

Communicating about climate in a time of uncertainty

Kaelin DeLong, Vrije Universiteit Amsterdam

13th March 2024

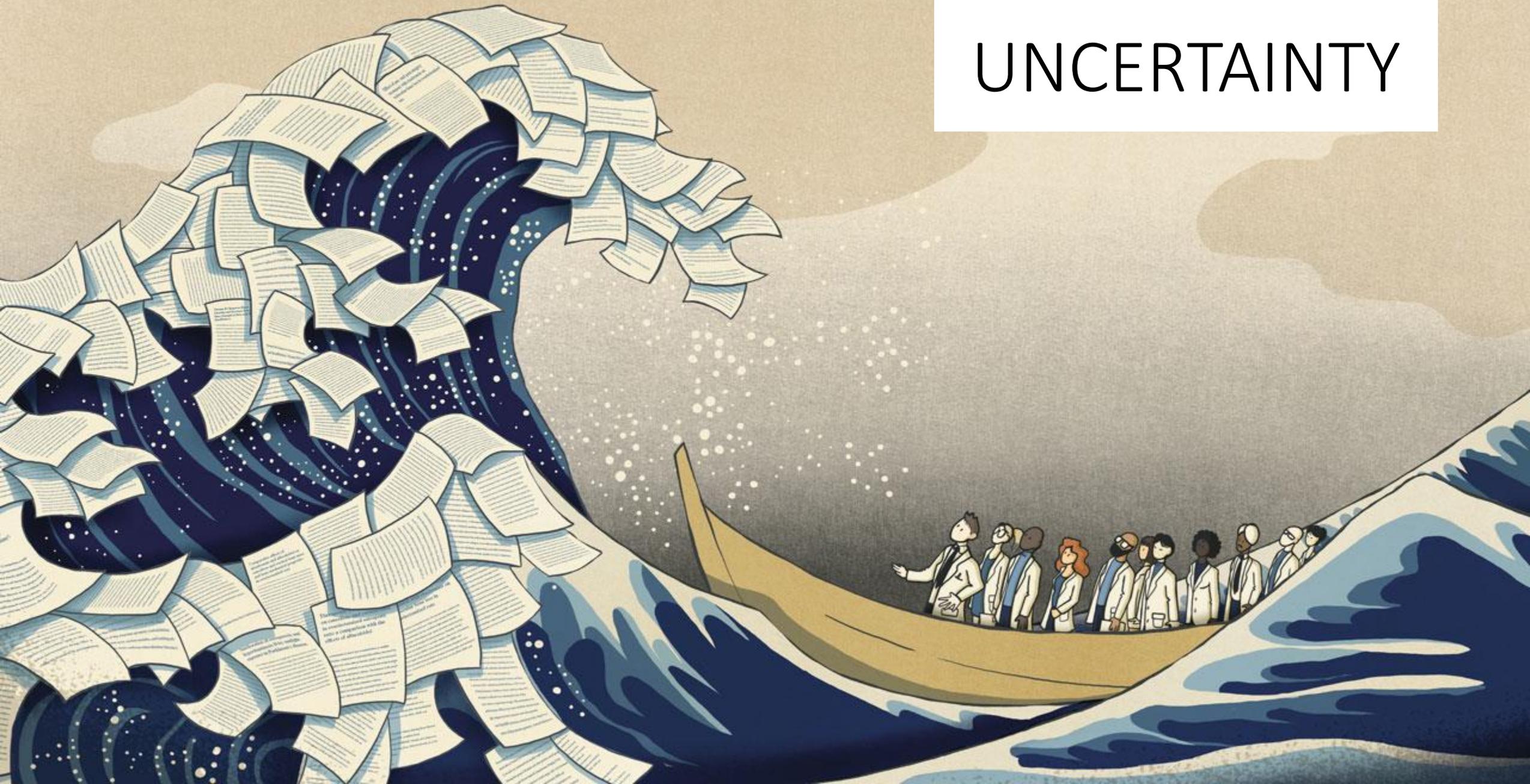
Climateurope2 Festival

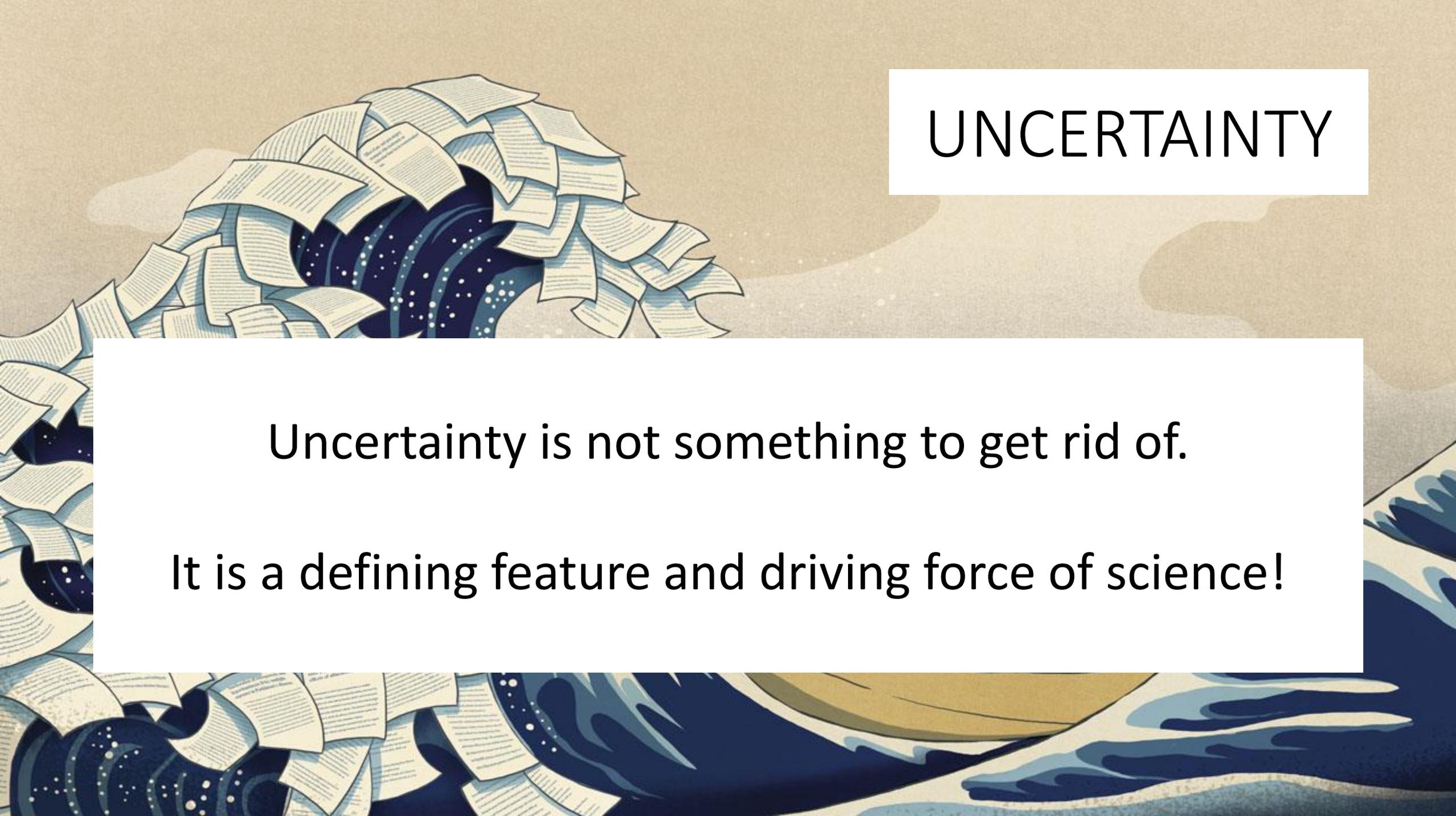


Funded by the European Union



UNCERTAINTY





UNCERTAINTY

Uncertainty is not something to get rid of.

It is a defining feature and driving force of science!

If uncertainty is a fundamental part of science...

Why do (some) people hesitate to communicate uncertainty?

- Confuse audiences
- Indicate incompetence
- Invite criticism
- Decrease trust in science
- Aid those with ulterior motives

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However, evidence suggests that most people are quite capable of understanding, recognizing, and appreciating uncertainty (van der Bles et al. 2020)



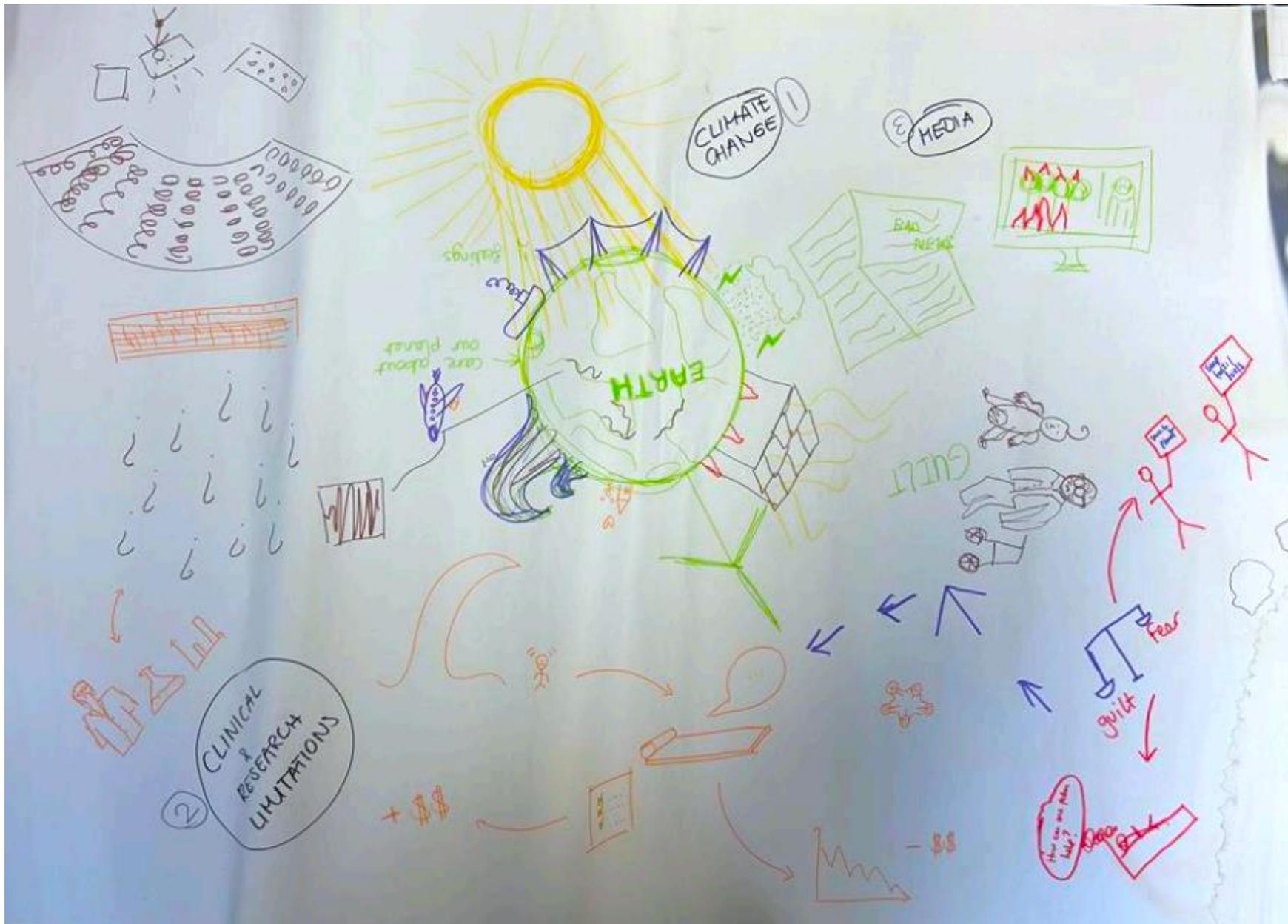
ECO- EMOTIONS

Anger
Contempt
Enthusiasm
Powerlessness
Guilt
Isolation
Anxiety
Sorrow

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Contempt
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How do you **feel** when you think about the climate?



Student drawing from the course "Science in Dialogue" at the Vrije Universiteit Amsterdam. Theme: Eco-anxiety.

Emotions

- Connect thoughts, feelings, and values
- Help prepare us for action
- Often neglected when communicating about science

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- Help prepare us for action
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Traditional view: Science is about “facts” and objectivity

Reality: **Emotions are a key to exploring and communicating complexity**



COALESCE

Co-creating the EU Competence Centre for
Science Communication

The COALESCE project aims to develop and consolidate knowledge and connections within science communication to establish a sustainable **European Competence Centre for Science Communication.**

Duration: April 2023 – March 2027

Budget: 3M €

Partners: 13 from 8 countries

Using storytelling to uncover stakeholder needs, interests, and values

“Tragedy strikes a remote farmer’s village in Hungary. Weeks of heavy rain trigger a catastrophic landslide that destroys most of the village's houses, infrastructure, and farmlands. Communication with the disaster area is limited, and the only dirt road leading there has been wiped out...”

A story of crisis: *Disaster in the Alps*

Tragedy strikes a remote farmer's village in Hungary. Weeks of heavy rain trigger a catastrophic landslide that destroys most of the village's houses, infrastructure, and farmlands. Communication with the disaster area is limited, and the only dirt road leading there has been wiped out.

In the immediate aftermath, the Hungarian government sends their army to help evacuate inhabitants and distribute food and medical supplies. Journalists arrive soon afterwards, and images of the devastation are shown in living rooms across the EU. Hungarian citizens are particularly shocked and empathize with the people affected by the disaster. Crowdfunding activities collect money, clothes, and furniture in a nation-wide attempt to help people rebuild their lives.

As times passes, the necessity for an immediate crisis response slowly fades (as does media attention). Now, the local government is called upon to rebuild the small farmer's town – and they make an unpopular decision. Scientific advisors have informed policymakers that the affected region is a high-risk area. According to their models, landslides will only become more likely in the future. Based on this advice, the policymakers decide that the village needs to be relocated.

The farmers raise their voice in protest. They have farmed these lands for generations. After weeks of being ignored by politicians, one of the younger residents, who speaks English, decides to contact the international media. In a very emotional interview, he says: *“We remember the stories of our ancestors. Our people have always lived with landslides, and we know that they make our soil rich and fertile. We don't care about all these scientists and politicians who tell us to leave because it is unsafe. We want to return to our land and rebuild. Our ancestors did it, and so can we.”*

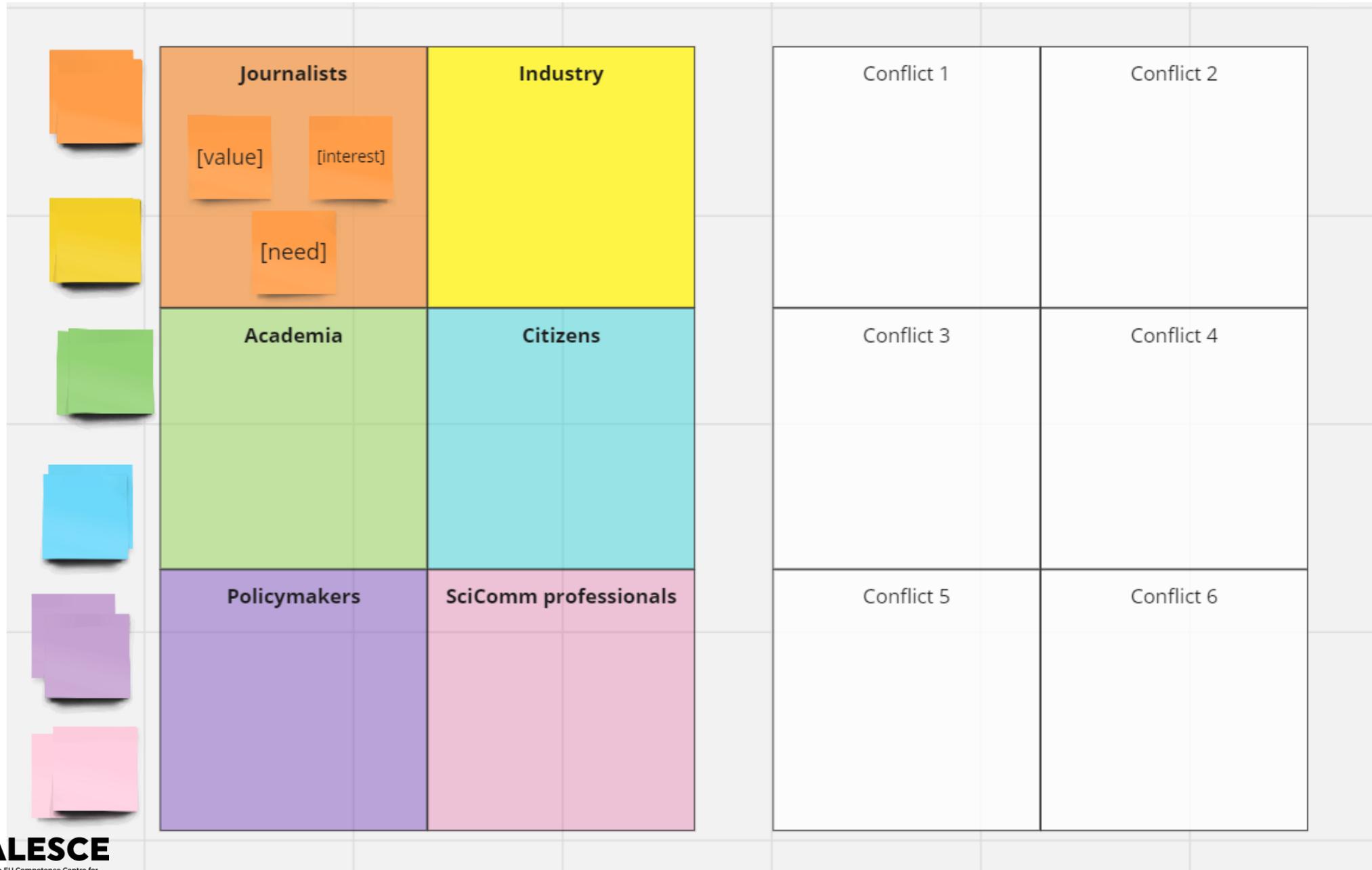
The interview gains a lot of attention and is shared widely. Scientists use the opportunity to educate the public about the causes of landslides. They use models and graphs to show how climate change will impact glaciers in the Alps. They also explain how economic interests, such as creating more ski areas, has led to deforestation, leading to an increased risk of landslides for the entire region.

Now, everyone in the Alps is talking about landslides. People wonder if they live in a high-risk region too. They ask themselves: Should we move to a safer village? Or can we still take measures to prevent landslides? Would it help to plant trees? Some people search the internet and dive into scientific papers for more information about eco-restoration and how to stop climate change. Others find more comfort in conversations with friends and family.

Then, a video clip of an interview with a climate scientist goes viral. When the interviewer starts to ask: *“What is one small thing we can all do?”* the scientist, clearly irritated, interrupts and says, *“Look, I know you want me to say that we should stop eating meat, or plant trees, or fly less. But honestly, it's too late for all that. We should be in the streets, demanding that politicians and large corporations take action now. Stop blaming individual citizens and fix the actual problem!”*

Her call to action immediately catches on. Climate activists, concerned citizens, researchers, and politicians come together and hold the largest protest in the history of the Alps. But another community also raises their voice... The Hungarian farmer's emotional appeal to return to their ancestral lands resonated with many people in the Alps. They recognize themselves in the story of the farmers, who are not listened to or taken seriously by their government.

A large part of the population is now openly voicing their lack of trust in politicians and scepticism about science. Some scientists publish articles that criticize the models being used to predict





Journalists	Industry
Academia	Citizens
Policymakers	SciComm professionals



COALESCE preliminary results

- Climate mentioned in almost all interviews → trigger or intensifier for other types of crises
- Communicating uncertainty can help or hinder trust, depending on the context
 - Crisis timeline
 - Culture
 - Recent events & pre-existing stakeholder relationships

COALESCE preliminary results

- Challenges

- Journalists need clarity and certainty, scientists are trained to understand nuance
- Journalists need science/data to inform the public, scientists are worried about reputation
- Policymakers need data to make good decisions, scientists cannot provide the certainty that they want
- Policymakers feel responsible for protecting citizens' safety, citizens sometimes prioritize community/identity/belonging over physical safety
- More in depth reporting from journalists is needed, but not often funded. Also not always desired from citizens.

Follow Coalesce project on social media

X @scicommEU

in @coalesce-scicomm
coalesceproject.eu



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Agency. Neither the European Union nor the granting authority can be held responsible for them.

THANK YOU

Join our community of practice



LITERATURE

Articles

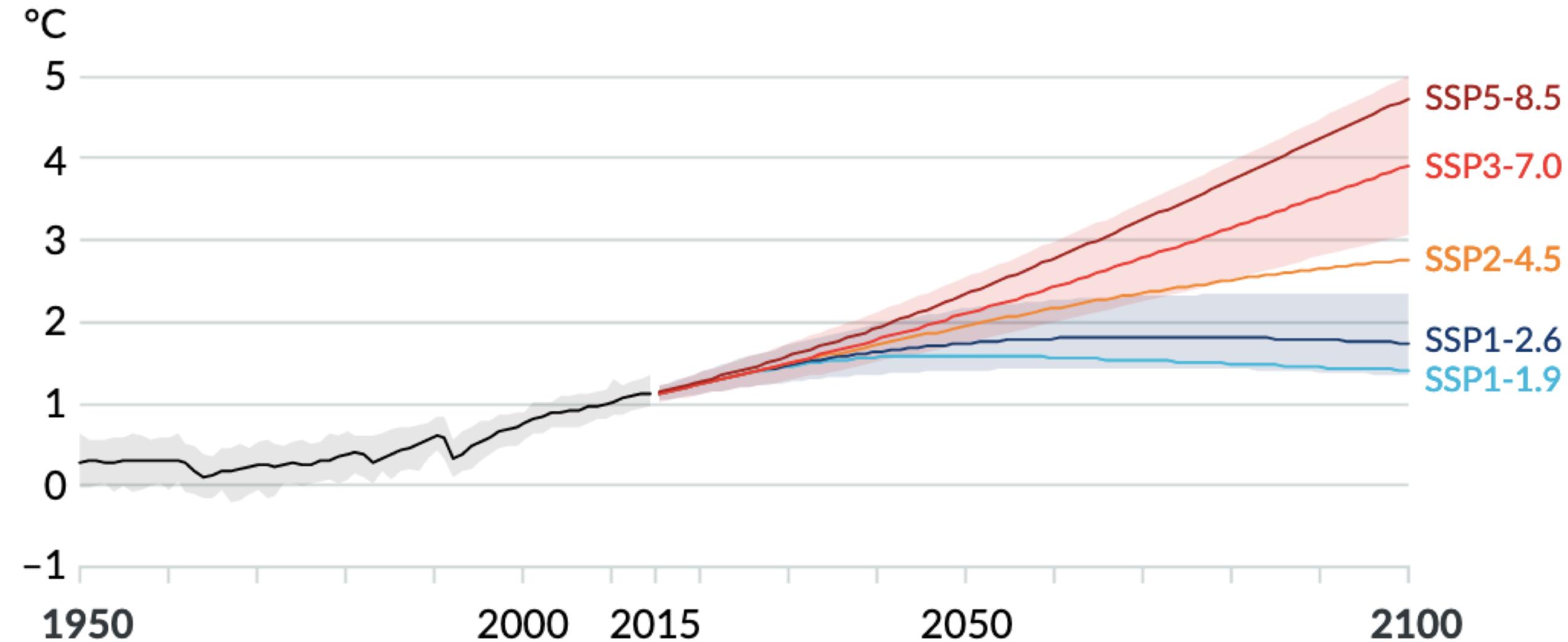
- Gabrys, J., & Yusoff, K. (2012). Arts, sciences and climate change: Practices and politics at the threshold. *Science as Culture*, 21(1), 1-24.
- Kupper (2020). The uncertainty of it all. Spokes magazine, in collection “post-truth and misinformation”.
- Nowotny, H., Scott, P. & Gibbons, M. (2002). Re-thinking science. Knowledge and the public in an age of uncertainty. Cambridge: Polity Press.
- Ryghaug, M., Holtan Sørensen, K., & Næss, R. (2011). Making sense of global warming: Norwegians appropriating knowledge of anthropogenic climate change. *Public Understanding of Science*, 20(6), 778-795.
- Van der Bles, A. M., van der Linden, S., Freeman, A. L. J., & Spiegelhalter, D. J. (2020). The effects of communicating uncertainty on public trust in facts and numbers. *PNAS*, 117(14).

Books

- Ignorance: How it drives science (Stuart Firestein)
- Don't even think about it: Why our brains are wired to ignore climate change (George Marshall)
- Ministry for the future (Kim Stanley Robinson)

NUMBERS ARE NOT ENOUGH?!

(a) Global surface temperature change relative to 1850–1900



(a) Global surface temperature change relative to 1850–1900

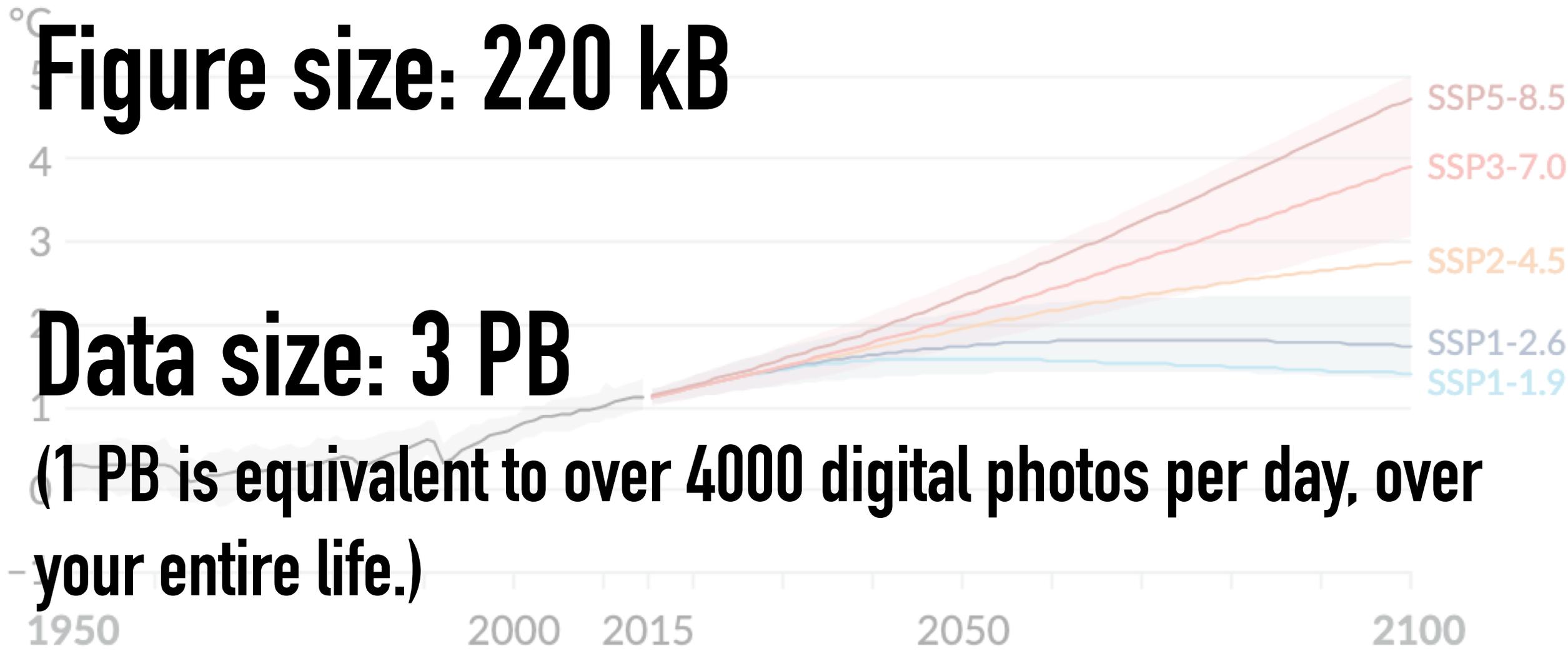


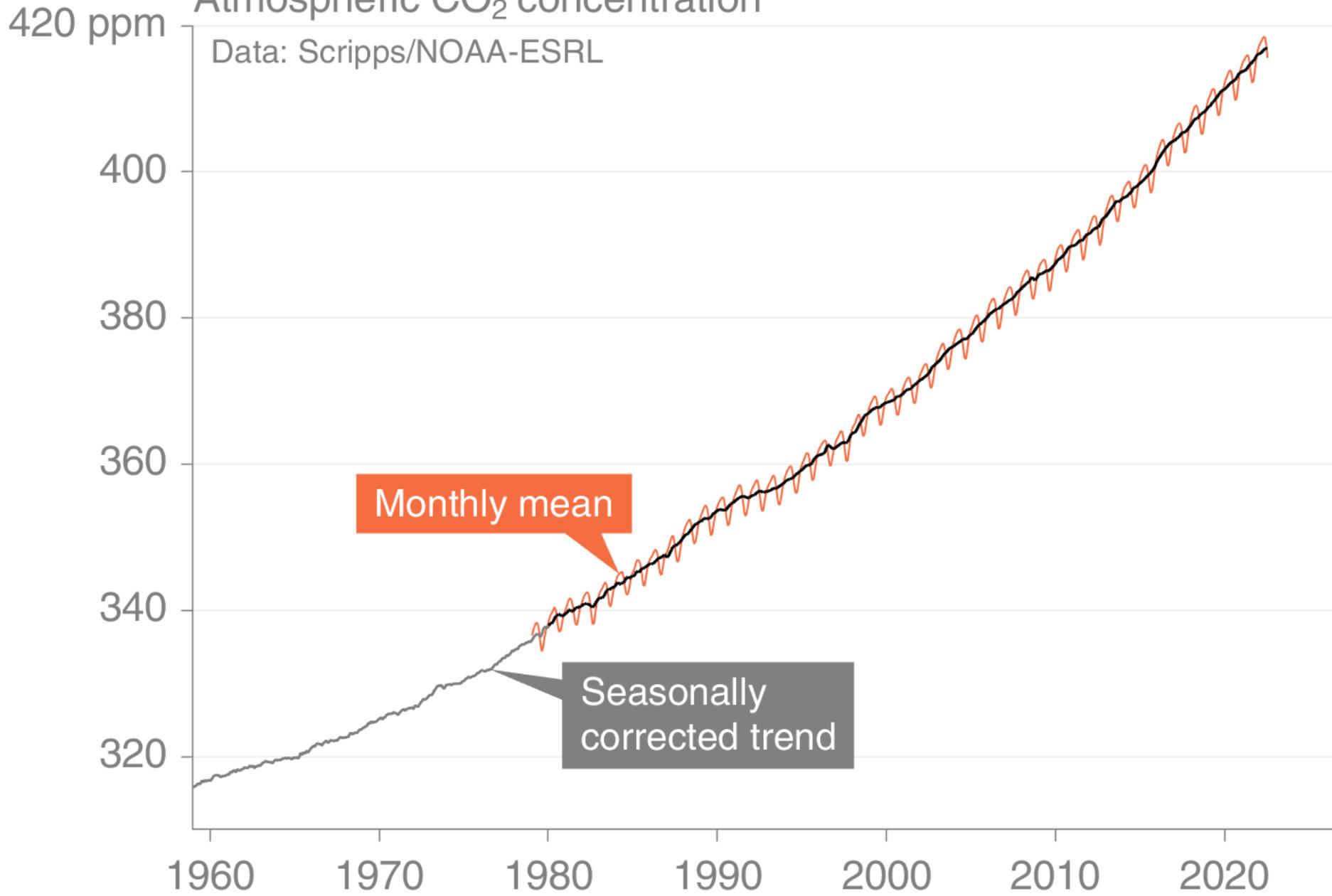
Figure size: 220 kB

Data size: 3 PB

(1 PB is equivalent to over 4000 digital photos per day, over your entire life.)

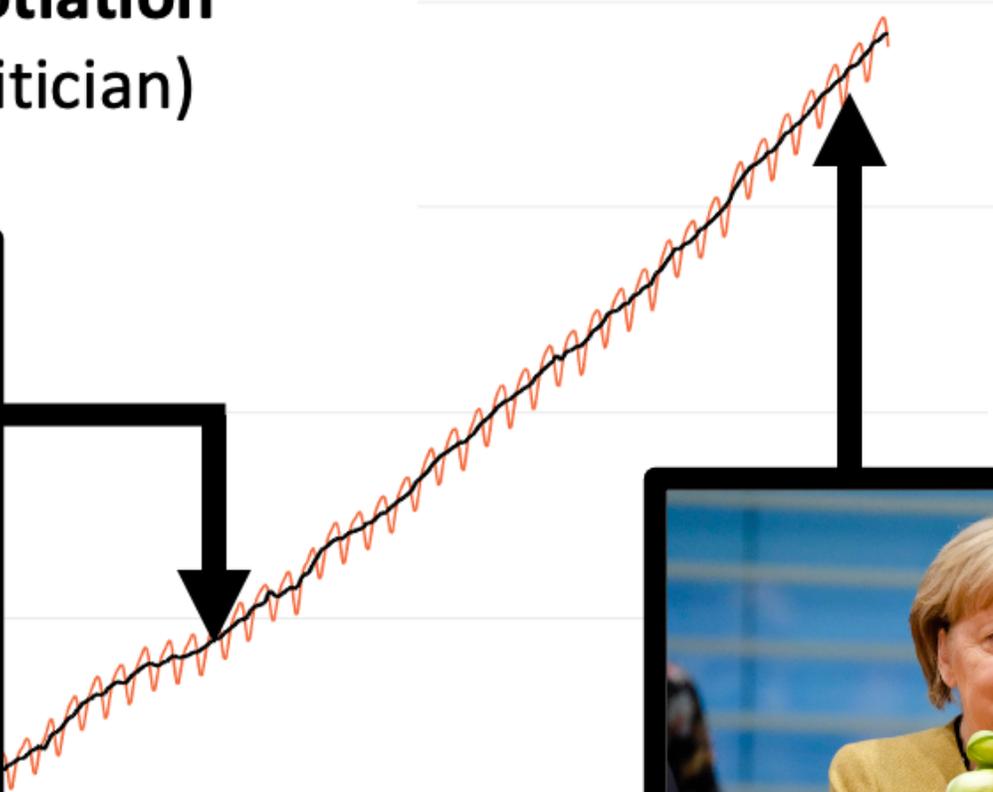
Atmospheric CO₂ concentration

Data: Scripps/NOAA-ESRL

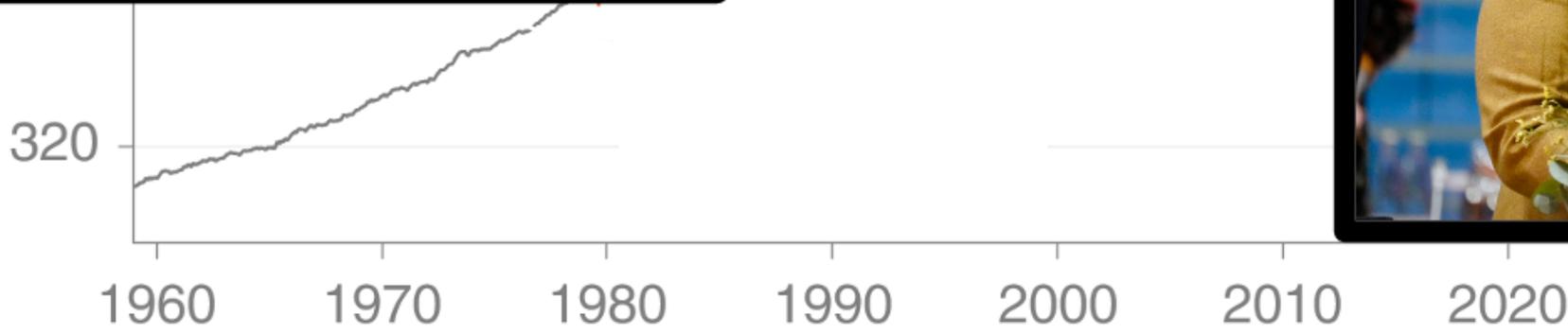


1995 – Start of Climate negotiation

Angela Merkel (as young politician)
president of UNFCCC COP1



She retired in 2021





MY "BINARY" CONTRIBUTIONS

110101010101010010100010

100101111000001000100101

010101010101001011100011

010001010010101110001001

010101010000111110101010

0101010101010100100011

Region 12: Mediterranean (MED)



Ref: Description of the CORDEX domains

(23/10/2015 version)

A) For rotated polar RCMs (in rotated coordinates):

RotPole (198.0; 39.25)

TLC (336.78; 5.94)

Nx=98

Ny=63

B) For non-rotated polar RCMs (in actual coordinates):

TLC (339.79; 50.65)

CNB (15.0; 56.66)

TRC (50.85; 52.34)

CWB (348.12; 38.35)

CPD (15.75; 43.02)

CORDEX DOMAINS

Domains

Cordex ESD

Region 1: South America

Region 2: Central America

Region 3: North America

Region 4: Europe (EURO)

Region 5: Africa

Region 6: South Asia

Region 7: East Asia

Region 8: Central Asia

Region 9: Australasia

Region 10: Antarctica

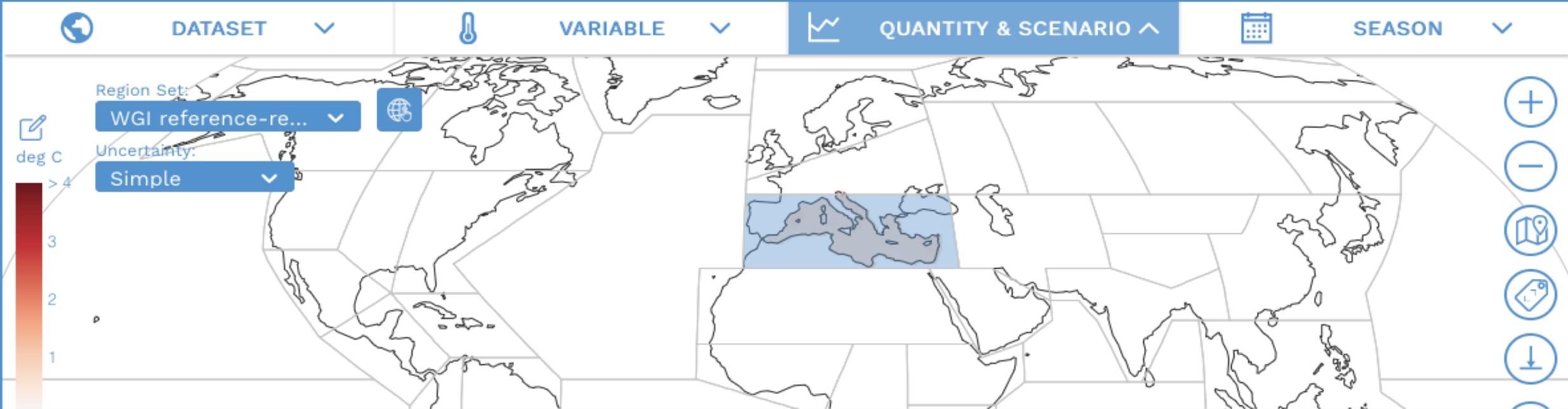
Region 11: Arctic

Region 12: Mediterranean (MED)

Region 13: Middle East North Africa (MENA)

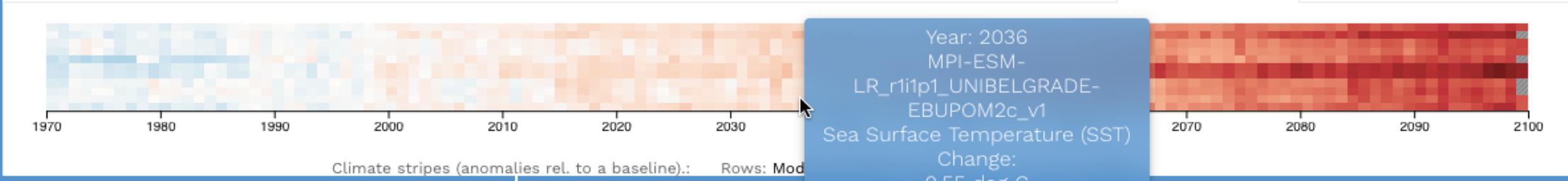
Region 14: South-East Asia (SEA)

CORDEX domain description



CORDEX Mediterranean - Sea Surface Temperature (SST) Change deg C - Near Term (2021-2040) RCP8.5 (rel. to 1986-2005)... (Global)

Navigation menu with icons for: Time Series, GWL Plot, Annual Cycle, Scatter Plot, Table Summary, Stripes, and Seasonal Stripes.



Year: 2036
MPI-ESM-
LR_r1i1p1_UNIBELGRADE-
EBUPOM2c_v1
Sea Surface Temperature (SST)
Change:
0.55 deg C

MY "OTHER" (WITHOUT NUMBERS) CONTRIBUTIONS



CENTER FOR
THE
PROMOTION
OF SCIENCE

ANGRY FACE OF NATURE

Short movie



that are two sizes smaller.



0:52 / 5:00





CENTER FOR
THE
PROMOTION
OF SCIENCE

Never enough.



ANGRY FACE OF NATURE – Vladimir Djurdjević and Olga Radulović. Directed by: Miloš Tomić. Through the dialogue between Dr. Vladimir Djurdjević, a climatologist, and Olga Radosavljević, a 2nd-grade elementary school student we learn . . .





Augmented lecture: **JUST ONE**

THEATRE OF WONDER FESTIVAL 2021, FDA – CURIOUS Project

On stage: Vladimir Djurdjevic and TKV

Director: Ana Popovic

Script: Vladimir Djurdjevic

Script consultant: Mirko Stojkovic

Producer: Jovana Karaulic

Executive producers: Tijana Micanovic, Miljana Milojkovic

Video: Raininger

Sound: Nikola Eric

Light: Gordana Pantelic



SAMO JEDAN
3.11 📍 **FDU –**
VELIKA BIOSKOPSKA
SALA; 20:30H

CLIMATE



CAPSULE



CENTER FOR
THE
PROMOTION
OF SCIENCE

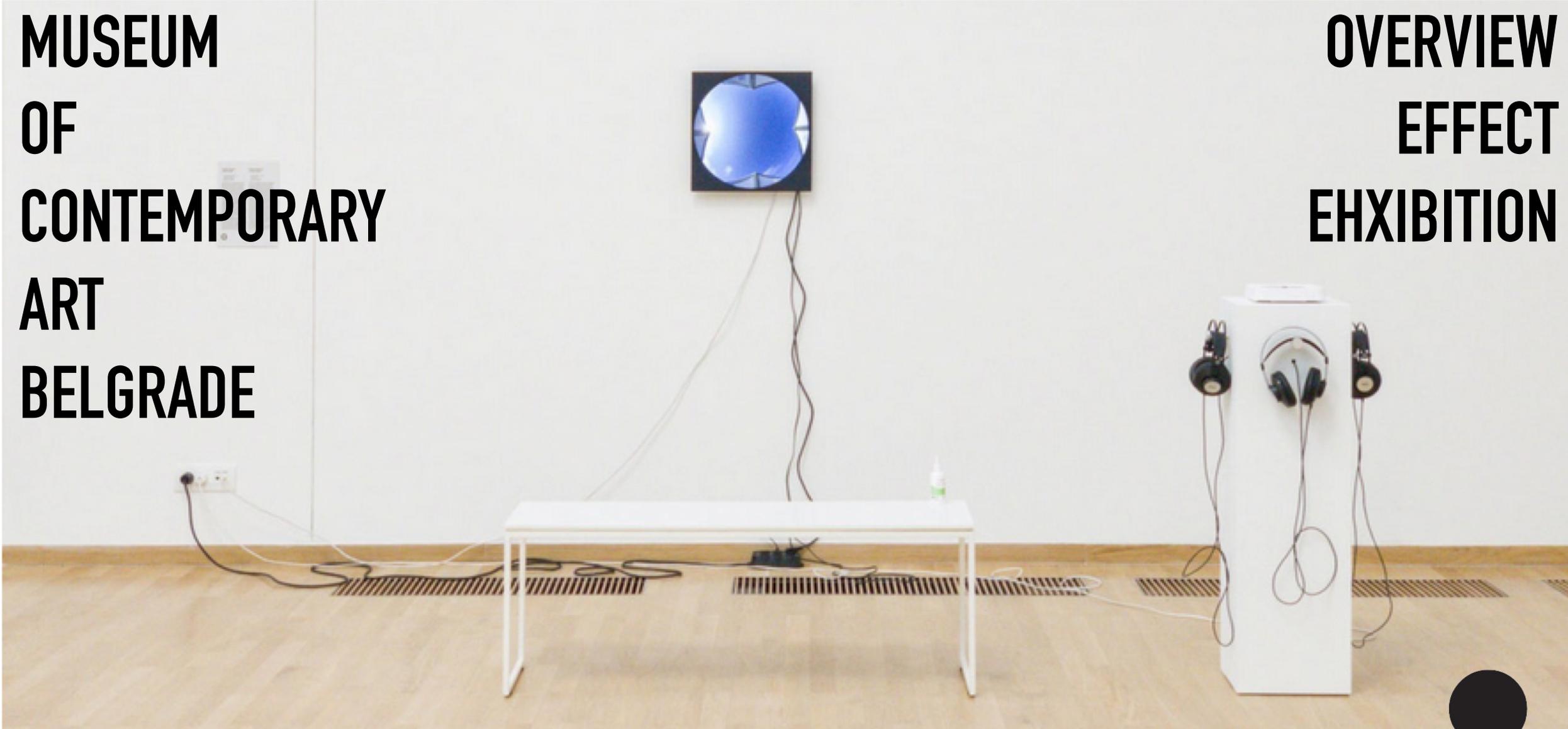


KLIMATSKA KAPSULA



**MUSEUM
OF
CONTEMPORARY
ART
BELGRADE**

**OVERVIEW
EFFECT
EXHIBITION**



Hemauer and Keller: observing the sky for the next 30 years | Arts · at · CERN

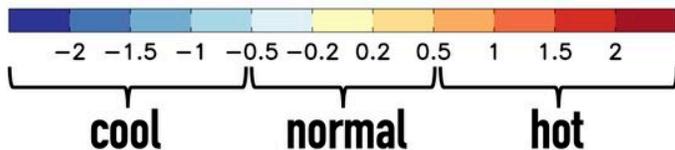
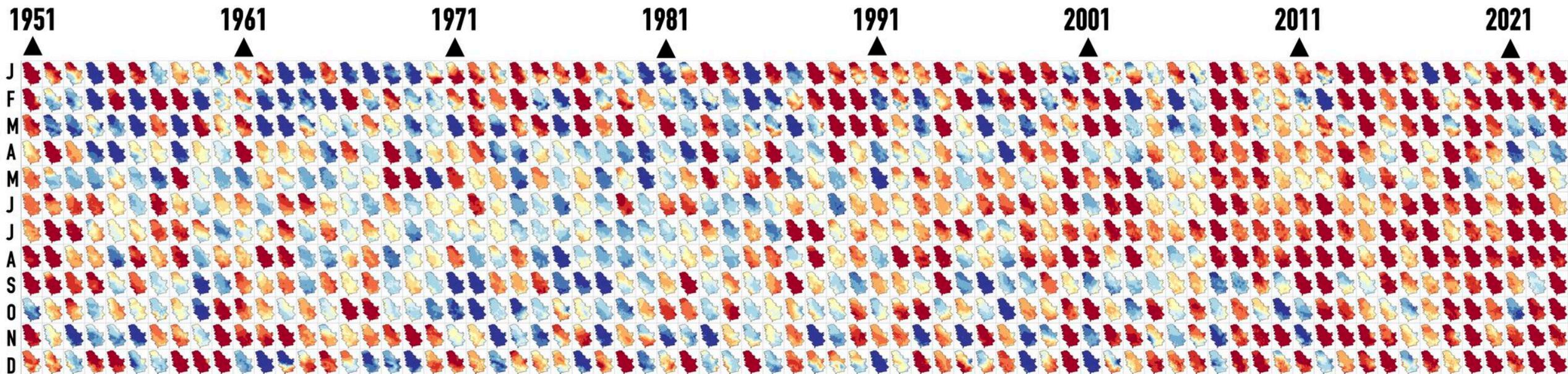
GREEN ART INCUBATOR

Through its various activities, Green Art Incubator highlights the potential for institutional and organizational eco-turnaround in the field of culture and arts, as powerful spaces for reflecting on the climate crisis.



CLIMATE HOROSCOPE!

Odstupanje prosečnih mesečnih temperatura (°C) u Srbiji od 1951. do 2023. u odnosu na srednju vrednost odgovarajućeg meseca iz perioda 1961–1990.
[Monthly surface air temperature anomaly (°C) from 1951 to 2023, relative to the period 1961–1990]



Podaci/Data:
ERA5 land (ECMWF/C3S)



KLIMATSKE PROMENE

Kako izgleda klimatski horoskop: Proverite da li ste cool, normal ili hot



R. M.
24.01.2024. 09:06

0 komentara



NAJNOVIJE

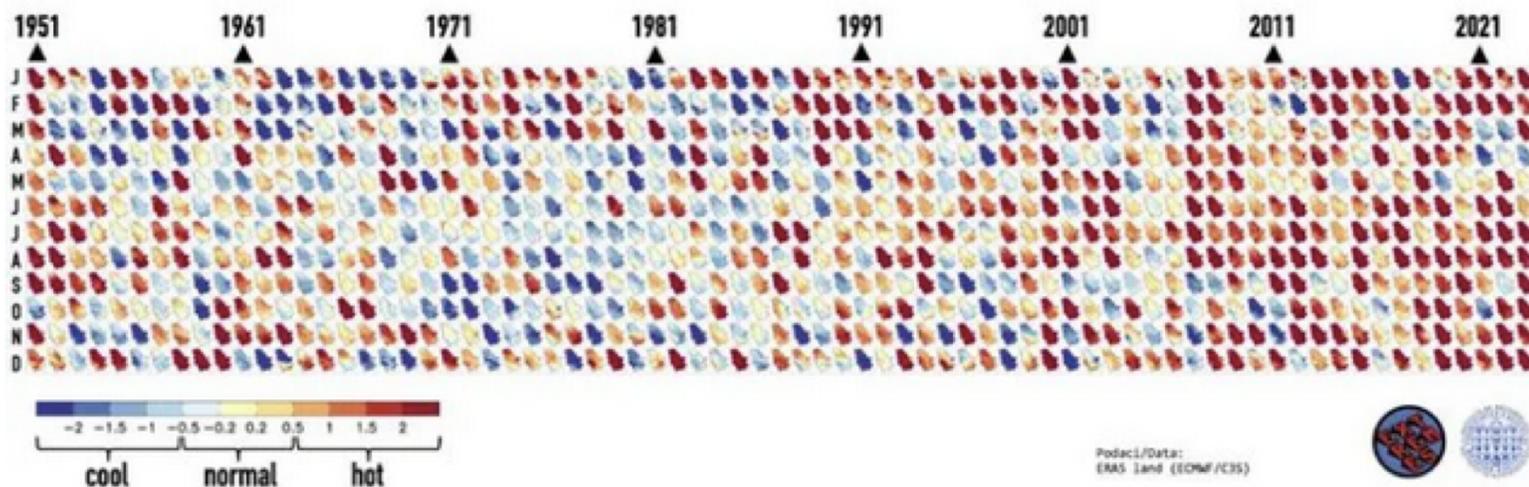
Društvo - danas 12:22

Blokirani telefoni kragujevačke Hitne pomoći, građani mogu da zovu na 0608058300



Odstupanje prosečnih mesečnih temperatura (°C) u Srbiji od 1951. do 2023. u odnosu na srednju vrednost odgovarajućeg meseca iz perioda 1961-1990.

[Monthly surface air temperature anomaly (°C) from 1951 to 2023, relative to the period 1961-1990]



CITYMAGAZINE VODIČ



15.03. @ 19:00 - 23:30

Decapitated / Incantation / Nervosa / Kassogtha // Zappa Baza // 15.03.



15.03. @ 19:00 - 21:00

Aleksandra Bijelić – Neka druga // UK Parobrod // 15.03.



15.03. @ 20:00 - 22:00

NUMBERS ARE NOT ENOUGH?!

I don't have conclusion but . . .

**Transforming numbers into experiences can
unlock many doors**

. . . that is my experience :^)



Catalysing climate narratives: the European Journalism Centre's (EJC) push for impactful climate journalism

Vera Penêda

Director of Programmes & Impact, European Journalism Centre

Climateurope 2 Festival, 11-13 March in Venice, Italy



 When Mauro invited me to be here and talk with you



Vera Penêda · You
Director of Programmes & Impact at European Journalism Centre (E...
5d · Edited · 

 Next week, I'm thrilled to step out of the journalism networking bubble to speak at **Climateurope2** about the role of journalism in bridging science and audiences. At the event, which primarily engages policymakers, scientists, and stakeholders working for sustainability, I'll share how the **European Journalism Centre (EJC)** builds bridges and supports stories of action and solutions-driven coverage - rather than stories of concern and doom - through grants and training. I'm told it is the first time journalism's role will be explored at Climateurope2, which focuses on uniting science, services, and standards for a climate-resilient future. I look forward to learning from other panelists on how we can collaborate and communicate about climate risk and create opportunities for climate action. Grateful for the invitation from **Mauro Buonocore & CMCC Foundation - Centro Euro Mediterraneo sui Cambiamenti Climatici** for this invitation.

 Learn more about EJC's support for climate journalists and newsrooms at <https://lnkd.in/gGPHwzAw>

[Every Thursday, I write a short impact story here and every month I publish about EJC's programmes & impact on ejc.net]
#impact #sustainability #sustainablejournalism #SDGs

Climateurope2
FESTIVAL
Uniting science, services, and standards
for a climate resilient future
March 11-13 2024, Venice



 Gaura Naithani and 24 others

7 comments



Why am I
even
here?





Why climate journalism matters



Climate journalism is a **PUBLIC INTEREST SERVICE**.

It fulfills a unique role in bridging science and people, not only online but also offline. Climate journalism provides **FACT-DRIVEN, RELIABLE** information and it 

- covers the latest environmental predictions and scientific data
- reports from climate summits and conventions
- questions public policies and calls out on political promises around climate policy
- exposes environmental crimes and climate corruption
- unveils powerful interests that prevent a fair transition to a sustainable future for everyone
- discusses potential solutions for environmental issues

thereby contributing to the **public debate on climate crisis** and **informing citizens to make decisions**.



How EJC fosters climate journalism with an impact

- Climate Journalism Award
- Training in climate journalism
- Grants for new ways of telling climate stories
- Building bridges among stakeholders
- Data journalism
- Funding environmental investigations

OUR SERVICE

PUBLIC INTEREST
JOURNALISM
that is driving
public awareness
and also
behaviour and
policy change



Climate Journalism Award

With a total prize amount of EUR 10,000, this award recognises journalistic work that elevates the importance and **visibility of climate reporting or showcases innovative thinking in this area.**

Journalists and media organisations submitted 181 eligible entries from 46 countries in five categories: Data, Storytelling & solutions, Visualisation, Investigative reporting, and Emerging talent.

This award is sponsored by Google News Initiative.

Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows

Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating

- **'Nowhere else to go': Alto Mayo, Peru, at centre of conservation row**
- **Greenwashing or a net zero necessity? Scientists on carbon offsetting**
- **Carbon offsets flawed but we are in a climate emergency**



📷 The Alto Mayo protection forest in Moyobamba, Peru, was supposed to be a flagship offsetting project but has faced human rights issues. Composite: Guardian Design/AFP/Getty Images

One of the award winning investigations produced by The Guardian, with Die Zeit and Source Material.



Training in climate journalism

In 2023 we trained over 100 journalists and climate video creators from 8 countries and 40 newsrooms across Europe.

The programme helped journalists and news creators to elevate their quality content above mis and disinformation online and engage younger audiences.

EJC's climate journalism training highlights the effectiveness of **solutions-oriented climate reporting** to tell stories about the environment, based on [evidence that solutions-oriented stories drive audience attention and engagement](#).



Journalists attend the session 'How to become a climate journalist', co-hosted by EJC at the International Journalism Forum in September 2023, in Athens.



Grants for solutions-oriented journalism

The EJC supported climate newsrooms with grants and mentoring through our [Solutions Journalism Accelerator](#). This programme funds **solutions-focused development journalism focused on the SDGs.**

Grantees have produced stories that show how climate change intersects with topics like healthcare, [gender inequality](#) and [food insecurity](#).

These stories have **driven discussions at UN agencies, and journalists who worked on these stories have been invited to advise government officials on topics like migration and inequality.**

This programme is supported by Bill & Melinda Gates foundation.

The screenshot shows a news article from 'Future Planet'. The title is 'Sea sponges offer lifeline to women in Zanzibar'. Below the title are social media sharing icons for WhatsApp, Twitter, Facebook, and LinkedIn. A credit line reads '(Image credit: Lauraclara Cosmas)'. The main image shows two women in traditional Zanzibari attire; one is holding a large, colorful woven basket, and the other is holding a basket of fresh produce. Below the image, the byline reads 'By Kizito Makoye 13th September 2023'. A sub-headline states: 'As ocean temperatures rise, single mothers and divorced women in Zanzibar switch from seaweed to sea sponge farming to stay afloat.' At the bottom right, there is an advertisement for a private bank in Italy with the text 'La migliore banca privata al mondo. Proprio qui. In Italia.' and a 'CONTATTACI' button.



Building bridges among stakeholders

Events like the yearly News Impact Summit bring together over 250 journalists, scientists and activists to discuss the best practices and latest tools to improve climate communication and environmental journalism.

Topics covered:

- **use of satellite imagery and data to visualise climate stories**
- **how to leverage short-form video in climate narratives**
- **ways to investigate environmental crimes across borders.**

A partnership with the **European Space Agency** and the **Euro Mediterranean Center on Climate Change** highlighted the need for closer collaboration between scientists and journalists.



The summit's main sessions are available on [YouTube](#).



Data Journalism

In the podcast and newsletter series [Conversations with Data](#), we highlight the best ways to **leverage the use of data for climate stories**.

We discuss topics like the importance of **using data to report on the racial justice component of climate reporting**, and the **use of visualisations and OSINT** (open source intelligence tools) to make climate science and stories more engaging.

We also publish [original articles](#) on climate solutions journalism, climate metrics, and gender.

This programme is supported by Google News Initiative.

The screenshot shows a podcast player interface. At the top, there is a back arrow and a grid of three black and white portrait photos of the hosts: Duncan Geere, Pei Ying Loh, and Rodolfo Almeida. Below the photos, the episode title is displayed in white text: "Episode 54: Conversation with Duncan Geere, Pei Ying Loh and Rodolfo Almeida". Underneath the title is the podcast name "Data Journalism Conversations" with a small logo icon. The release date and duration are shown as "6 Jun 2023 • 53 min left" with a progress bar. A row of icons for adding, downloading, sharing, and more options is visible, along with a large green play button. The main description text reads: "Climate change is one of the most pressing issues of our time. So what can data journalists do to help audiences understand this complex issue and help evade audience apathy? Powering your climate stories with visualisation is one way to awaken emotion and inspire change. ... [see more](#)". At the bottom, there are three buttons for the hosts: "Duncan Geere", "Pei Ying Loh", and "Rodolfo Almeida". A small thumbnail of the episode cover is visible in the bottom left corner of the player, and a play button is in the bottom right corner.



Funding Cross-Border Environmental Investigations

EJC co-manages the **IJ4EU programme**, the largest grant scheme for cross-border investigative journalism in Europe.

[Dry to the bone](#) exposed how a deadly mix of rising temperatures and inhumane working conditions is harming the health of agricultural migrant workers in Southern Europe.

The project team was invited to speak at the Italian Ministry of Labour and Social Policies to discuss the results of the investigation and received an [award](#).

This programme is funded by the European Commission.

INCHIESTA - - - ●

Nel girone dei braccianti uccisi dalla fatica e dal caldo

CLAUDIA COLLIVA, GIADA SANTANA E SOFIA ALVAREZ JURADO

19 luglio 2023 - 19:13

Aggiornato, 19 luglio 2023 - 19:13



- Storia di Moussa e delle condizioni infernali di lavoro per la raccolta del pomodoro che arriva sulle nostre tavole.
- Secondo i sindacati sono morte cinque persone. L'Inail: «Esiste correlazione tra incidenti e alte temperature».



Reimagining journalism in 2024

EJC is currently looking into:

- **Sustainable journalism** & role of journalism in building a sustainable world
- **Cross-sector collaboration** with different stakeholders, from activists to private sector
- **Journalism+**: taking journalism off the platforms and closer to people via exhibitions, theatre, arts
- **Empathy & connection**: the role of journalism in bridging divides & conflict resolution



What can journalists & media offer to climate service providers?

- Expertise in storytelling + Innovative ways to tell climate stories
- Audience-centered approach: focus on providing the info people need
- Journalism backed by science: data-driven, reliable information
- Turning data into human stories & experiences
- Reach & impact
- Engagement with communities and citizens, through local journalism
- Empowerment, inspiration & courage to act
- Visibility of the work & tools produced by climate service providers



Visit ejc.net

or

Find and follow the EJC and me
on LinkedIn, X and Instagram

You can also write to me peneda@ejc.net

Do you have
questions?

Thank you for
listening!



Tip: who to follow for great climate journalism that is relevant to your work

- EJC, of course!
 - Carbon Brief
 - Climate Home News
 - Clean Energy Wire
 - Climate Action Network Europe

 - The Guardian & NYT
 - BBC: Future Planet & Climate Guardians series
 - The Bureau of Investigative Journalism
 - Lighthouse Reports
 - Forbidden Stories

 - Context Newsroom
- On YouTube:
 - Climate Adam
 - Doctor Gilbz

13 March 2024
ClimatEurope festival

IPCC Working Group II: From AR6 to AR7

Bart van den HURK & Winston CHOW
WGII Co-Chairs, IPCC AR7



- Climate is speaking for itself, the urgency is on the **action**
- We’re seeking not only impact assessments, but also **action impact assessments**
- Engagement with **action holders** is more needed than ever



The AR7 agenda for WG2:

Contribution to Special report on Climate Change and Cities
Jointly with other Working Groups

WG2 Assessment report
With ambition to be more concise and policy oriented

****Featuring****

An update to the 1994 Impacts and Adaptation Guideline
(extended with adaptation metrics and indicators)

- IPCC AR6 reports summarized for **Urban Summary Makers**
- Based on WG1/WG2/WG3 reports
- Some **interesting notions and concepts** to consider for SR-Cities

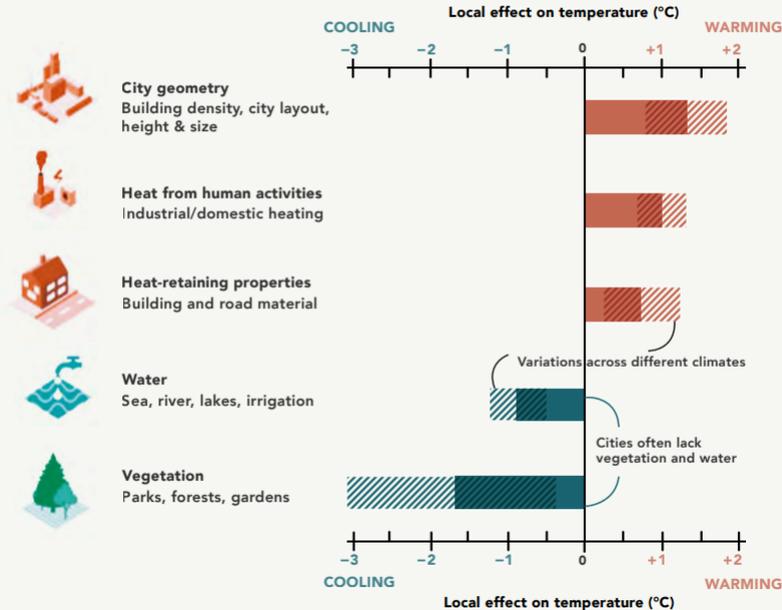
THE SUMMARY
FOR URBAN
POLICYMAKERS
OF THE IPCC'S
SIXTH ASSESSMENT
REPORT

- **Urban heating** explained
- Physical drivers of UHI
- Cooling attributes

For SR-Cities:

- Create **typology** of cities, climates, seasons
- Provide ranges of **cooling measures**
- **Translate** measures to health, wellbeing, spatial planning, labor, ...

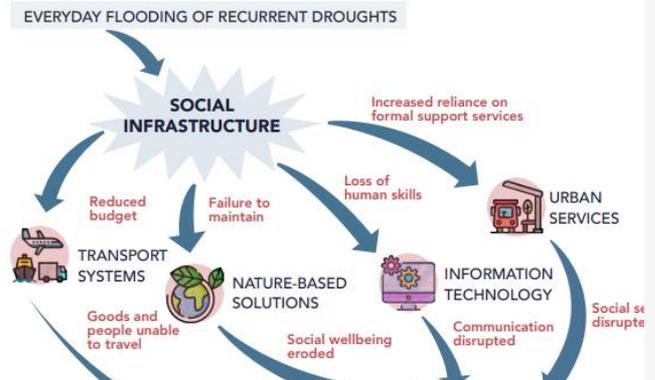
Figure 3: Cities are usually warmer than their surrounding areas due to factors that trap and release heat and a lack of natural cooling influences such as water and vegetation.



- Notion of **impact chains**
- Direct and indirect effects
- Physical, ecological and socio-economic processes

For SR-Cities:

- **Assess cascading impacts**
- With gallery of **intervention options**
- Appreciating **complexity of impacts and of decision taking**
- Involving **multi- and transdisciplinary teams**

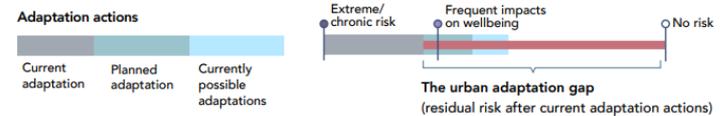


- Addressing the **adaptation gap**
- **Residual risk** after adaptation
- Specific for different **vulnerability classes**

For SR-Cities:

- **Assess metrics of adaptation effectivity**
- Typology of adaptation/mitigation **decision contexts**
- Comparison between different takes on **climate justice**

Figure 4: The Urban Adaptation Gap



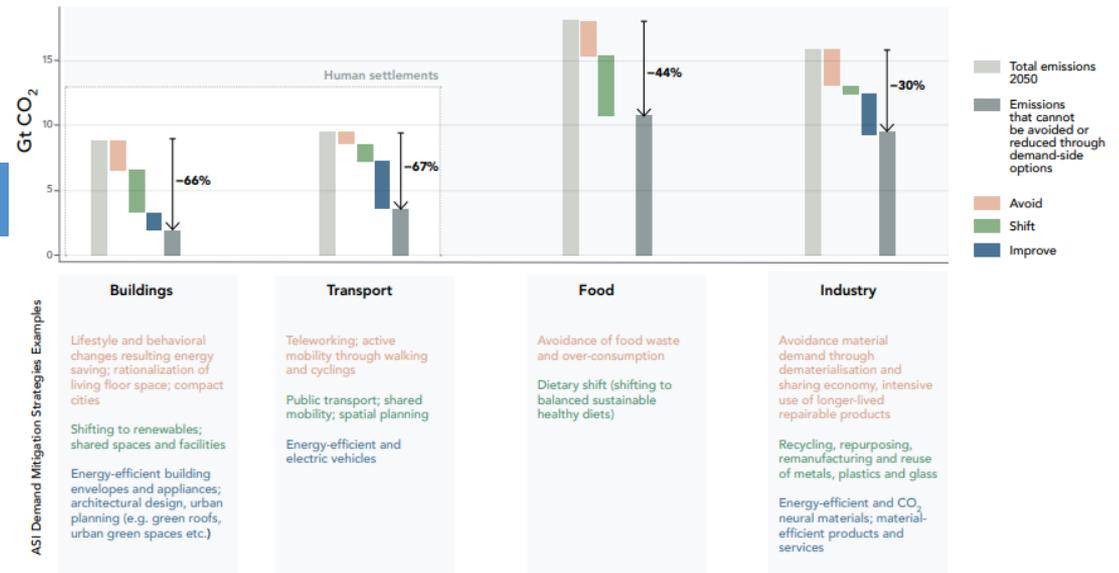
- Addressing the **mitigation potential**
- For **Avoid-Shift-Improve** strategies
- Different **sectors**

For SR-Cities:

- Bring in **temporal developments**
- Typology of adaptation/mitigation **decision contexts**
- **Comparison between different takes on climate justice**

Figure 1: Mitigation potential of demand-side options by 2050.

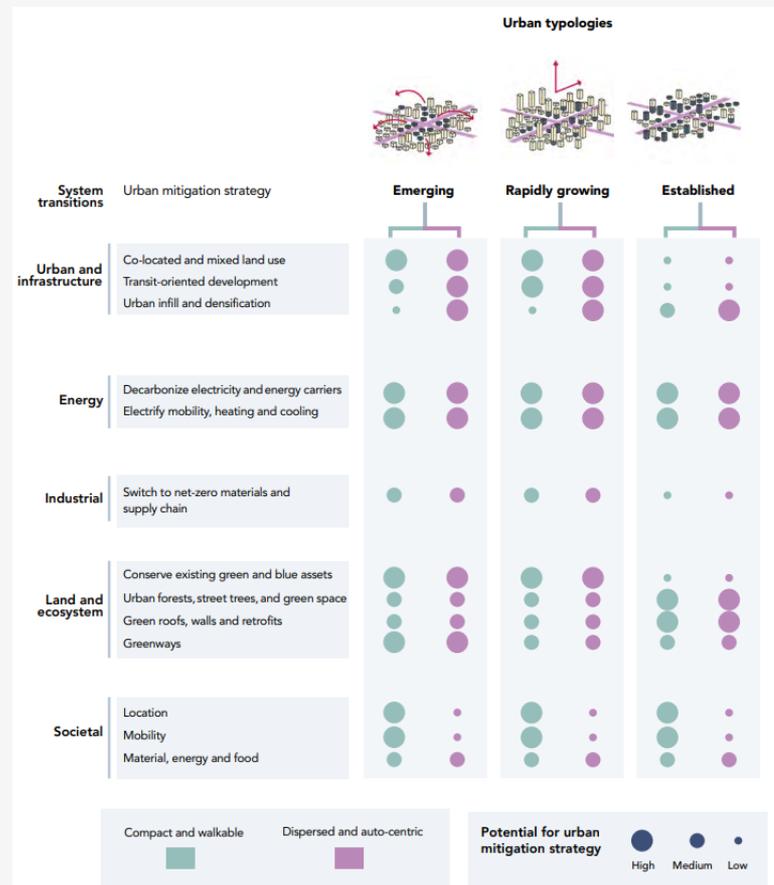
a. Mitigation potentials in end-use sector classified in Avoid-Shift-Improve options



- Mapping mitigation strategies in **system transitions**
- For different **urbanization typologies**
- Evaluation **potential of strategy**

For SR-Cities:

- Bring in **cost/benefit analyses**
- **Guidance for prioritization** dependent on potential and development stage
- Highlighting **trade-offs and dilemmas**



- Climate is speaking for itself, the urgency is on the **action**
- We’re seeking not only impact assessments, but also **action impact assessments**
- Engagement with **action holders** is more needed than ever



Thank you!



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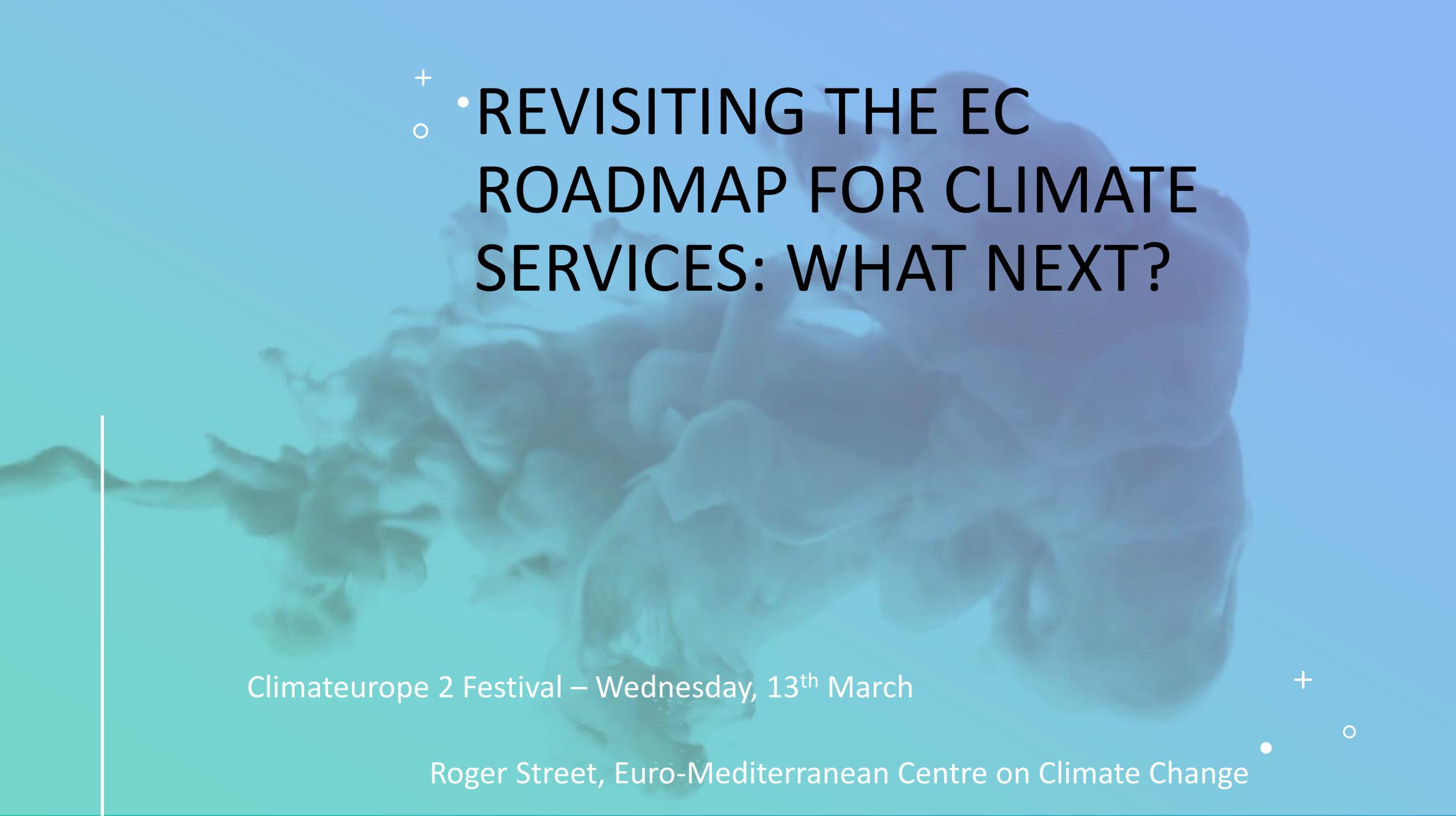
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- +
 - • REVISITING THE EC ROADMAP FOR CLIMATE SERVICES: WHAT NEXT?

Climateurope 2 Festival – Wednesday, 13th March

Roger Street, Euro-Mediterranean Centre on Climate Change

- + A European
 - research and innovation
 - Roadmap for Climate Services (2015)

A framework to engender discussions among relevant actors and stakeholders – exploring and finding shared solutions and pathways to enable the development and use of climate services

Three research and innovation challenges comprised nine main activities and 25 specific actions; addressing that which could facilitate the development of a climate service market capable of enabling and empowering climate action

1. Enabling market growth– assessing the nature of, growing and demonstrating the added value of climate service market
2. Building the market framework– supportive communities and infrastructure; standards, quality assurance and control, access and legal aspects; and international cooperation
3. Enhancing the quality and relevance of climate services – supportive information frameworks, strengthen the scientific basis and relevance; and climate information and users’ needs, innovations and products.

Subsequent Review and Shared Perspectives: R&I and CS Gaps

Position paper prepared by Climateurope–stakeholder workshop (2017)

Climateurope (2019) - recommendations for HEUR framework programme on research needs for climate modelling and climate services

ERA4CS (2020) future research needs in support of climate services

ECCA 2021 - At your Service: Climate knowledge and information as enablers for climate action

Challenges and Barriers

Knowledge and information are primarily developed based on a siloed (climate hazard) perspective and have been developed based on climate science and varied understandings of users' needs.

Available knowledge, information and resources are failing to create sufficient trust and to create an appetite for such – Acting as and reinforcing barriers to picking up (and the pull for) knowledge and information that support climate action.

There is an ongoing need to increase efforts to enhance the marketability and quality of climate services as perceived by those using and those that should be using climate services

Results of these Assessments and Deliberations:

Recommendations consistent with and built on the Roadmap challenges and activities reflecting aspects that were the particular focus of the engaged communities

Perceptions of what compromised successes and required actions - inspiring and informing actions

- Sharing knowledge,
- Inspiring action, including on transformation and transitions
- Creating connections and collaborations, and
- Implementing solutions

Central to most of the highlighted successes and required actions is the need to re-imagine the knowledge and information being provided and how they are used to be consistent with and supportive of the evolving nature and scope of required climate action.

Continuing to Make Progress (1)

Addressing the identified challenges and gaps?

- Translating to enhance relevance and usability;
- Recognising the diversity of users and diversity of needs and capabilities – Balancing the use of in-person and digital platforms
- Re-imagining what is being provided, available and being used – knowledge and information enablers that reflect societal and political priorities and an agreed (yet evolving) vision
- Working with national or regional knowledge and information platforms as an effective way of enhancing reach, impacts and knowledge sharing

Continuing to Make Progress (2)

Addressing the identified challenges and gaps?

- Recognising the nature and role of collaborations required across science, policy, practice and humanitarian processes to deliver sustainable and just climate action and lifestyles, including
- Enabling integrating of knowledge and information from multiple sources recognising that decisions are seldom taken just to address climate impacts and using just climate knowledge and information.
- Better articulating what is and what is not working – users' (decision-makers') journeys (more than just case studies) in co-designing, co-producing, and co-evaluating

Continuing to Make Progress (3)

Creating and sustaining a community and an environment capable of inspiring and informing the required climate actions of today and tomorrow:

- Coordinating and networking that are essential to effective knowledge sharing, building trust and capacities; and
- Bringing user communities and CS community closer together
- Investing in natural, physical, social and engineering sciences and humanities, as well as enhancing the level and quality of inter and trans-disciplinary research and innovation supporting climate services.
- Improving roles of those along the value chain, including addressing concerns related to equity and inclusion (e.g., enhanced democratising, sharing and access to knowledge)

Future Challenges and Gaps

- Are these challenge and gaps still valid; well defined, evolving?
- Which and to what extent are these currently being addressed?
- Are there new challenges or emerging gaps?

It is time for a new assessment – what has been accomplished and what is still needed, what are the emerging challenges, and how should the community be evolving to address those challenges?