <sup>46</sup> ) or rely on blue or green infrastructure ( <sup>47</sup> ) to the extent possible.

#### II. Classification of climate-related hazards ( <sup>48</sup> )

## ➔ climate risk and vulnerability assessment in Germany

### purposes:

creating awareness → addressing those affected

prioritization of action requirements → basis for decision-making for clients

### results:

communication products (e.g. key messages, graphics)

decision templates (e.g. priority lists)



## → climate risk and vulnerability assessment in Germany

result: in which fields of action, which climate impacts and in which regions are particularly

- high climate risks?
- low adaptation capacities?
- urgent need for action?

example

➔ **climate risk and vulnerability assessment\* in Germany**  
- climate risks without/with further-reaching adaptation -

Fields of action	Climate risk without adaptation		Climate risk with adaptation	
	Mid-century		Mid-century	
	optimistic	pessimistic	optimistic	pessimistic
Biodiversity	low-medium	medium-high	low-medium	medium-high
Soil	low-medium	medium-high	low	low-medium
Agriculture	low-medium	high	low-medium	high
Forestry and forest management	low-medium	high	low-medium	high
Fishing	low-medium	high	low-medium	medium-high
Coastal and marine protection	low-medium	high	low-medium	medium-high
Water balance, water management	low-medium	high	low-medium	medium-high
Construction industry	low-medium	medium-high	low-medium	low-medium
Energy industry	low	low	low	low
Traffic, traffic infrastructure	low	low-medium	low	low-medium
Industry and trade	low	low-medium	low	low-medium
Tourism	low	low-medium	low	low-medium
Human health	low-medium	high	low	low-medium



\*ISO 14091



... in a binary data format. NO EXCEL!

...come as ensembles. NO SINGLE TRUTH!

... are inherent uncertain.

... a large amount of data. TB!

... must be processed appropriately for your location / region.

... are the only reliable source of information about future climatic conditions

... support adaptation measures and standardization work

... can be obtained tailored for any purpose from climate services!



”

**The enormous problems of our time cannot be solved with the same way of thinking that produced those problems**

*Albert Einstein*

Thank you!



- ▶ DIN/DKE/VDI workshop on 27.06.2023: "Which climate scenario do we need to be prepared for precautionary reasons?"
  - ▶ 60 participants from Technical Committees, businesses, politics
  - ▶ Breakout sessions for clusters *Construction, Occupational safety, Product safety, Transport, Water*
  - ▶ Main insight: There is a lot of expertise but there still is a big gap towards a broad application of the German adaptation plan



- ▶ What can standardization organizations contribute?
  - ▶ Standards that already take adaptation to climate change into account (possibly EU taxonomy-compliant)
  - ▶ Support for committees at DIN/DKE/VDI that want to consider adaptation to climate change
  - ▶ Consolidated methodologies, e.g. for
    - ▶ Risk analysis (incl. cost-benefit analysis) regarding climate impacts
    - ▶ Derivation of requirements in standards from climate projection data





- ▶ Additionally, there is a need for
  - ▶ More support for small and medium-sized enterprises regarding adaptation to climate change
  - ▶ clear communication from knowledge carriers and decision-makers regarding adaptation to climate change
  - ▶ Political guidelines, e. g. regarding the selection of a reference scenario



# Our commitment (DIN/DKE/VDI)

*The DIN/DKE/VDI adaptation action plan is currently being drawn up internally*

- ▶ **Goals of our adaptation action plan:**
  - ▶ **Short term**
    - ▶ Quick help for companies (recommendations for action/checklists)
  - ▶ **Medium/long-term**
    - ▶ There exists a structure for coordinating adaptation to climate change in standardization
    - ▶ Adaptation to climate change (including EU taxonomy conformity) is already included in many standards

# Our commitment (DIN/DKE/VDI)

*The DIN/DKE/VDI adaptation action plan is currently being drawn up internally*

- ▶ To be considered:
  - ▶ Draft standardization request of the EU Commission on climate adaptation
    - ▶ 350 infrastructure standards to be revised
  - ▶ (in Germany) German adaptation strategy to be revised by the end of 2024, that is to contain
    - ▶ measurable targets for adaptation to climate change
    - ▶ measures (standards also play a role here)



# Our commitment (DIN/DKE/VDI)

*The DIN/DKE/VDI adaptation action plan is currently being drawn up internally*

- ▶ **DIN/DKE/VDI Adaptation action plan**
  - ▶ identification and prioritization of affected sectors and areas
  - ▶ individual climate risk analysis
    - ▶ Includes determination of required climate data
  - ▶ **Risk management**
    - ▶ derivation of specific requirements for adaptation measures
  - ▶ **Taxonomy conformity**
  - ▶ **Consultation**
  - ▶ **Coordination**
    - ▶ among and within the organizations involved as well as with policy makers and stakeholders

# How to identify standards for revision

- ▶ **DIN Toolbox Climate Change (VDI developed a similar tool)**
- ▶ **Our Climate Toolbox includes:**
  - ▶ questionnaires on climate change mitigation, adaptation and circularity (3 questions each) plus guidance for DIN project managers and further information for interested committees



Klimaschutz



Klimafolgenanpassung



Zirkularität

## ▶ Questionnaire Adaptation to climate change

1. Are the normative specifications a) dependent on climatic conditions and/or b) could the subject of the standard be susceptible to extreme weather conditions?

### ▶ Tip:

Regarding a) Is the subject matter of the standard dependent on temperature, wind speed, precipitation, ... ?

Regarding b) Could flooding, for example, have an effect on such standard objects that are usually located in cellars?

2. Can changes (additions/modifications) to your normative specifications reduce the vulnerabilities identified in question 1?
3. Does the subject matter of your standard contribute to necessary functions of natural and societal systems?

### ▶ Note:

Examples of societal systems: Contribution to the function of infrastructures (roads, daycare centers, schools, supermarkets ...) and/or influence on livelihoods or economic, social or cultural assets.

Examples of natural systems: Contribution to the function of ecosystems/ecosystem services or economic systems that use nature.



- ▶ Standards can support stakeholders regarding adaptation to climate change and thus a broad implementation of adaptation measures
- ▶ Standardization organizations have to review their processes
  - ▶ How to identify standards that are in need of revision
  - ▶ How to include/ work together with key stakeholders
  - ▶ How to coordinate adaptation in standardization

- ▶ Guidelines to implement adaptation measures:
  - ▶ **CEN/CLC Guide 32** Guide for addressing climate change adaptation in standards;
  - ▶ **CEN/CLC Guide 33** Guide for addressing environmental issues in testing standards;
  - ▶ **Tailored Guidance** for standardization Technical Committees: how to include adaptation to climate change (ACC) in European infrastructure standards.
  
- ▶ Examples for sector specific approaches:
  - ▶ **CEN/TC 234** 'Gas infrastructure': EN 17649 forces users to assess possible impact of foreseeable scenarios;
  - ▶ **CEN/TC 430** 'Nuclear energy, nuclear technologies, and radiological protection': reference to comprehensive IAEA Guides;
  - ▶ **CLC/TC 9X** 'Electrical and electronic applications for railways' EN 50125-series 'Environmental conditions for equipment'

## ▶ Examples of publications

- ▶ **EN 17680:2023** Sustainability of construction works - Evaluation of the potential for sustainable refurbishment of buildings
- ▶ **EN ISO 14090** Adaptation to climate change - Principles, requirements and guidelines (ISO 14090:2019)
- ▶ **EN ISO 14091** Adaptation to climate change - Guidelines on vulnerability, impacts and risk assessment (ISO 14091:2021)
- ▶ **EN IEC 60721-3-1** Classification of environmental conditions - Part 3-1: Classification of groups of environmental parameters and their severities - Storage
- ▶ **CWA 17727** City Resilience Development - Guide to combine disaster risk management and climate change adaptation - Historic areas
- ▶ **CWA 17518** Good practice recommendations for making Climate Adaptation Plans for fisheries and aquaculture
- ▶ **CWA 17890** Guide to the implementation of cool surfaces for buildings' envelope to mitigate the Urban Heat Island effects



## Climate change mitigation is a priority in the Strategy 2030

- ▶ **Goal:** CEN and CENELEC is committed to combat climate change and support mitigation and adaptation measures actively through providing meaningful solutions
- ▶ **Vision:** Building a safer, more sustainable and competitive Europe through European and International Standardization
- ▶ **Mission:** We create consensus-based standards in order to generate trust, fulfil market requirements, enable market access and innovations for a better, safer and more sustainable Europe.

[https://www.cencenelec.eu/news/publications/Publications/CEN-CLC\\_Strategy2030.pdf](https://www.cencenelec.eu/news/publications/Publications/CEN-CLC_Strategy2030.pdf)



## CEN and CENELECs 'Climate Commitment'



- ▶ CEN and CENELEC supports ISO to implement the '**London declaration action plan**' where first actions to mitigate climate change through standardization will be taken;
- ▶ Standardization is a 'critical catalyst' for **sustainable development**, to transform our economy and enhance the Green and Digital Transition of Europe;
- ▶ Close collaboration with the DG CLIMA through **Standardization Requests** incorporating climate adaptation methods into (infrastructure) standards.



European Standardization Organizations

# Thanks for your attention!

Upcoming webinars/events:

- 2024-02-23 - [Webinar 'Gap-analysis of harmonised standards for machinery against the new Machinery Regulation'](#)
- 2024-03-05 - [8th Cybersecurity Standardization Conference](#)
- 2024-03-19 - [Webinar 'Ensuring a smooth transition between GPSD and GPSR'](#)
- 2024-04-16 - [Webinar on EN ISO 14083 - GHG emissions accounting for transport operations, in the context of new Commission's proposal CountEmissions and other relevant EU legislation](#)