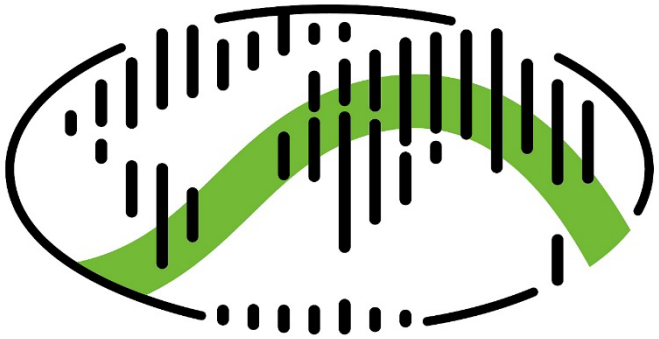


Wegener Center

UNI GRAZ

Climate Change Graz

Field of Excellence
University of Graz

Graz Climate Change Indicators: A data portal backing climate narratives towards reaching the Paris climate goals

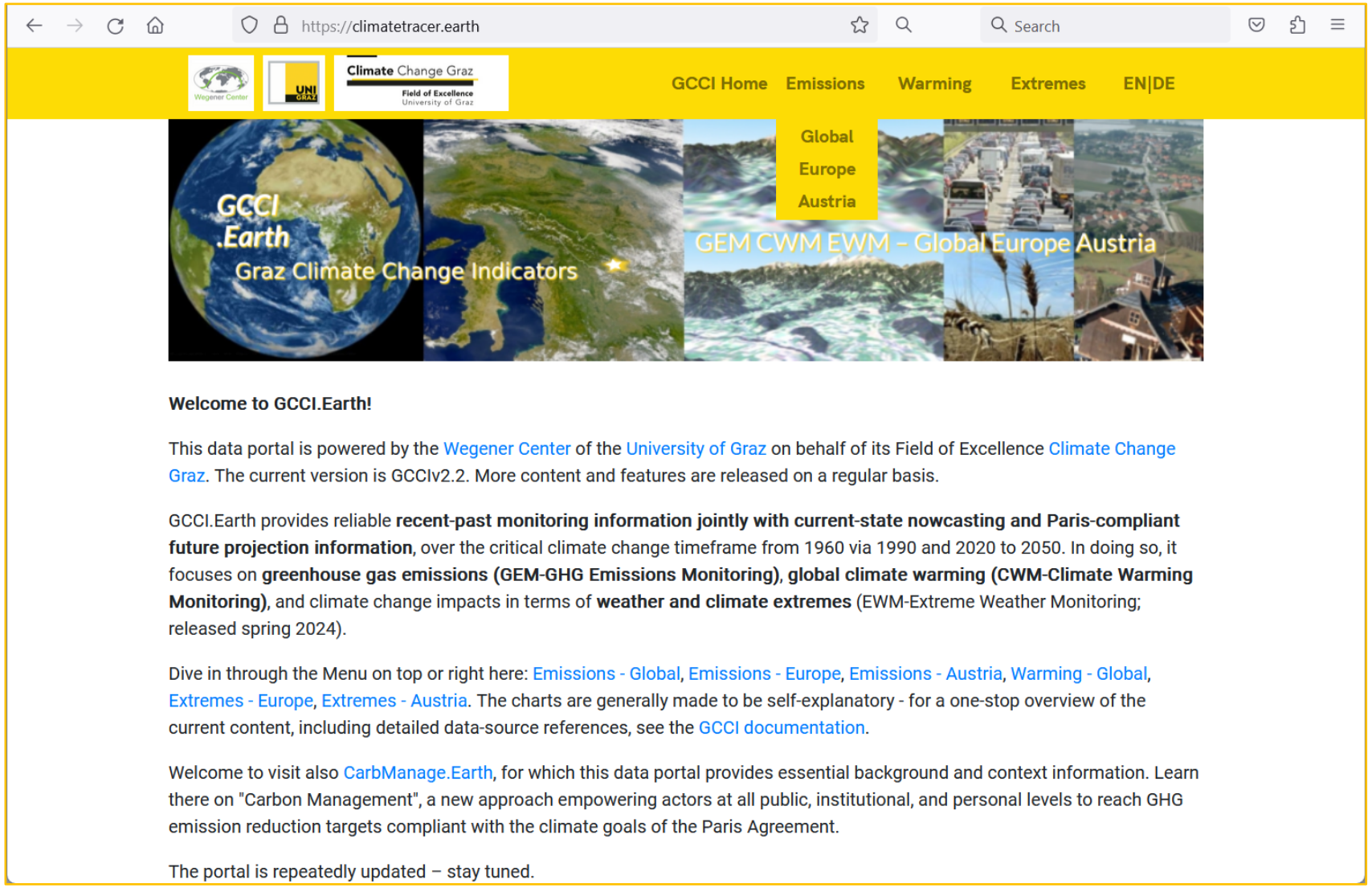
Gottfried Kirchengast [1,2] and Moritz Pichler [1]

[1] Wegener Center for Climate and Global Change (WEGC), University of Graz, Graz, Austria
[2] Institute of Physics, University of Graz, Graz, Austria

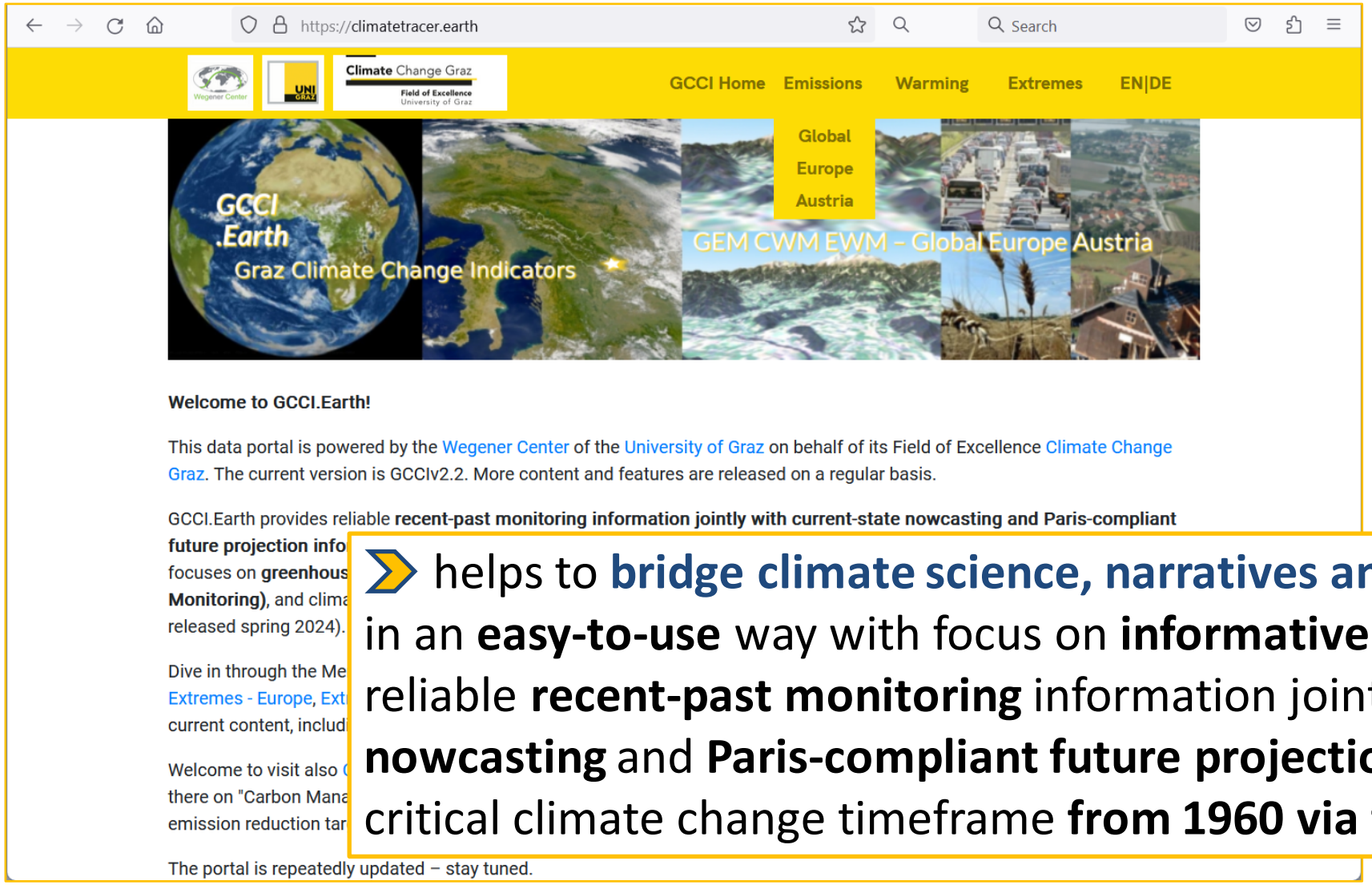
(Contact e-mail: gottfried.kirchengast@uni-graz.at)

EGU 2024, 16 April 2024, Session EOS1.8
– Telling climate stories: platforms, tools, and methodologies for accurate and engaging science communication

Welcome to GCCI.Earth! (equivalently, ClimateTracer.Earth)

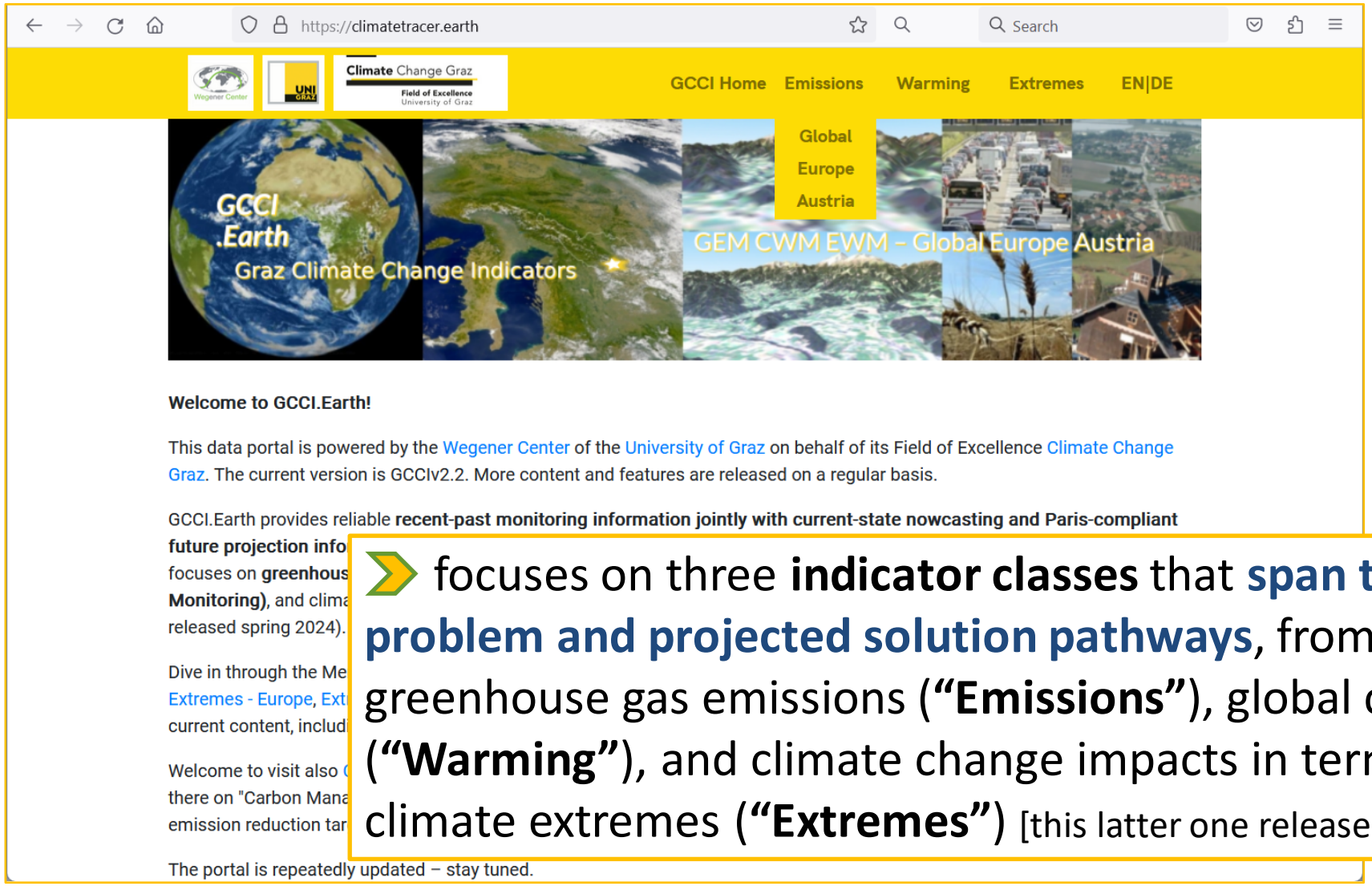


The portal gcci.earth (equivalently, climatetracer.earth)… (1)



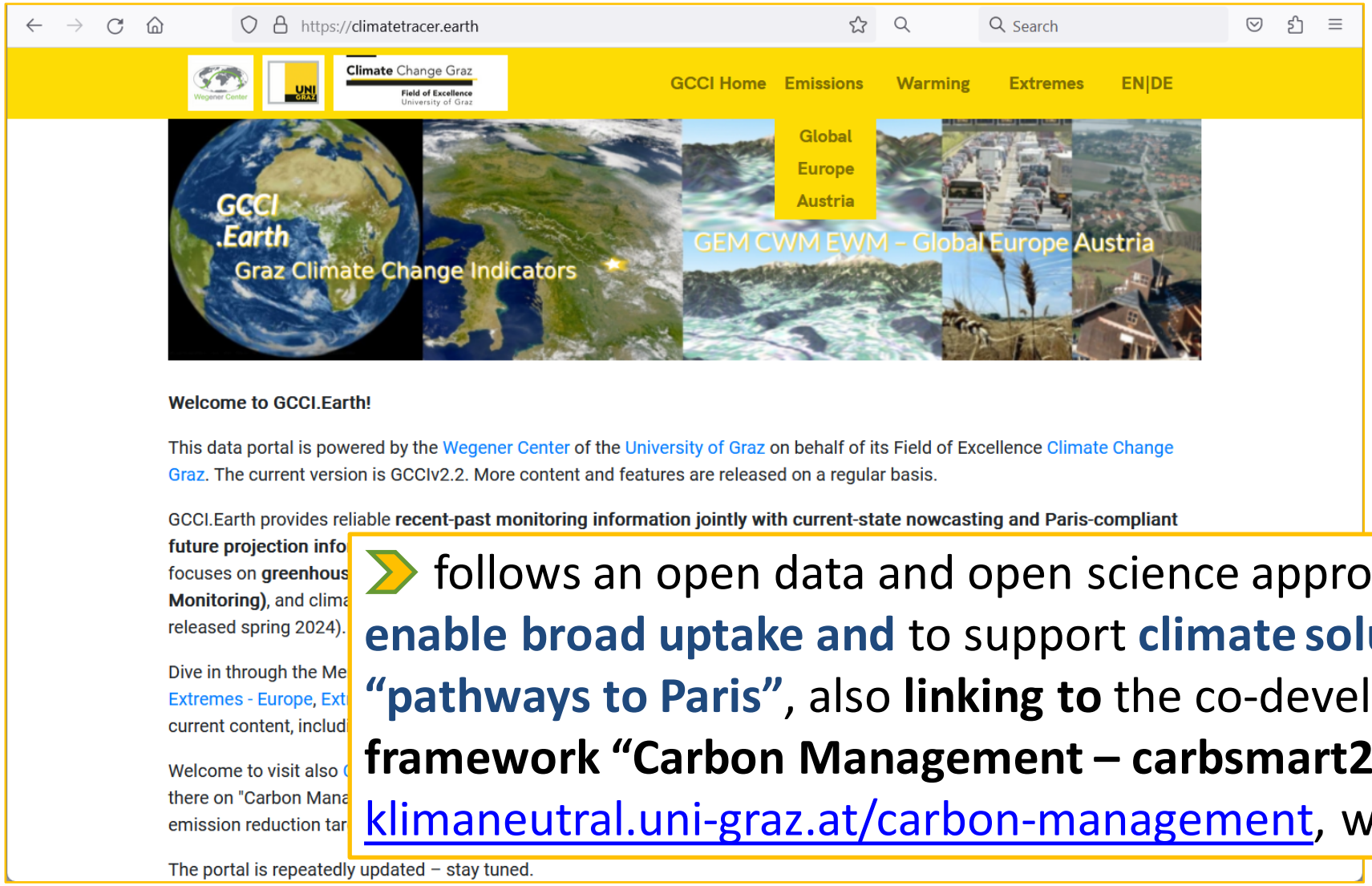
» helps to **bridge climate science, narratives and action** and provides, in an **easy-to-use** way with focus on **informative indicator time series**, reliable **recent-past monitoring** information jointly with **current-state nowcasting** and **Paris-compliant future projection** information, over the critical climate change timeframe **from 1960 via the Present to 2050**.

The portal gcci.earth (equivalently, climatetracer.earth)… (2)



- focuses on three **indicator classes** that **span the climate change problem and projected solution pathways**, from causes to impacts: greenhouse gas emissions (**"Emissions"**), global climate warming (**"Warming"**), and climate change impacts in terms of weather and climate extremes (**"Extremes"**) [this latter one released later in 2024].

The portal gcci.earth (equivalently, climatetracer.earth)… (3)



follows an open data and open science approach, which is made to **enable broad uptake and** to support **climate solution narratives on "pathways to Paris"**, also **linking to** the co-developed **climate solutions framework "Carbon Management – carbsmart2Paris"** (short intro infos klimaneutral.uni-graz.at/carbon-management, web carbmanage.earth).

Example ***Emissions*** | backing **emission reduction policymaking**

https://climatetracer.earth/global/gem/

Search

Climate Change Graz
Field of Excellence
University of Graz

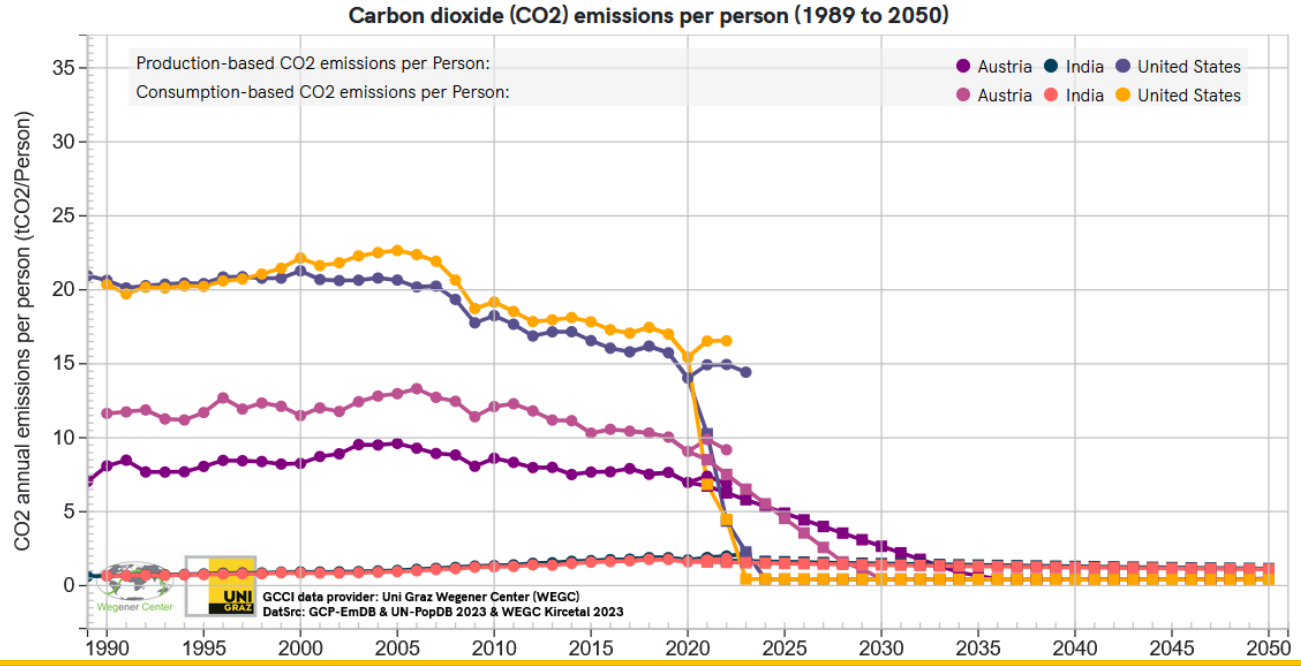
GCCI Home | Emissions | Warming | Extremes | EN|DE

Select Variable:
CO2 annual emissions per person (tCO2/Person)

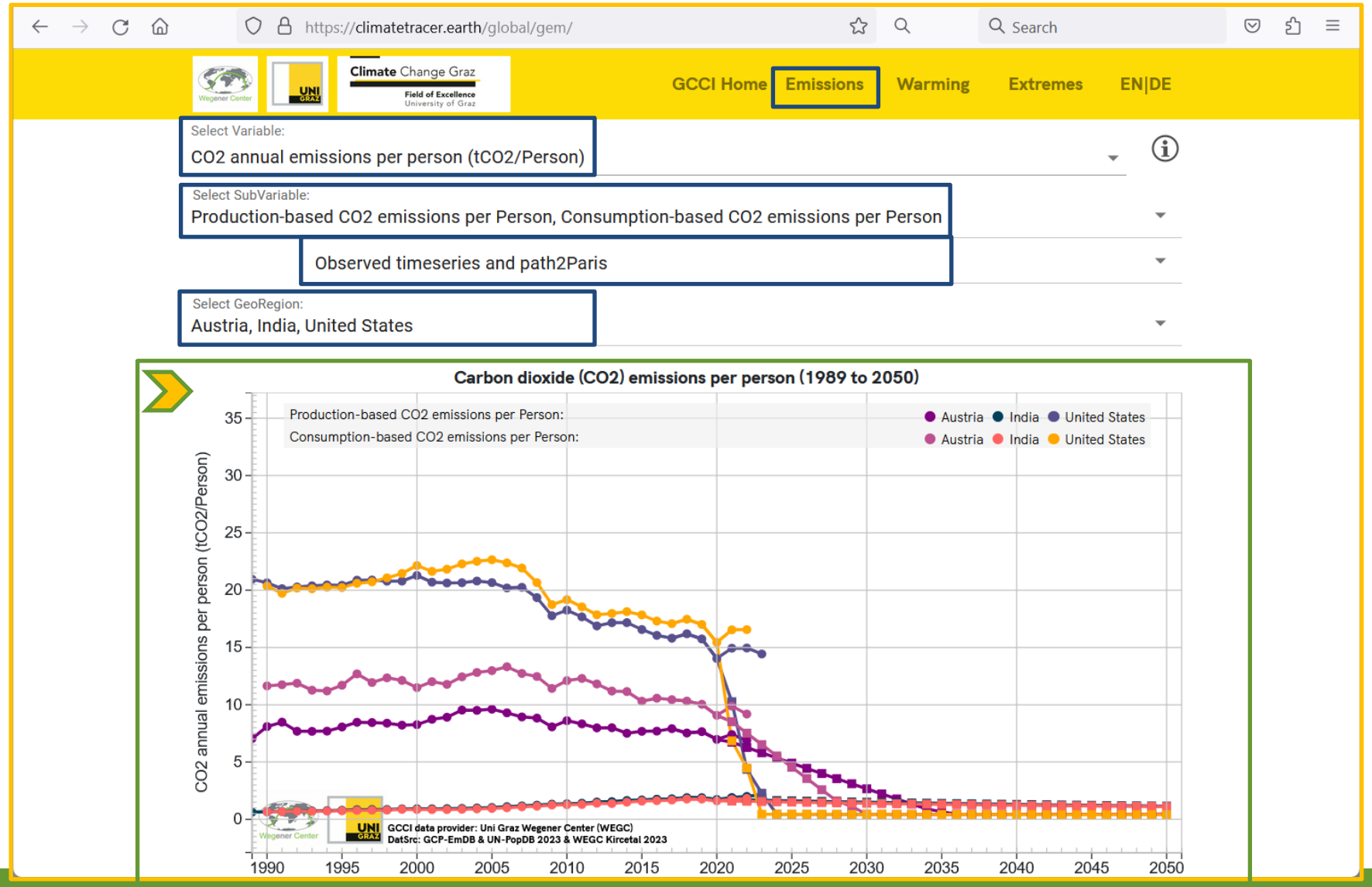
Select SubVariable:
Production-based CO2 emissions per Person, Consumption-based CO2 emissions per Person

Observed timeseries and path2Paris

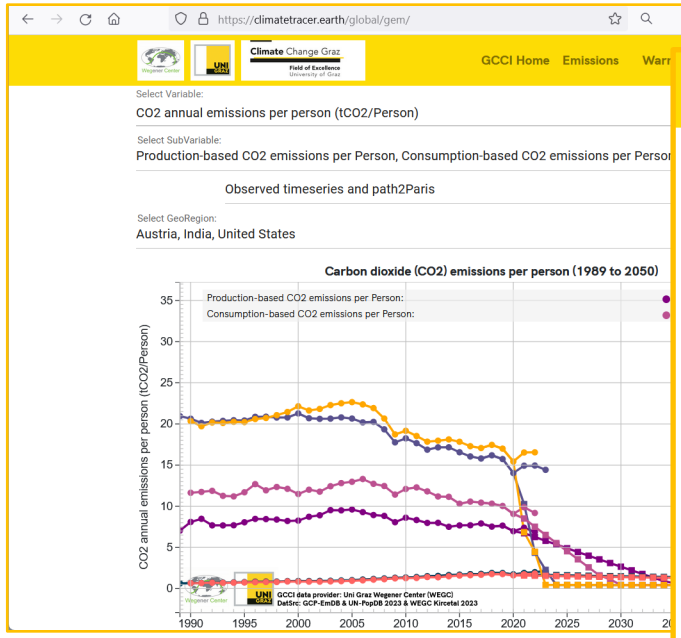
Select GeoRegion:
Austria, India, United States

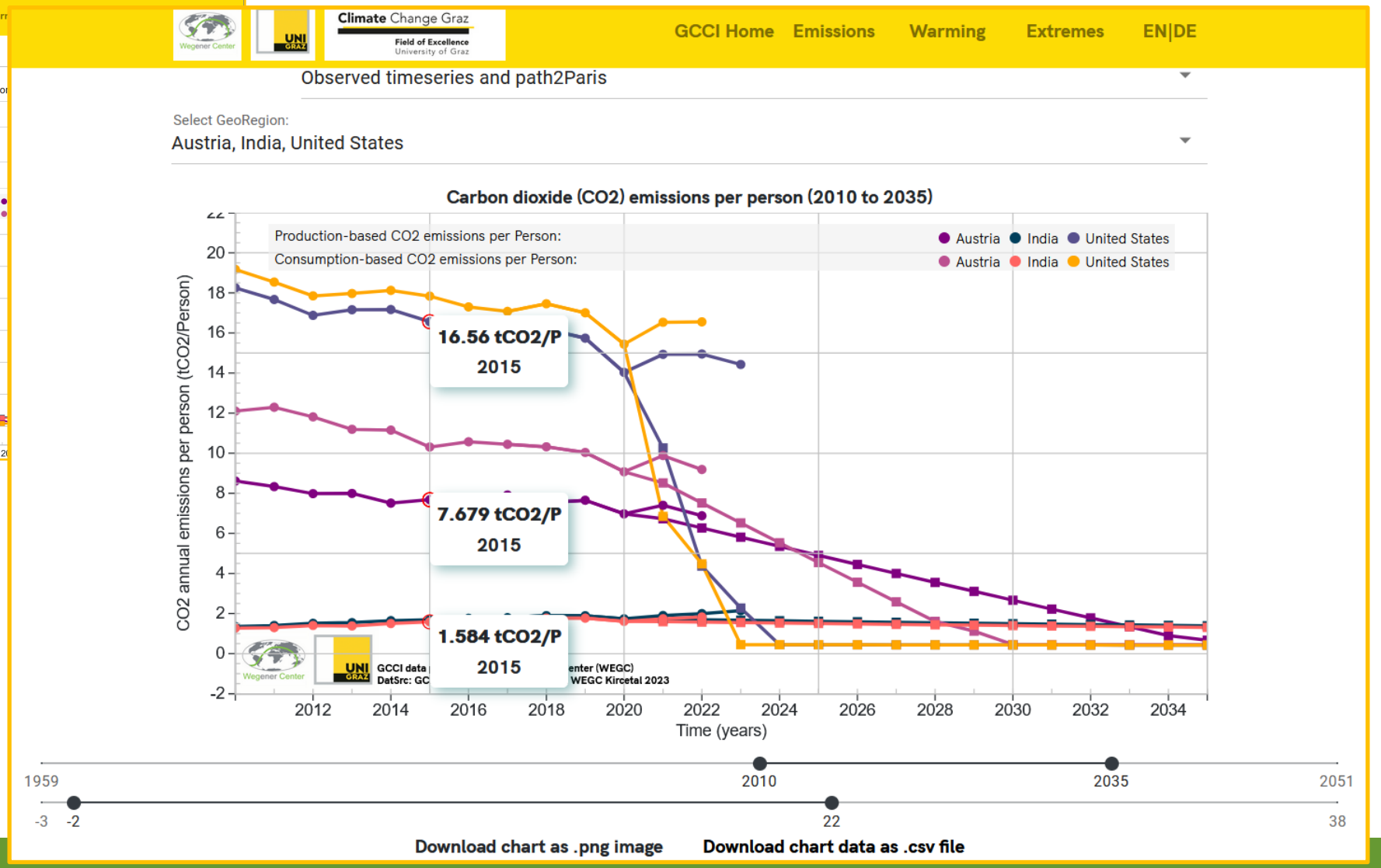


Example ***Emissions*** | backing **emission reduction policymaking**

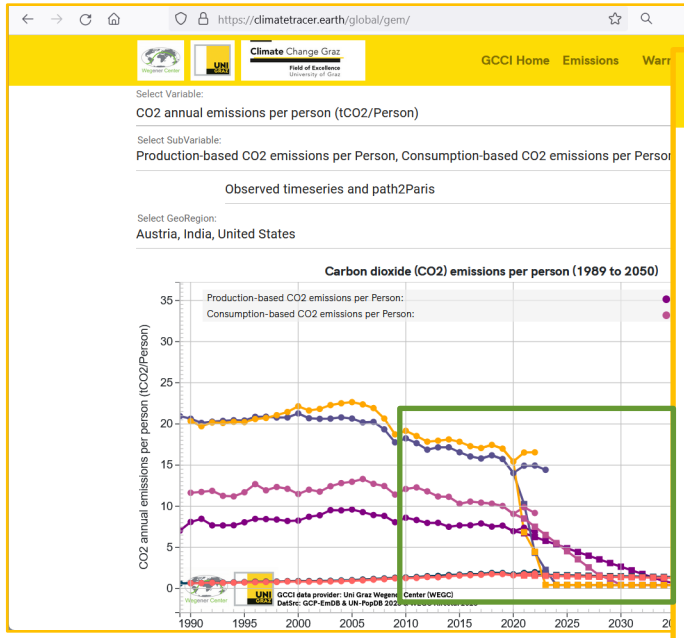


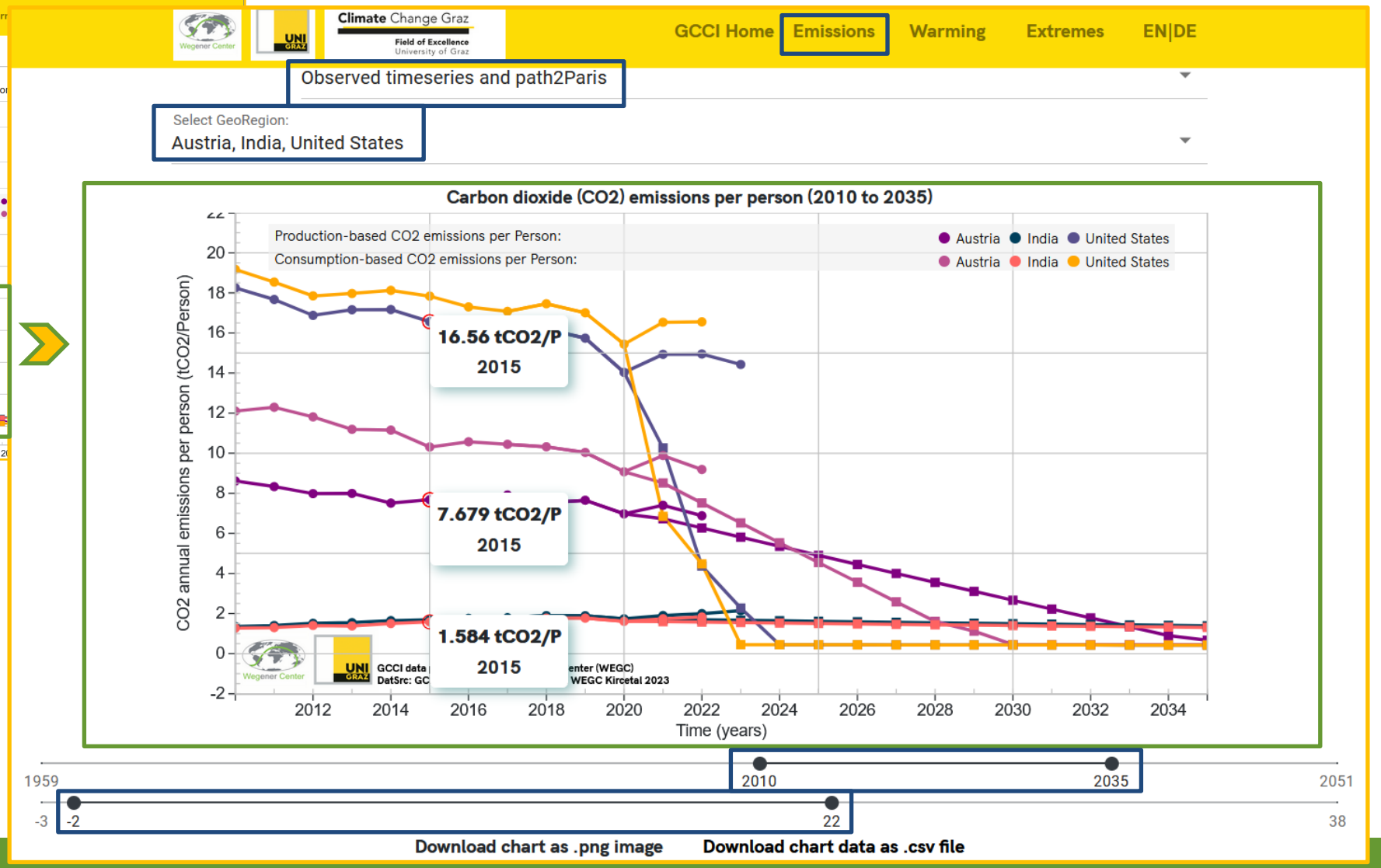
Example ***Emissions*** | backing **emission reduction policymaking**



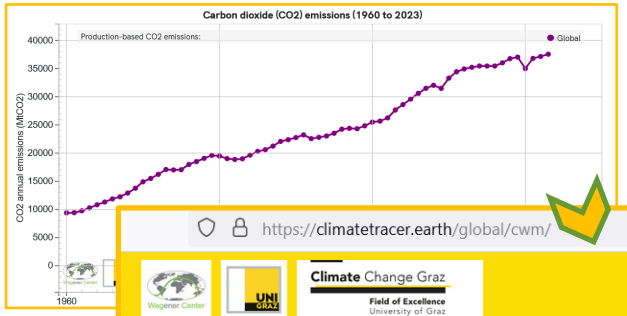


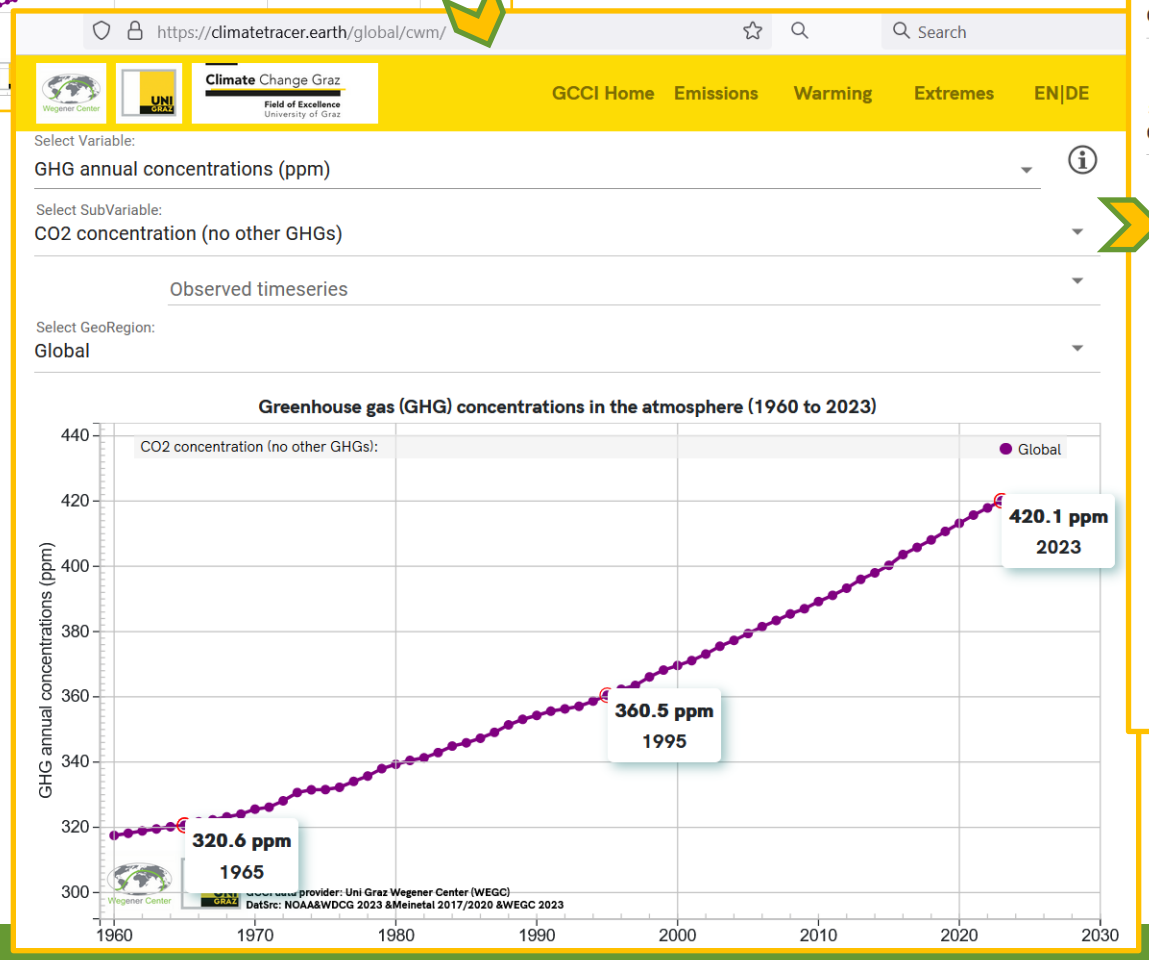
Example ***Emissions*** | backing **emission reduction policymaking**

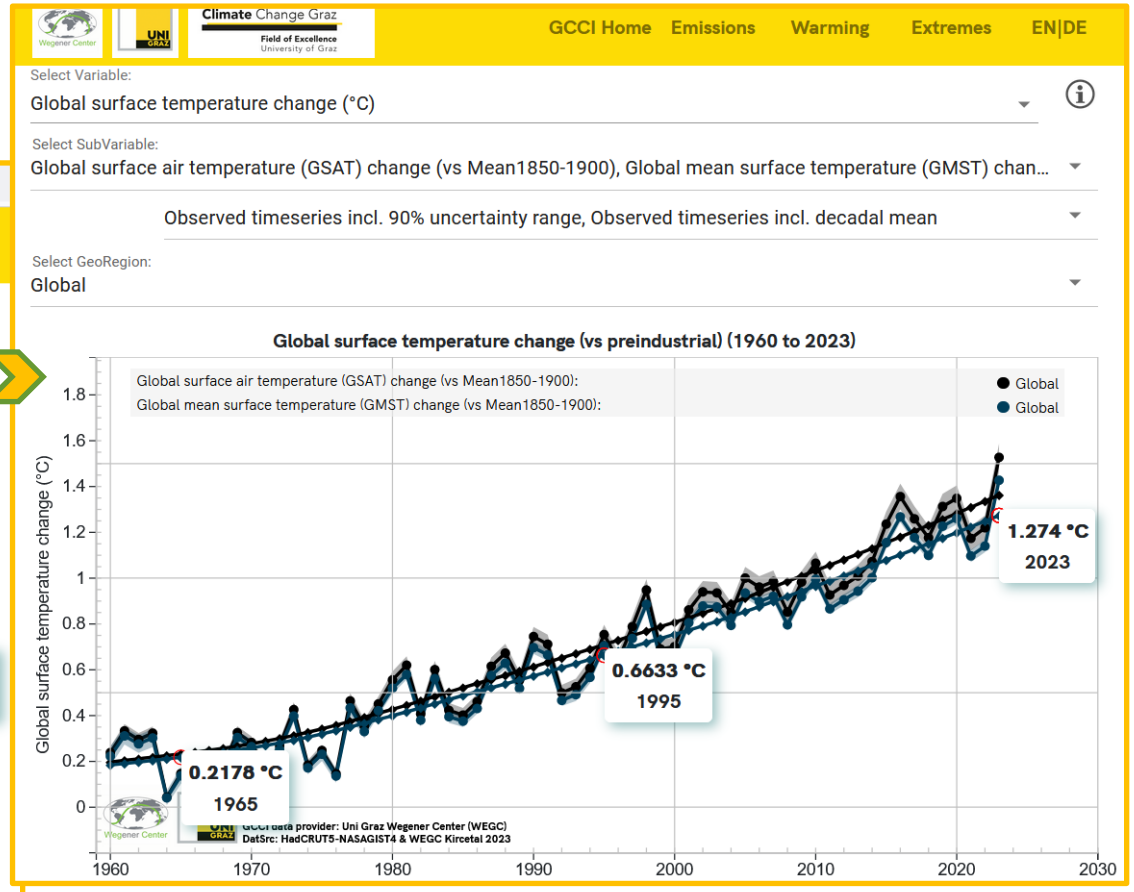




Example ***Warming*** | insight to **links emissions > global warming**







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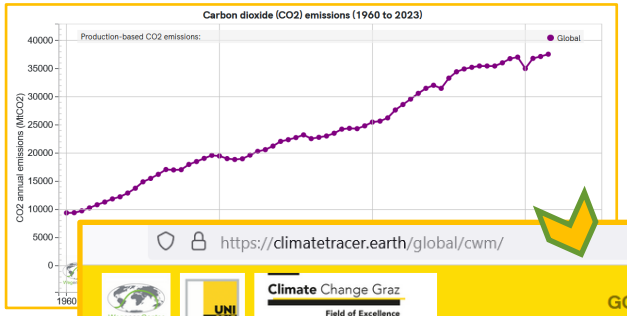
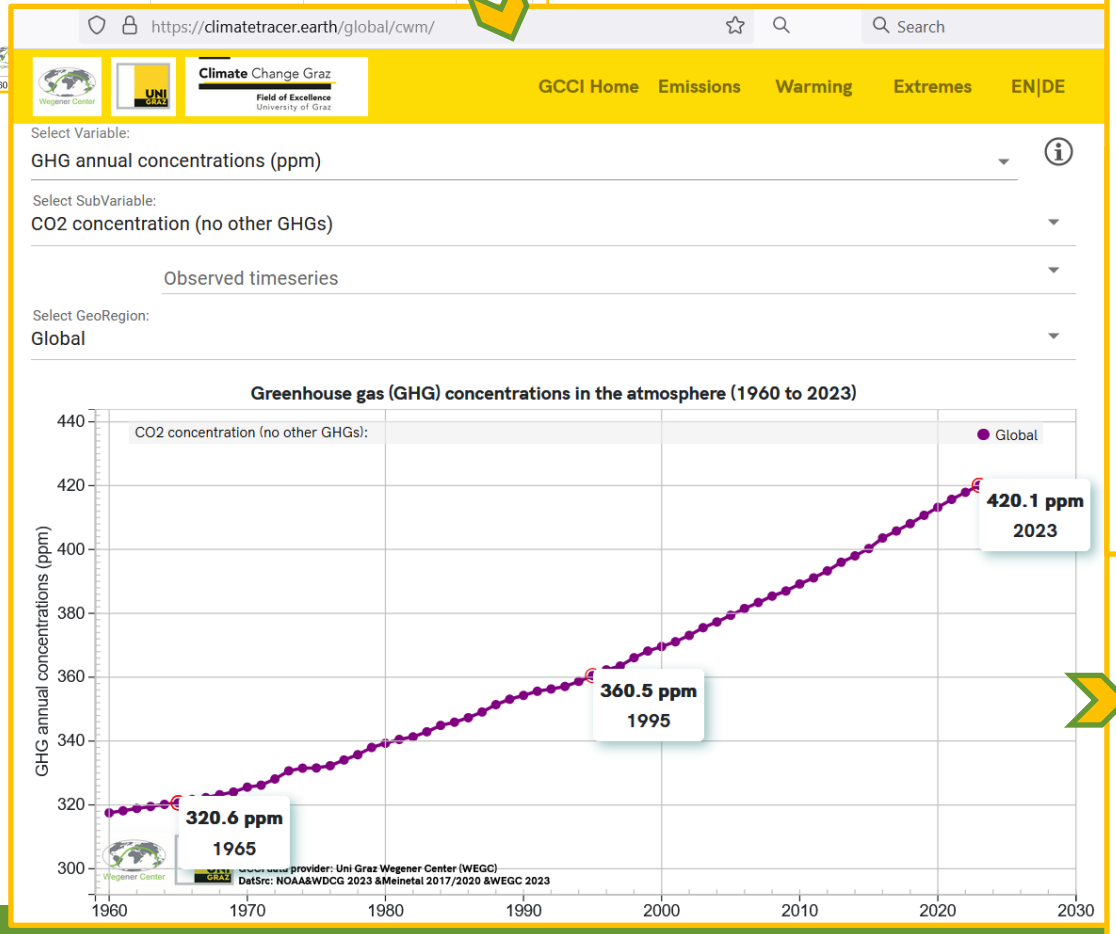
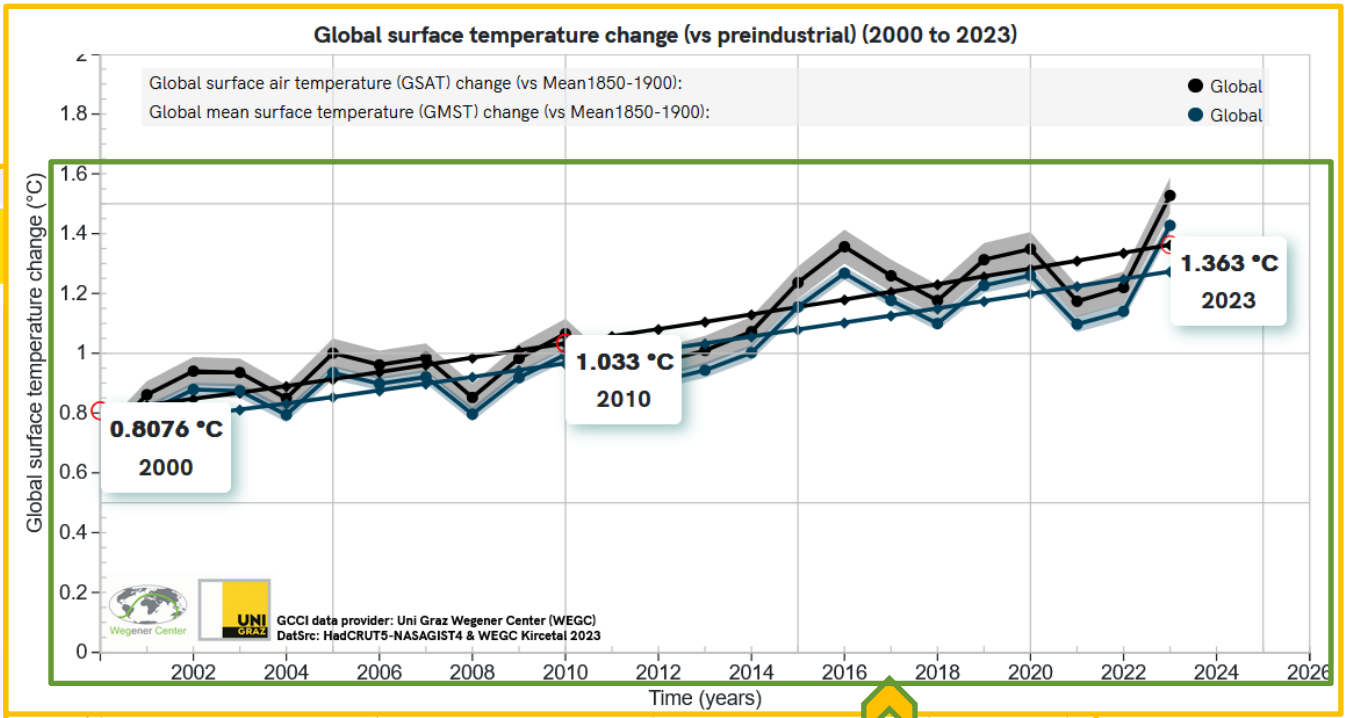
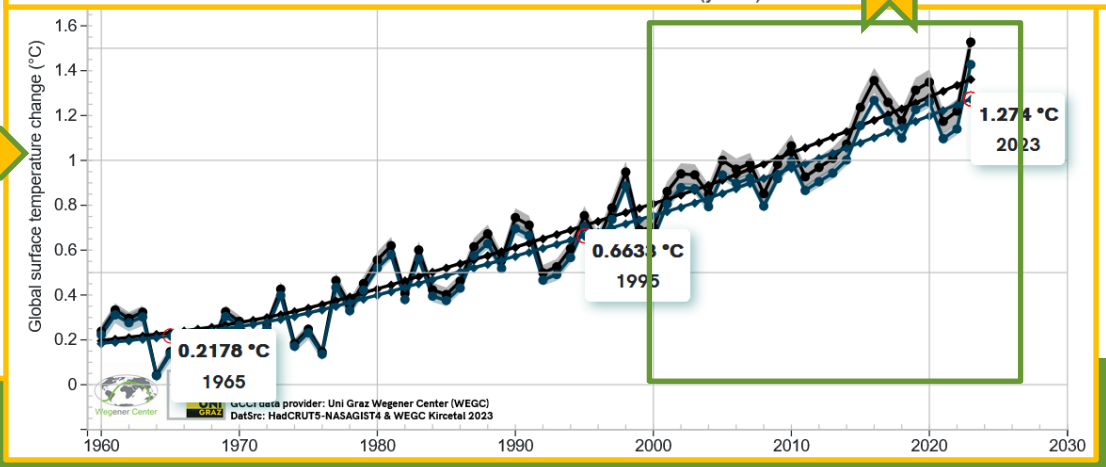
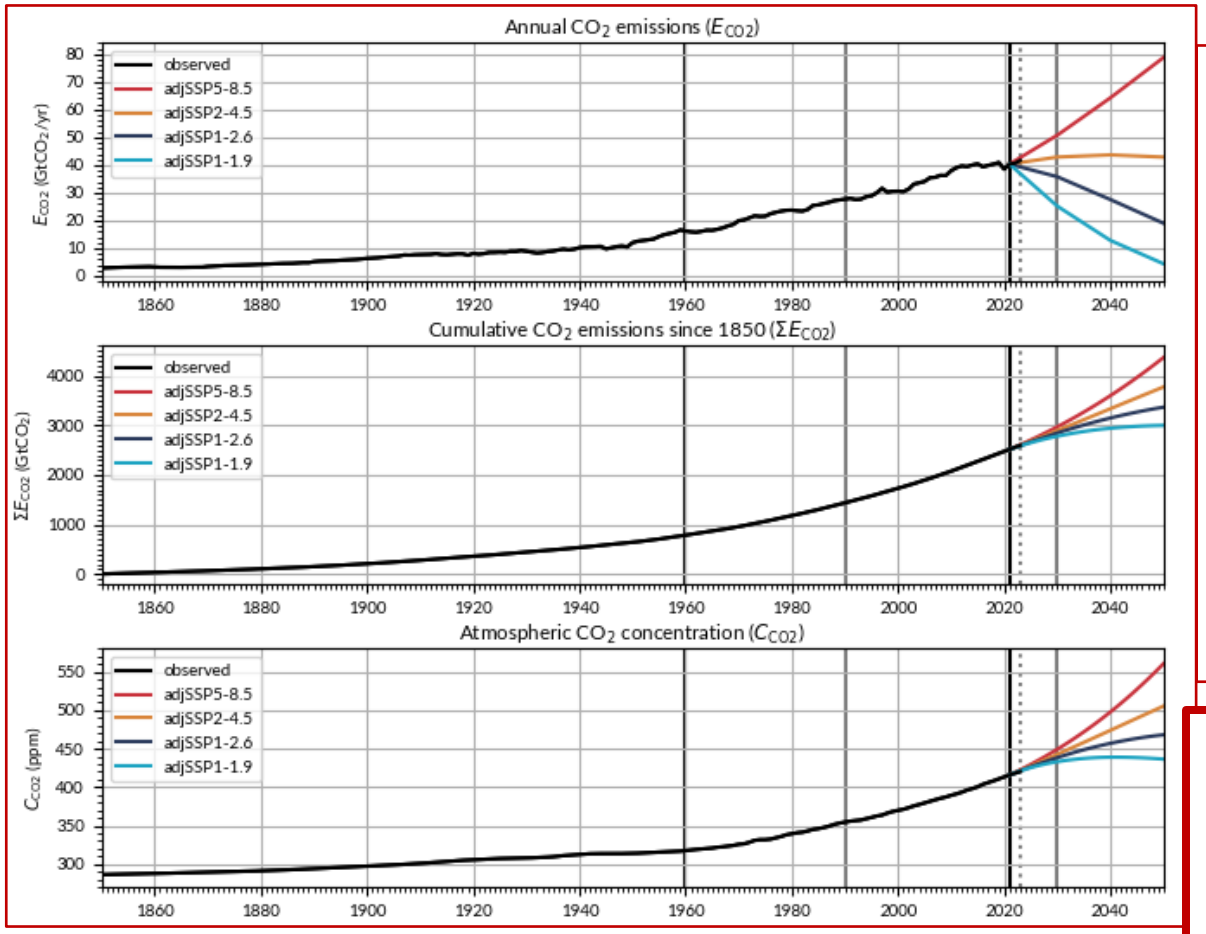


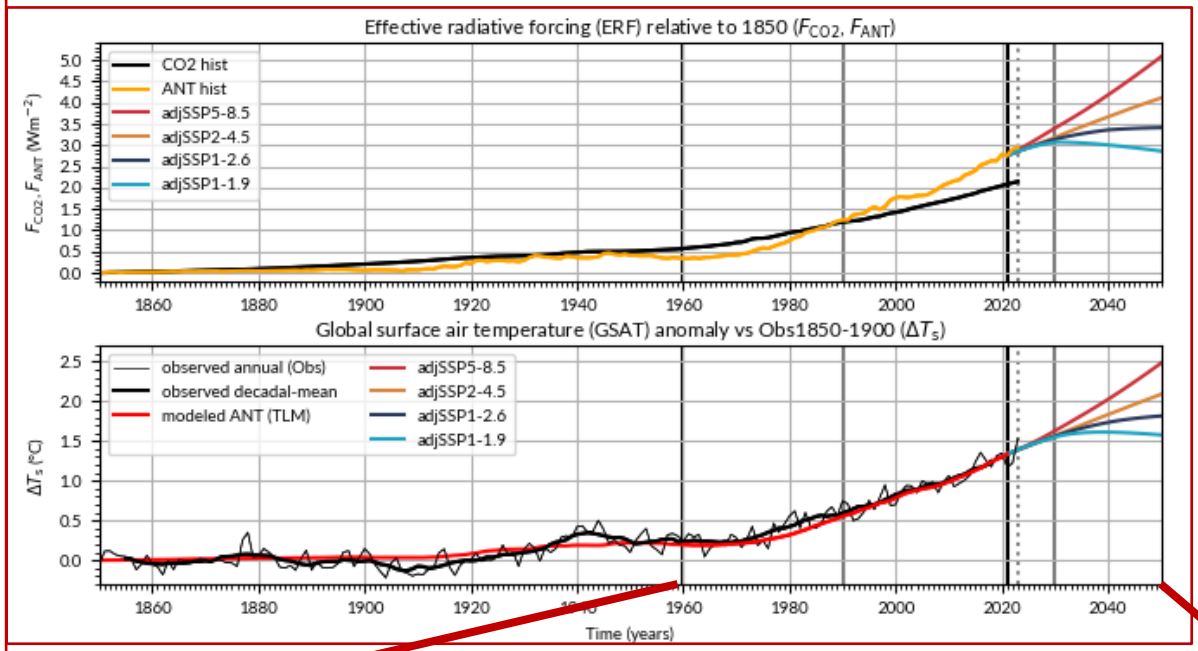


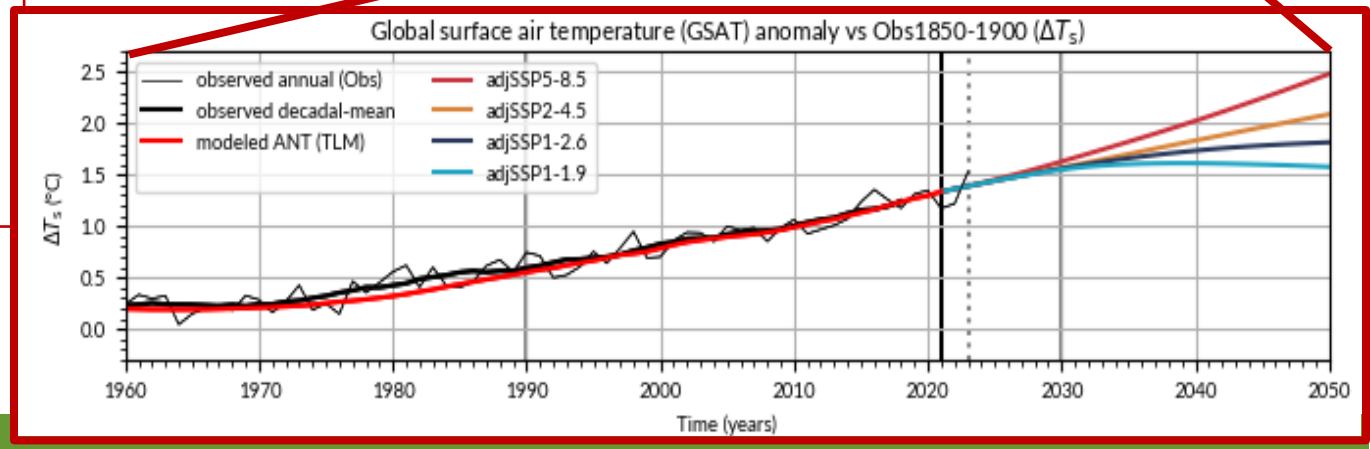




Strong **science backing**, e.g., **links emissions > global warming**

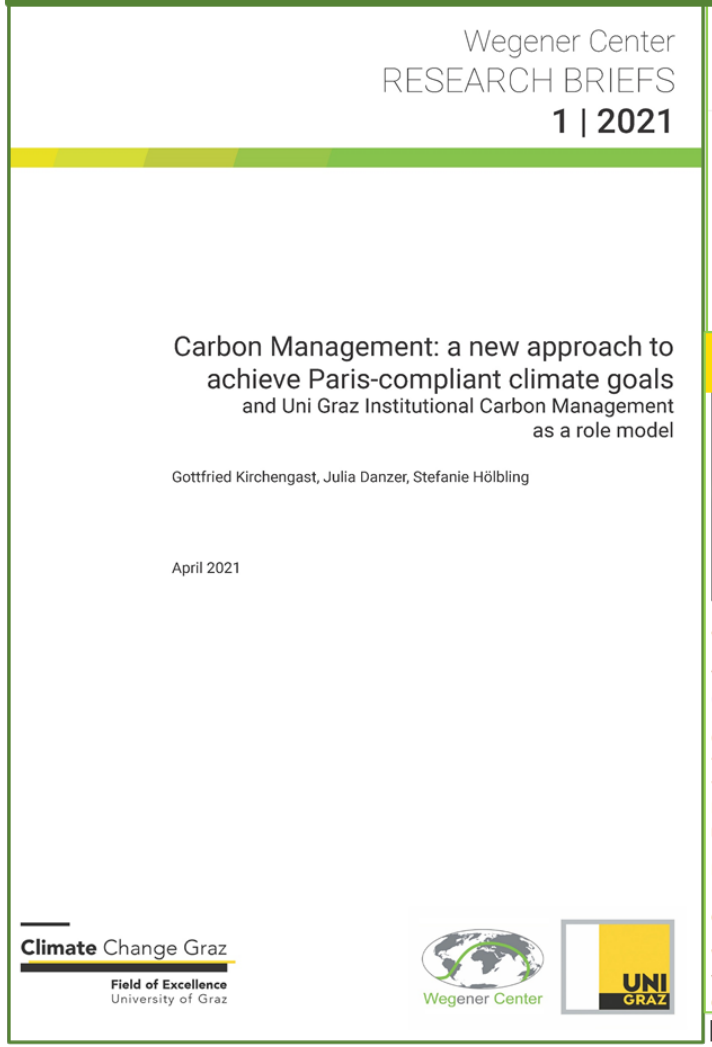




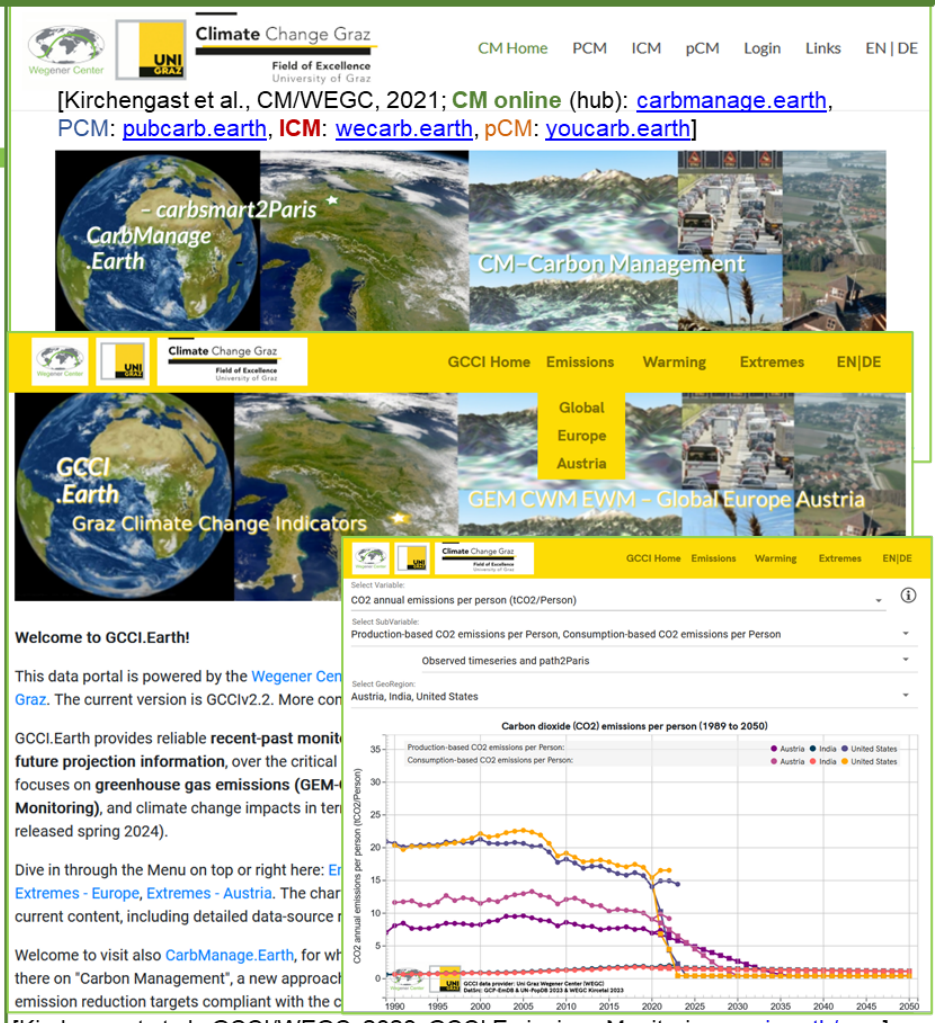


Strong **science2public**, e.g., **Carbon Management framework**

***Carbon Management*–a new solution framework to help meet the Paris climate goals…**

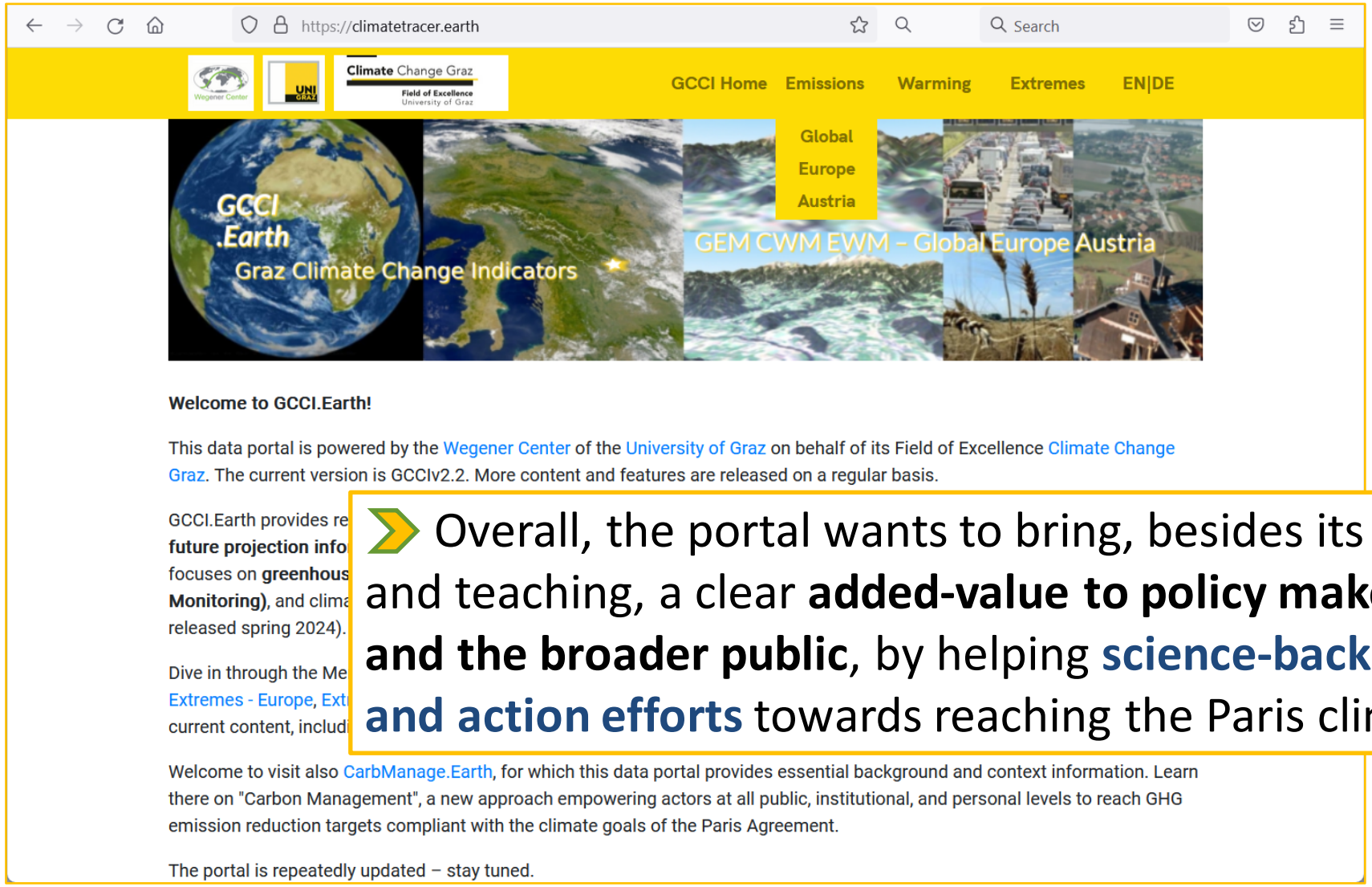


[Kirchengast et al. WEGC RB1-2021; accessible online (including individual-sections access) via https://doi.org/10.25364/23.2021.1]



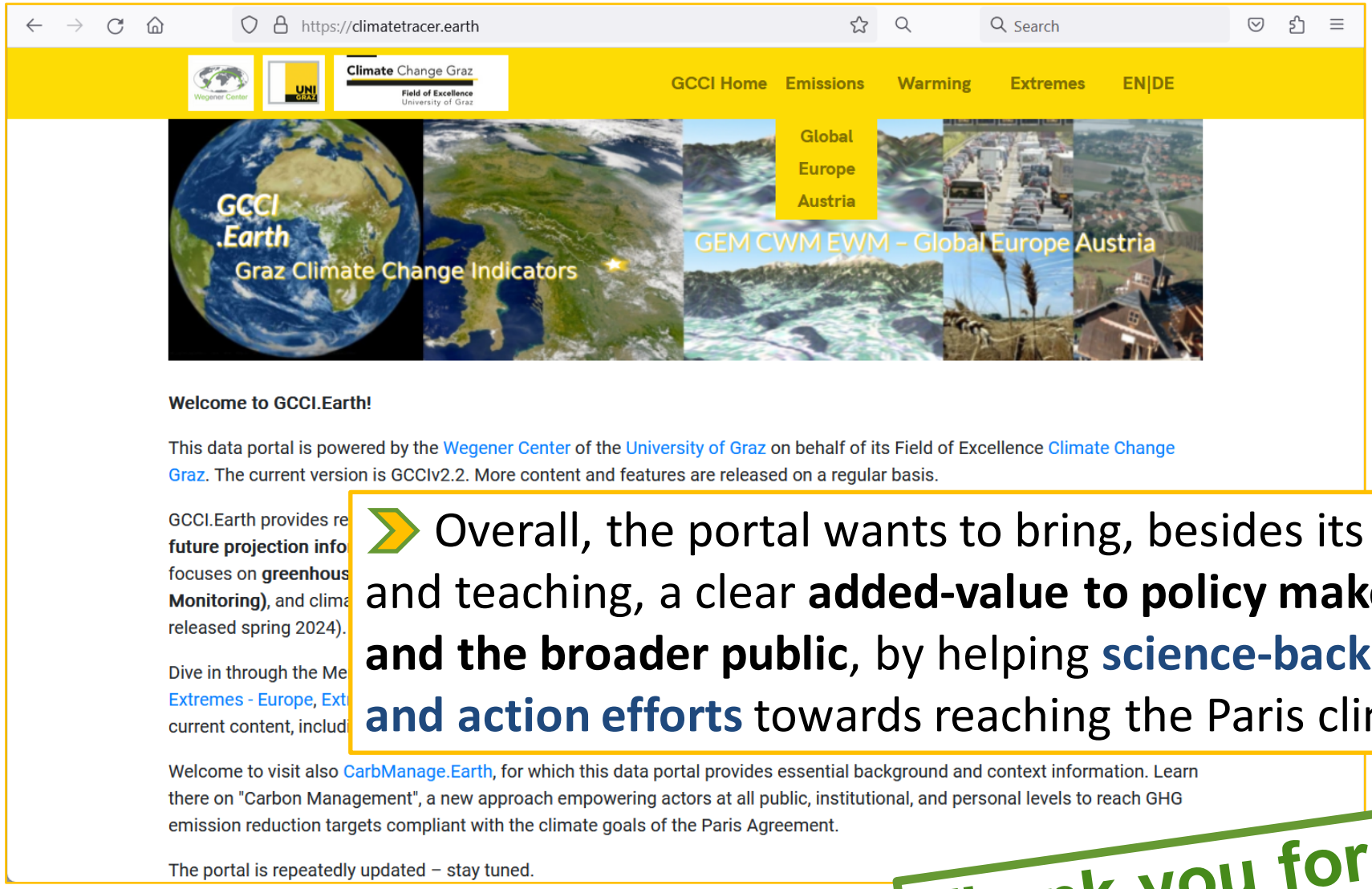
[Kirchengast et al., GCCI/WEGC, 2023; GCCI Emissions Monitoring: gcci.earth/gem]

Conclusions – Welcome to GCCI.Earth! (or ClimateTracer.Earth)



- Overall, the portal wants to bring, besides its value also for research and teaching, a clear **added-value to policy makers, other stakeholders and the broader public**, by helping **science-back their climate narratives and action efforts** towards reaching the Paris climate goals.

Conclusions – Welcome to GCCI.Earth! (or ClimateTracer.Earth)



Overall, the portal wants to bring, besides its value also for research and teaching, a clear **added-value to policy makers, other stakeholders and the broader public**, by helping **science-back their climate narratives and action efforts** towards reaching the Paris climate goals.

Thank you for your attention! ☺