IGC – 25/08/2024
C.16 - Co-production of techno-scientific promises: spaces, institutions, and communities

Promising updates or updating promises?

RETROFITTING HIGHLY EMITTING INFRASTRUCTURES TO ENABLE CARBON CAPTURE, UTILIZATION, AND STORAGE

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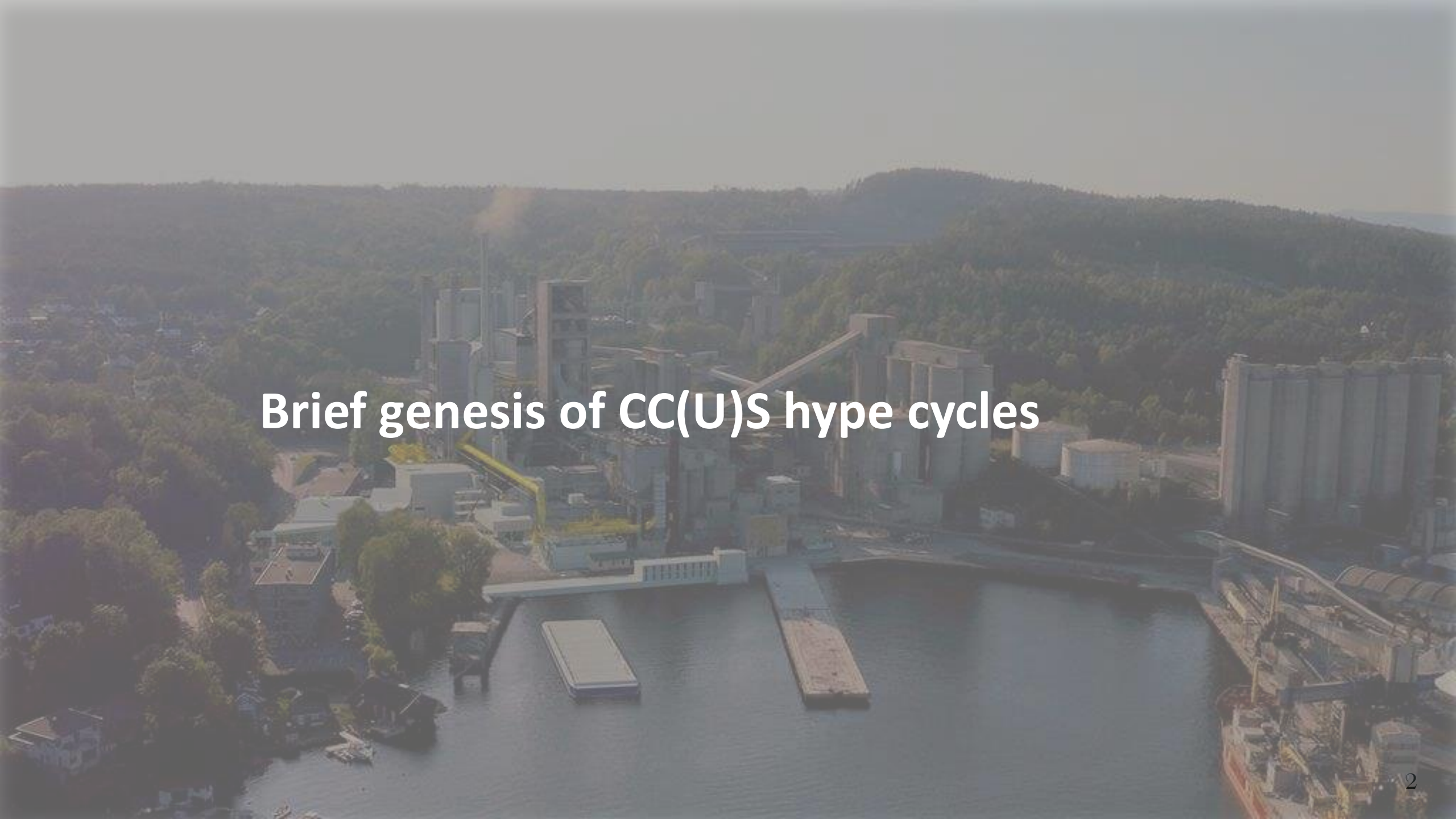
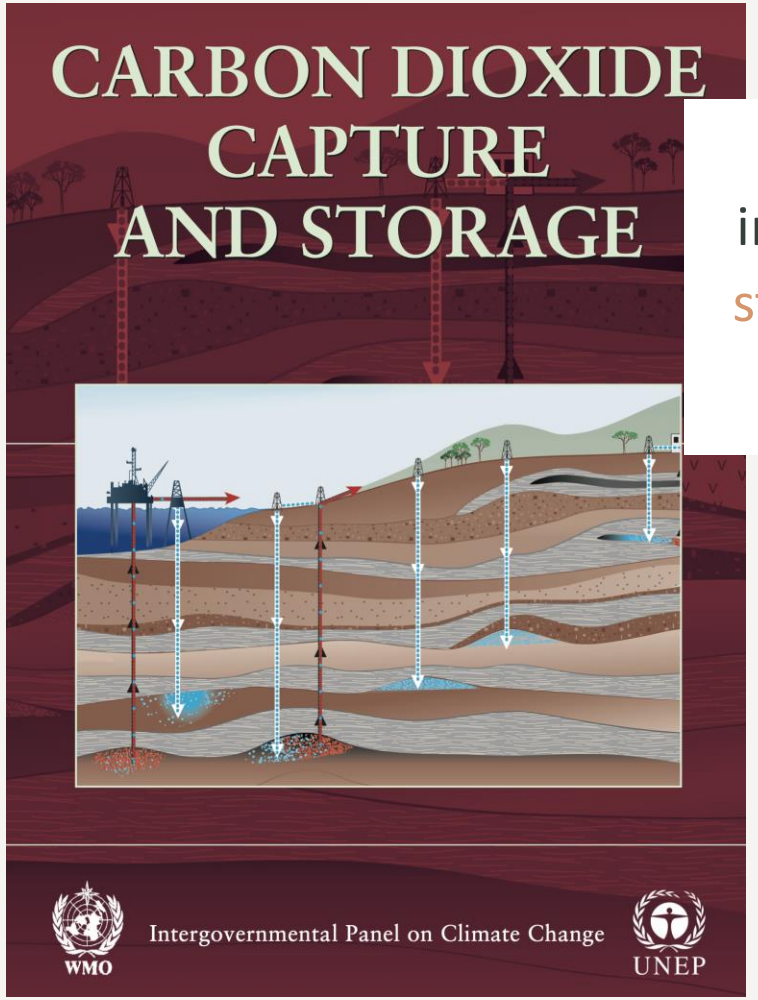
Spiral



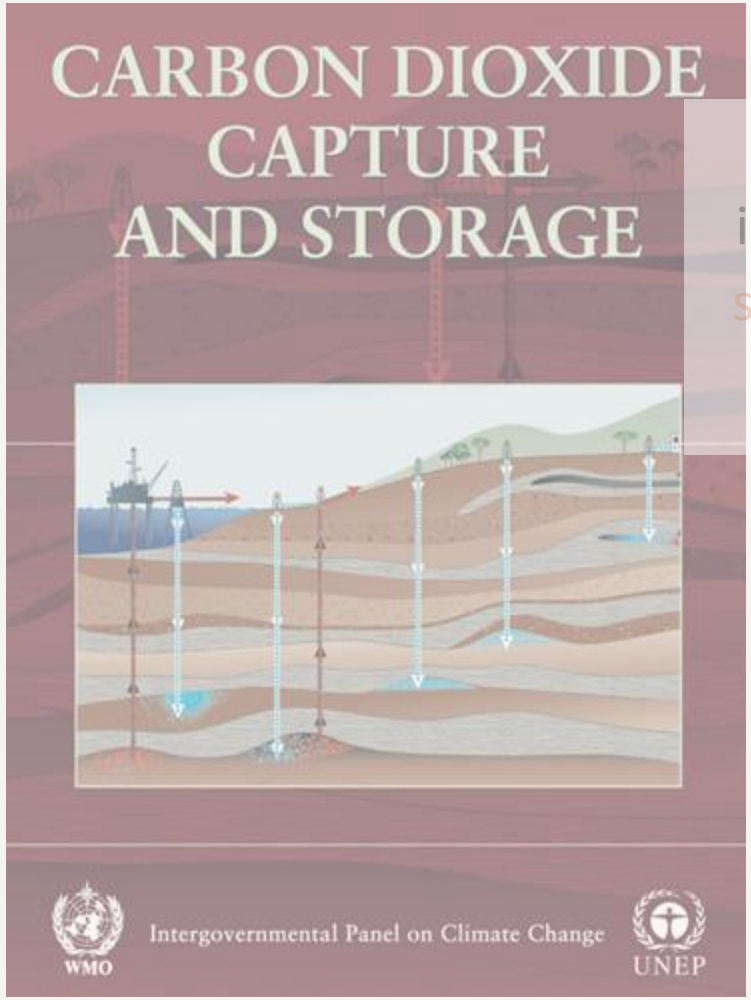
Brief genesis of CC(U)S hype cycles

Carbon capture and storage 101



CCS = "the process of *separating CO2 from emission sources* in industrial or related energy sectors, transporting it, and securely storing it in geological formations, isolated from the atmosphere for the long term" (IPCC, 2005).

Carbon capture and storage 101

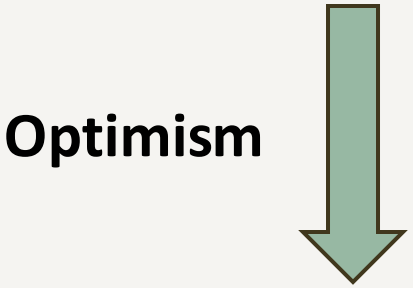


CCS = "the process of *separating CO2 from emission sources* in industrial or related energy sectors, transporting it, and securely storing it in geological formations, isolated from the atmosphere for the long term" (IPCC, 2005).

Part of energy-climate policies

2008: disillusionment

Optimism

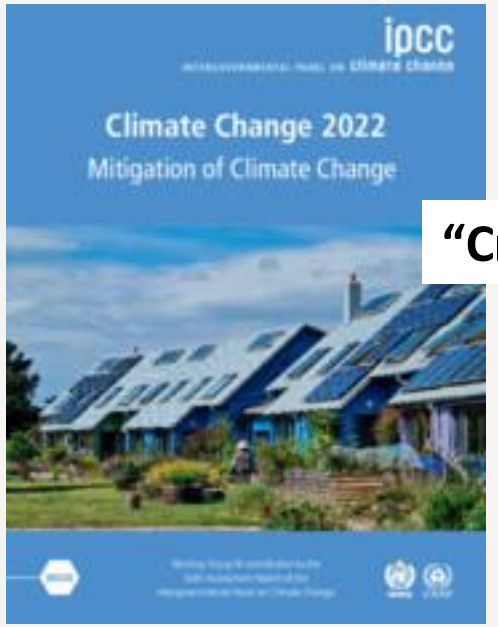


2015 Paris Agreement: new hype & new framings

Hard-to-abate industries > power generation

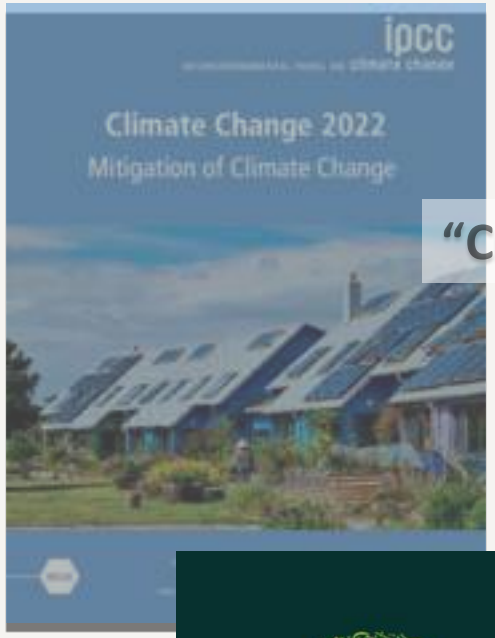
CCUS: valuing carbon

CCUS as an obligatory passage point?



“Critical mitigation option”

CCUS as an obligatory passage point?

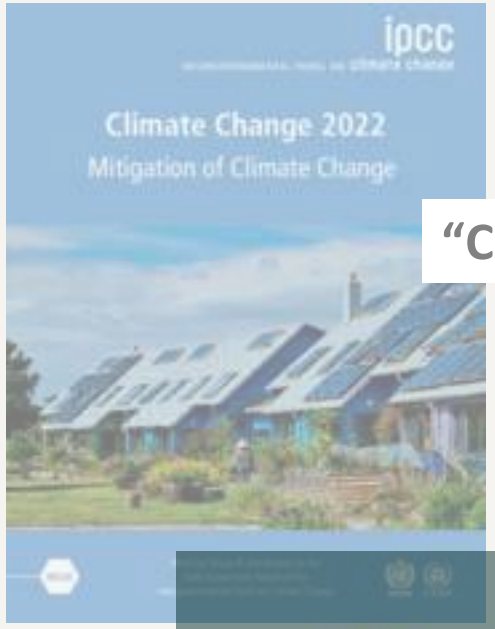


"Critical mitigation option"

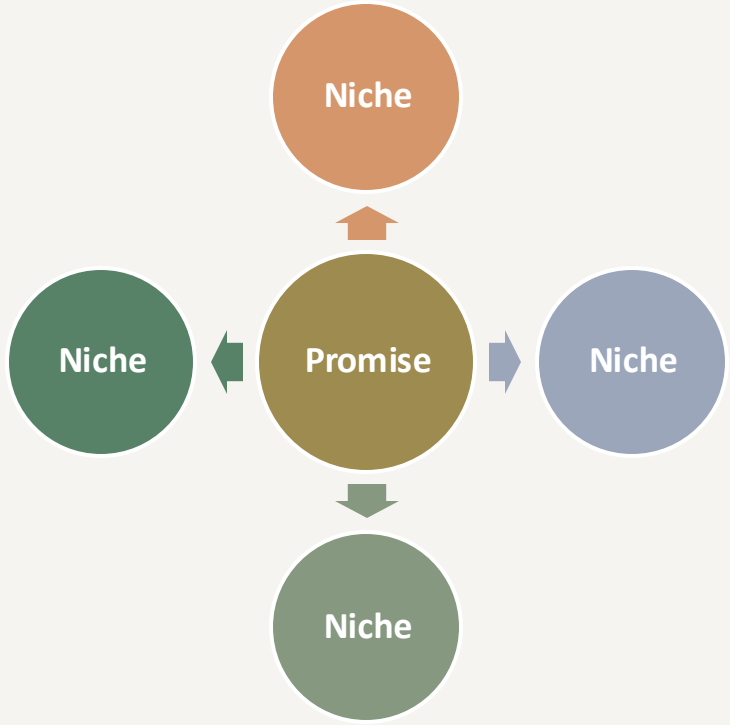
COP28 UAE

"Phase down of unabated coal power"

CCUS as an obligatory passage point?



"Critical mitigation option"



"Phase down of unabated coal power"

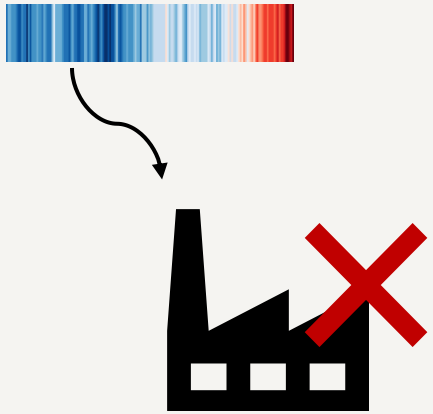
Retrofitting or playing with in-betweenness

Retrofit 101

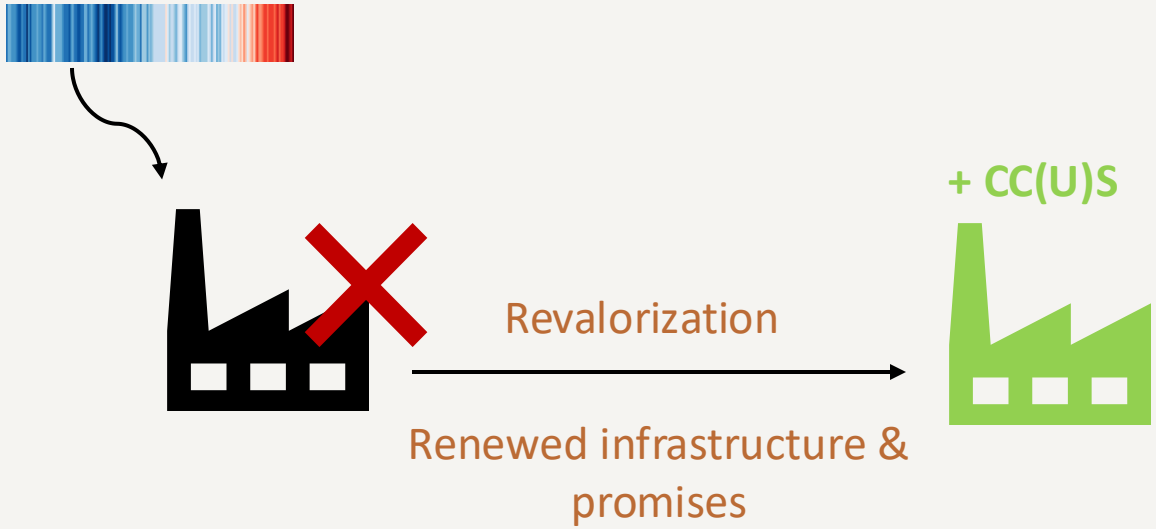
"The modification or conversion, not the complete replacement, of an existing process, facility or structure"
(Sanvido & Riggs, 1991 in Jagarajan & al., 2017)

'Messy hybridization': between old & new (Högselius, 2022)

A new world in the shell of the old



A new world in the shell of the old



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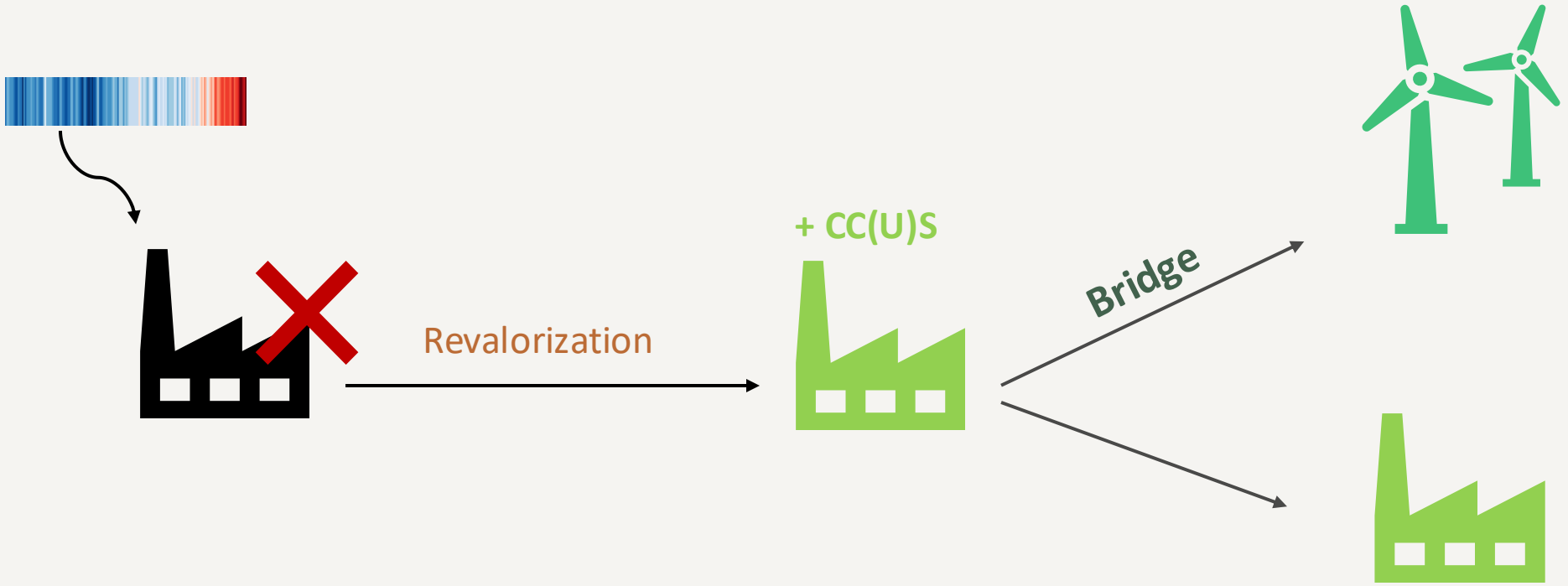
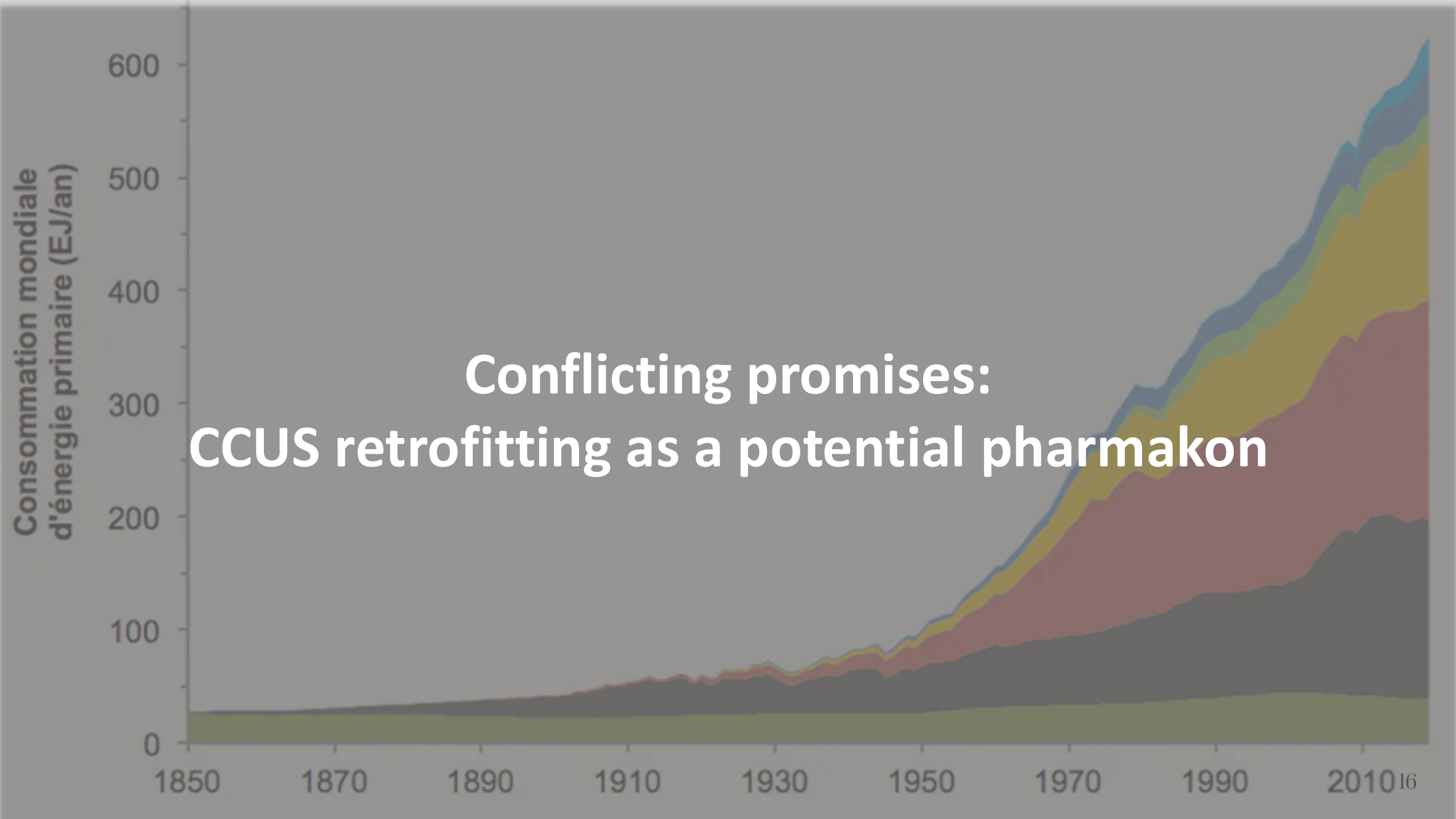


Making industrial near-ruins ‘great again’

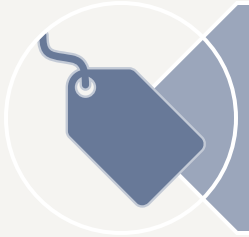


Conflicting promises: CCUS retrofitting as a potential pharmakon

A risk of carbon lock-in ?

Technical fix in line with incumbent industries

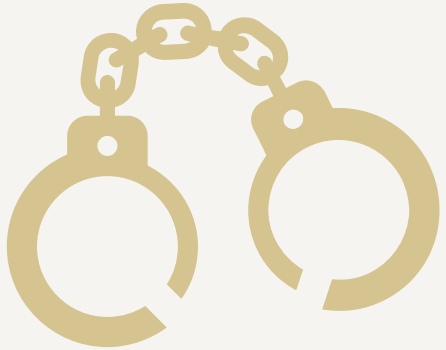
‘Fit & conform’ strategy



Label > content ?

A bridge to where?

Development & deployment:
past lessons



Accumulation > replacement
Idea of a bridge = paradox

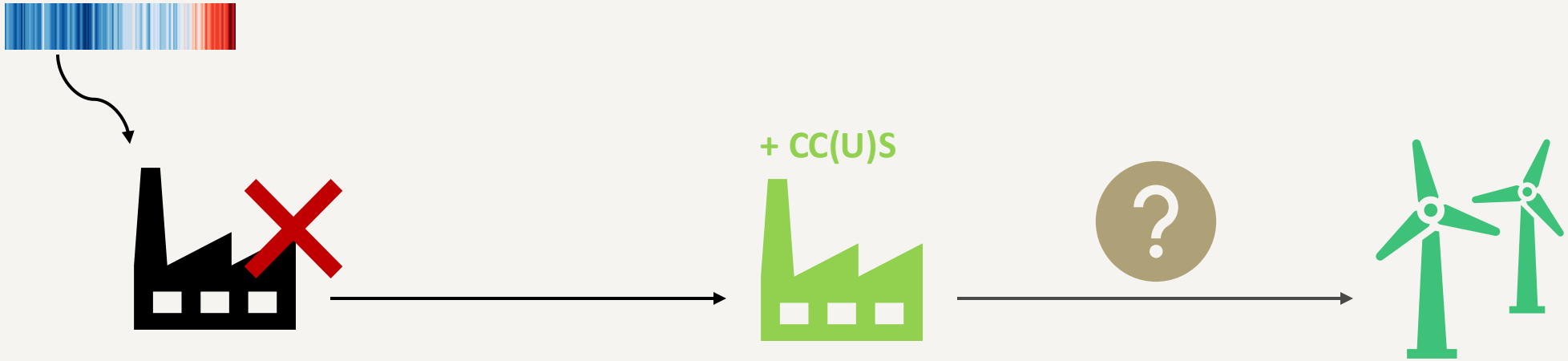
Bridging timelines to soothe tensions

Temporal inconsistencies – i.e., the challenges and tensions resulting from the constant overlaps between concurrent forms of time (Felt 2016)

Politics of 'as if': CO2 = resource-in-waiting

Colonizing the future: timeprints

Bridging as oxymoron: long-term temporary



Conclusion: seizing Kairos in entangled timescapes

Playing with polyphony: multiple coexisting forms of time

Attention to the socio-material anchorage in specific contexts

Thank you !

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- Felt, U. (2016). The temporal choreographies of participation. Thinking innovation and society from a time-sensitive perspective. In: J. Chilvers and M. Kearnes (Eds.),Remaking participation: Science, environment and emergent publics (pp.178-99). Routledge
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- International Panel on Climate Change (IPCC). (2022). Climate change 2022. Mitigation of climate change. Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.
- Jagarajan, R., Abdullah Mohd Asmoni, M. N., Mohammed, A. H., Jaafar, M. N., Lee Yim Mei, J., & Baba, M. (2017). Green retrofitting – A review of current status, implementations and challenges. Renewable and Sustainable Energy Reviews, 67, 1360–1368.