

Qualitative Foresight to Navigate Multilevel Climate Policy Futures

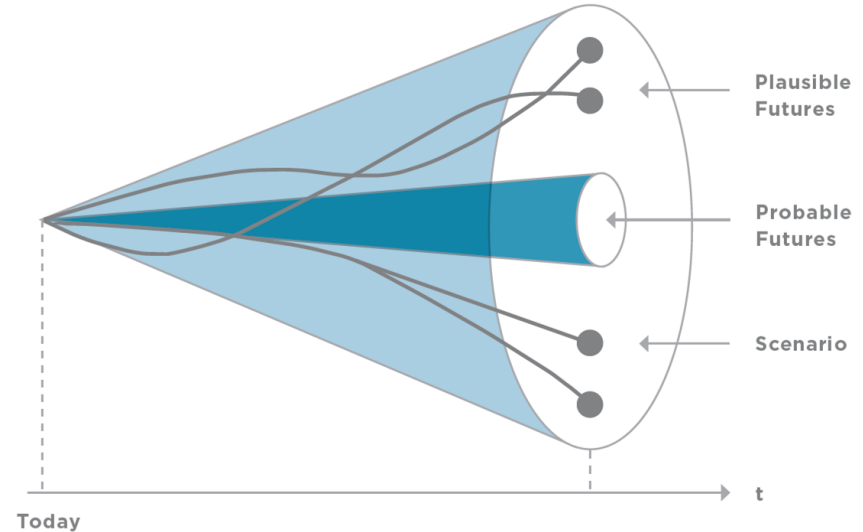


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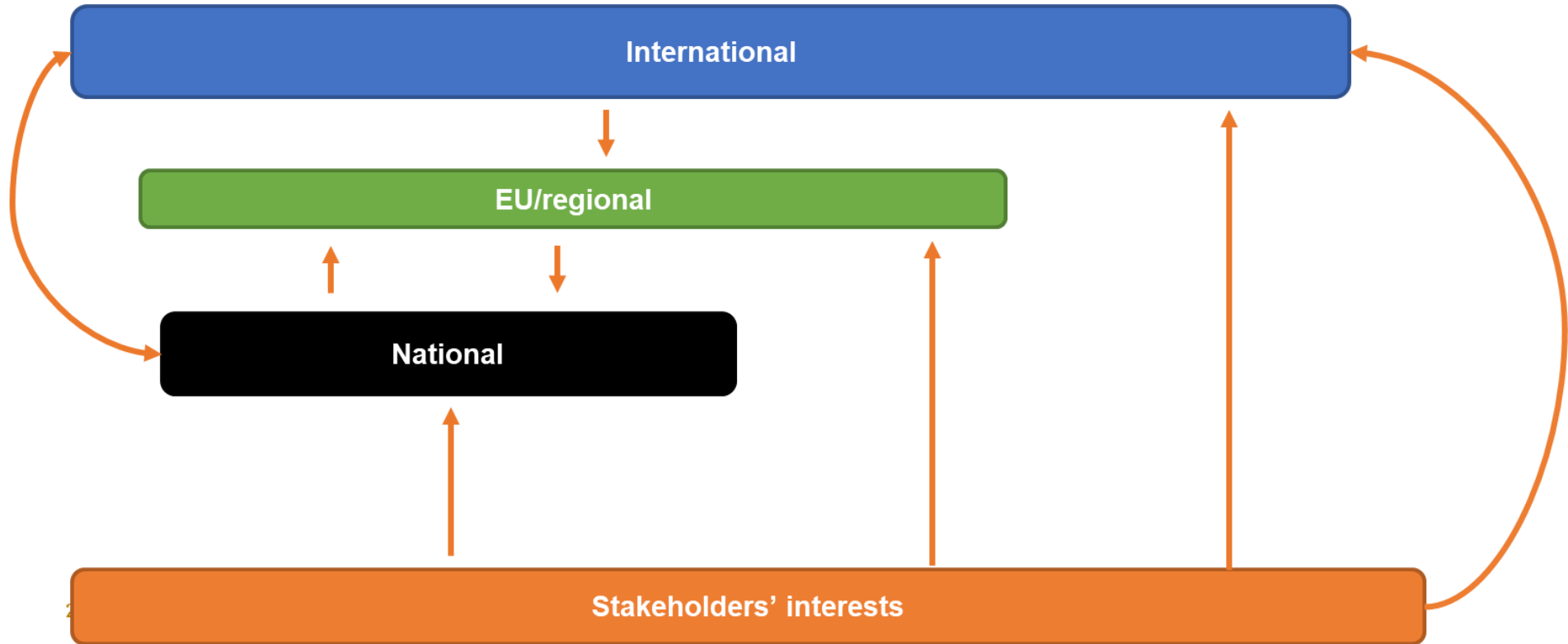
Foresight to navigate climate policy futures

- **Facilitates structured, anticipatory, group communication** about policy futures
- **Widens understandings of plausible developments** based on the anticipation of interactions between a range of political, economic, technological, and social factors
- **Can help explore policy responses to deal with risks and opportunities** across a range of plausible futures



Boettcher et al. (2016):
<http://doi.org/10.2312/iass.2016.007>

Multilevel climate policy



Foresight to navigate climate policy futures

Guiding question:

Which factors will **plausibly** have a **significant** impact on EU climate policy between now and 2030?

Climate policy futures

1. Horizon scanning

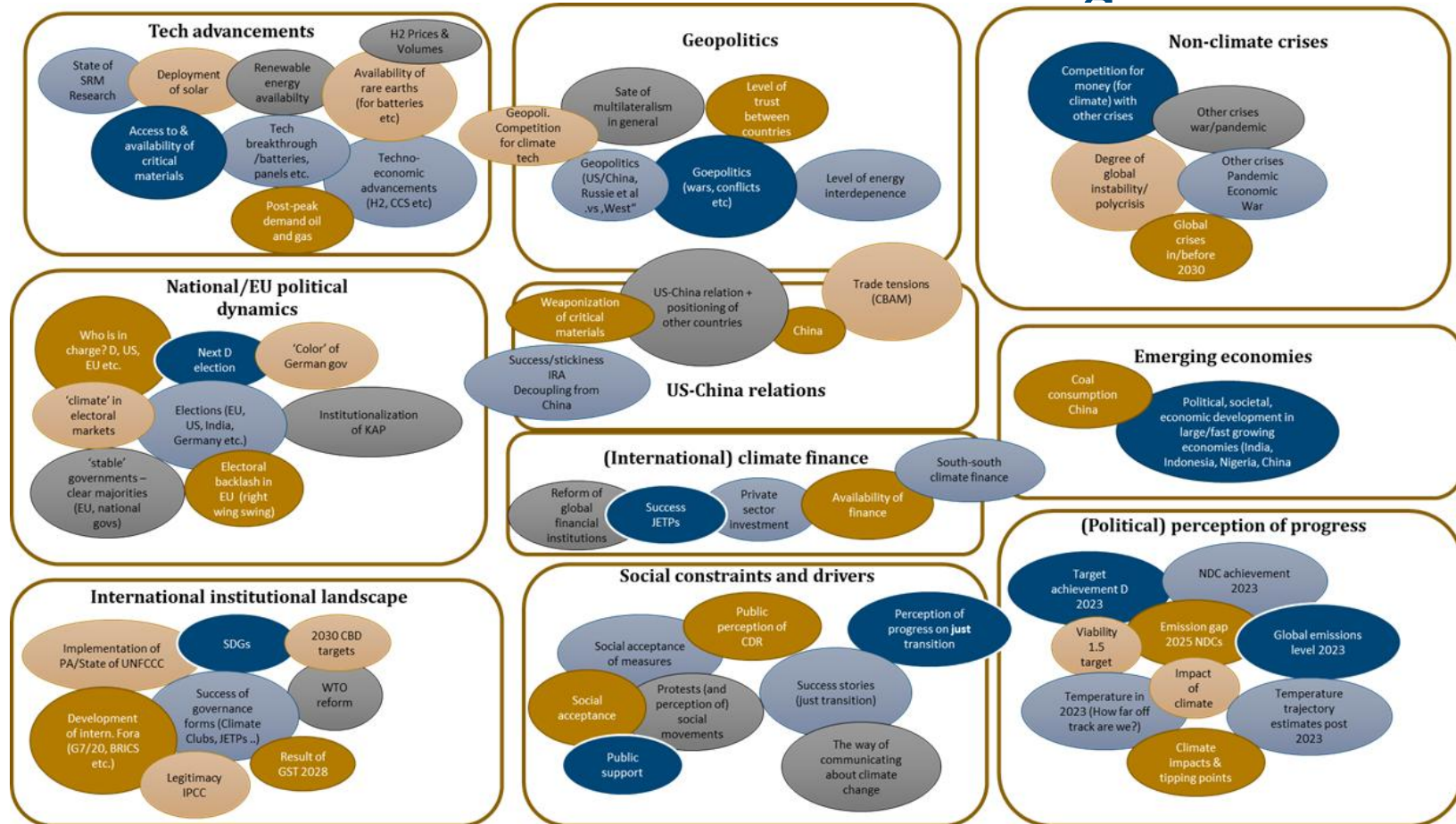
- **Identifying** a broad range of political, economic, social, technological, environmental, and other **factors** relevant for climate policy futures
- **Clustering** into **sets of factors** for the next step of the process

A European Green Deal

Striving to be the first climate-neutral continent



Results of factor horizon scan & clustering



Climate policy futures

2. Narrowing down to key uncertainties

- **Simple uncertainty-impact analysis**
- **Rating the uncertainty and impact** of the clustered factors gathered during the environment scanning
- **Agreeing upon highly ranked 'key uncertainties (KUs)'** to continue to work with



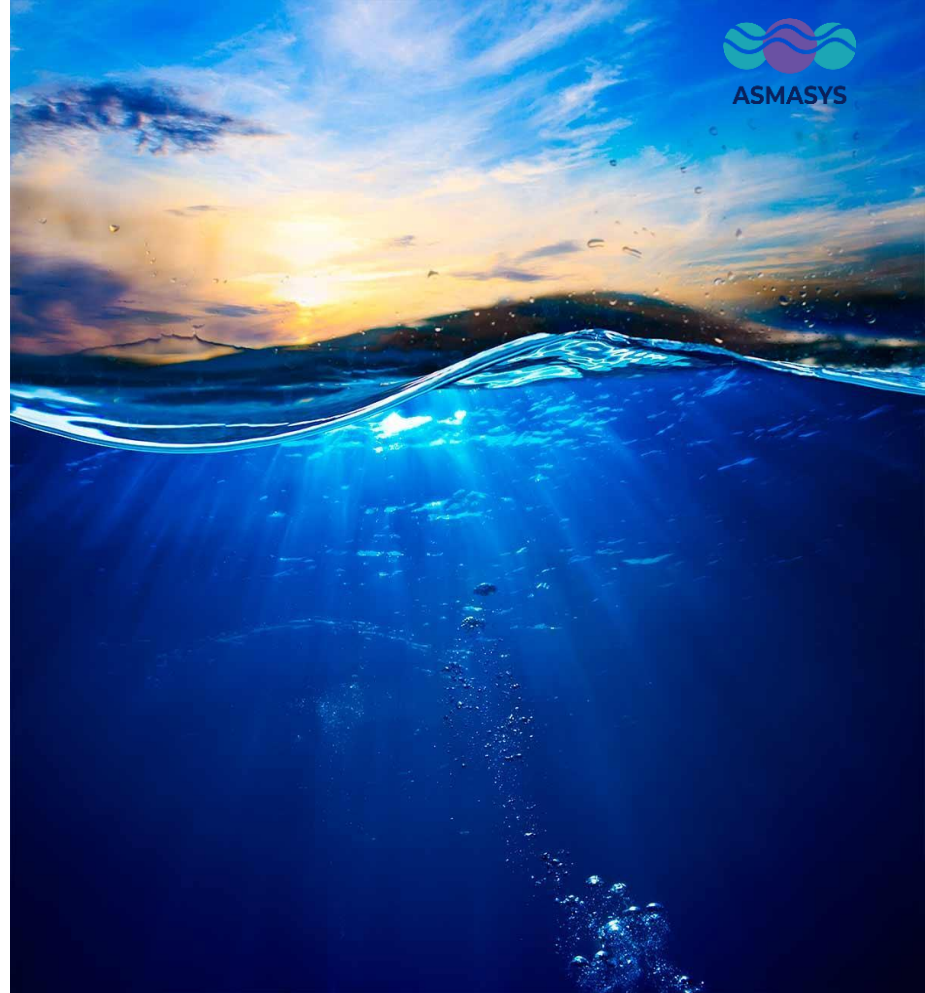
Key Uncertainties shaping climate policy futures

KU	Title/Description
KU1	Who's in charge (national political dynamics, electoral dynamics)
KU2	Techno-economic advancements (H2, CCS, CDR, renewables)
KU3	Non-climate crises (pandemic, economic)
KU4	Geopolitical rivalries and alliances (US/China, Russia et al./"The West")
KU5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)
KU6	Private sector investment / availability of climate finance
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)

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3. Creating projections

- Developing at least **three distinct outcomes** for each key uncertainty in 2030
- Mutually exclusive, comprehensively exhaustive (MECE)

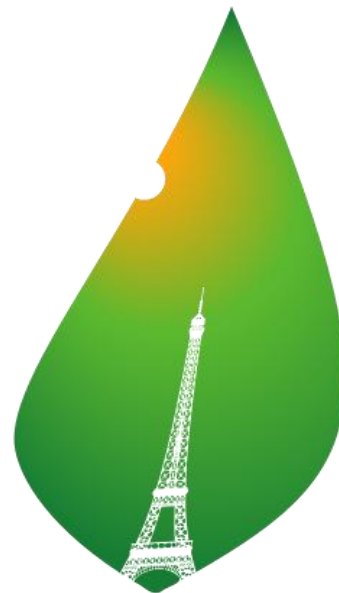


	Description	Projection A	Projection B	Projection C
KU 1	Who's in charge (national political dynamics, electoral dynamics)	Only pro-climate parties (the good guys) rule	Only anti-climate parties(the bad guys) rule	A colourful mixture of pro and anti climate parties in power, with a slight pro-climate improvement over time.
KU 2	Techno-economic advancements (H2, CCS, CDR, renewables)	Breakthroughs and rapid upscaling of all climate relevant tech	Stagnation of all climate relevant tech (i.e due to increase in cost)	Incremental but differentiated progress across different techs
KU3	Non-climate crises (pandemic, economic)	Stability, no crises	Global, systemic instability, multiple ongoing global crises	Regional, sporadic, time-bound crises
KU 4	Geopolitical rivalries	Rivalries drive competitive action and alignments (race to the top)	Dysfunctional rivalries block action and alignments (race to the bottom)	Dynamic fragmentation, with some alignment differentiated by policy fields
KU 5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)	PA fully guides ambitious national climate policy in line with targets & burden sharing (CBDR-RC)	PA is considered irrelevant, key (high emitting) countries drop out	Fragmented, key decisions taken outside PA, claiming & shirking (promissory words with limited action). Thin layer of universal implementation (NDCs)
KU 5	Availability of public financing for climate, and private sector green investment	Public financing aligned with climate targets, green investment becomes a business model globally	Public and private financing for climate declining	Very limited private sector green investment, greenwashing
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)	Step change: Perception of major progress in most countries on emissions reductions, climate impacts deemed low.	Too little, too late: Emissions still rising, climate impacts deemed very serious globally, perception of climate 'failure' (primarily mitigation failure & adaptation is not perceived as sufficient yet)	Incrementalism: Some progress, but perceived (by some) as not enough to achieve climate goals/prevent climate impacts (mitigation, adaptation etc.)

Climate policy futures

4. Creating scenario frameworks

- Creating a set of at least three **logically consistent** scenario frameworks, each including one projection from each of the key uncertainties
- **Via group discussion**
 - Only one projection per factor in each scenario framework
 - A factor projection cannot not be reused in another framework
 - Each participant only allowed to pick one projection per scenario framework – justify choice!



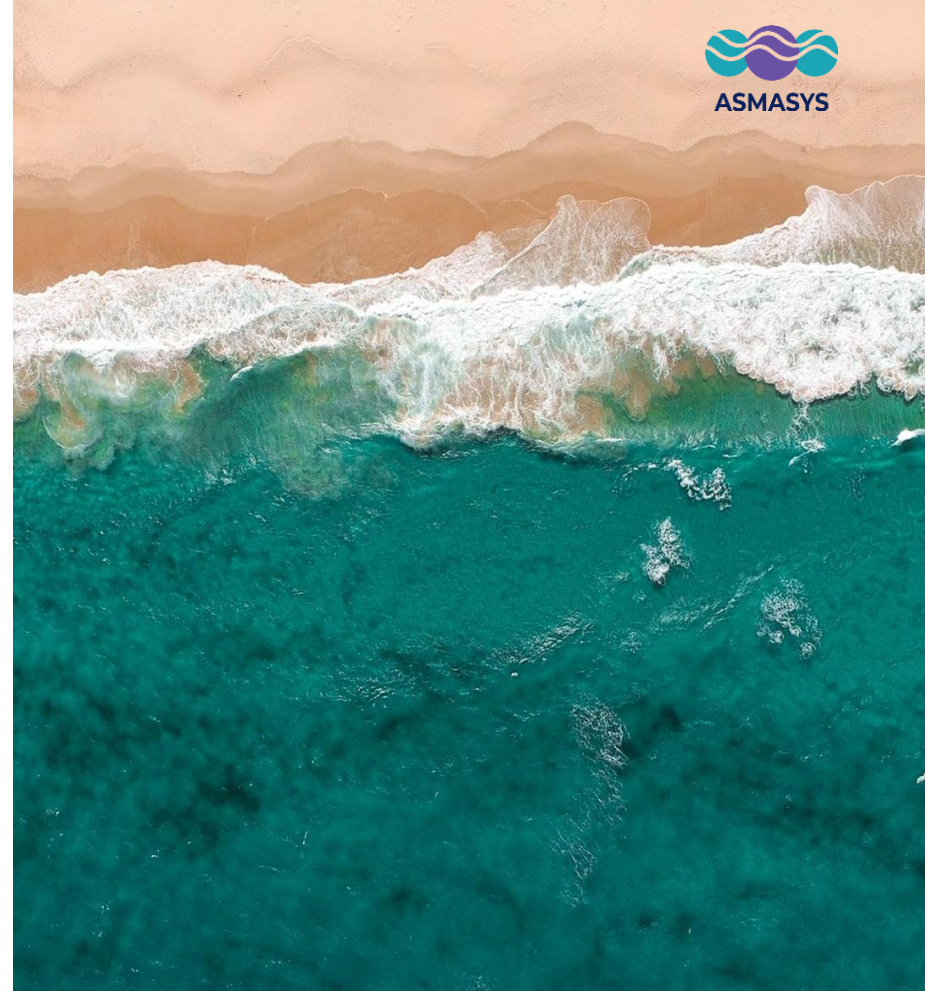
PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

	Description	Projection A (BC)	Projection B (WC)	Projection C (BAU)	Projection D
KU 1	Who's in charge (national political dynamics, electoral dynamics)	Only pro-climate parties (the good guys) rule	Only anti-climate parties (the bad guys) rule	A colourful mixture of pro and anti climate parties in power, with a slight pro-climate improvement over time.	Only climate-agnostic parties rule
KU 2	Techno-economic advancements (H2, CCS, CDR, renewables)	Breakthroughs and rapid upscaling of all climate relevant tech	Stagnation of all climate relevant tech (i.e due to increase in cost)	Incremental but differentiated progress across different techs	
KU3	Non-climate crises (pandemic, economic)	Stability, no crises	Global, systemic instability, multiple ongoing global crises	Regional, sporadic, time-bound crises	
KU 4	Geopolitical rivalries	Rivalries drive competitive action and alignments (race to the top)	Dysfunctional rivalries block action and alignments (race to the bottom)	Dynamic fragmentation, with some alignment differentiated by policy fields	
KU 5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)	PA fully guides ambitious national climate policy in line with targets & burden sharing (CBDR-RC)	PA is considered irrelevant, key (high emitting) countries drop out	Fragmented, key decisions taken outside PA, claiming & shaming (promissory words with limited action). Thin layer of universal implementation (NDCs)	Only carbon market mechanisms implemented, economic optimisation, market-based governance.
KU 6	Availability of public financing for climate, and private sector green investment	Public financing aligned with climate targets, green investment becomes a business model globally	Public and private financing for climate declining	Very limited private sector, some public green investment, greenwashing	No public financing, private only
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)	Step change: Perception of major progress in most countries on emissions reductions, climate impacts deemed low.	Too little, too late: Emissions still rising, climate impacts deemed very serious globally, perception of climate 'failure' (primarily mitigation failure & adaptation is not perceived as sufficient yet)	Incrementalism: Some progress, but perceived (by some) as not enough to achieve climate goals/prevent climate impacts (mitigation, adaptation etc.)	Stagnation: no progress, but also no perceived negative climate impacts

Climate policy futures

5. Creating pictures and histories of the future

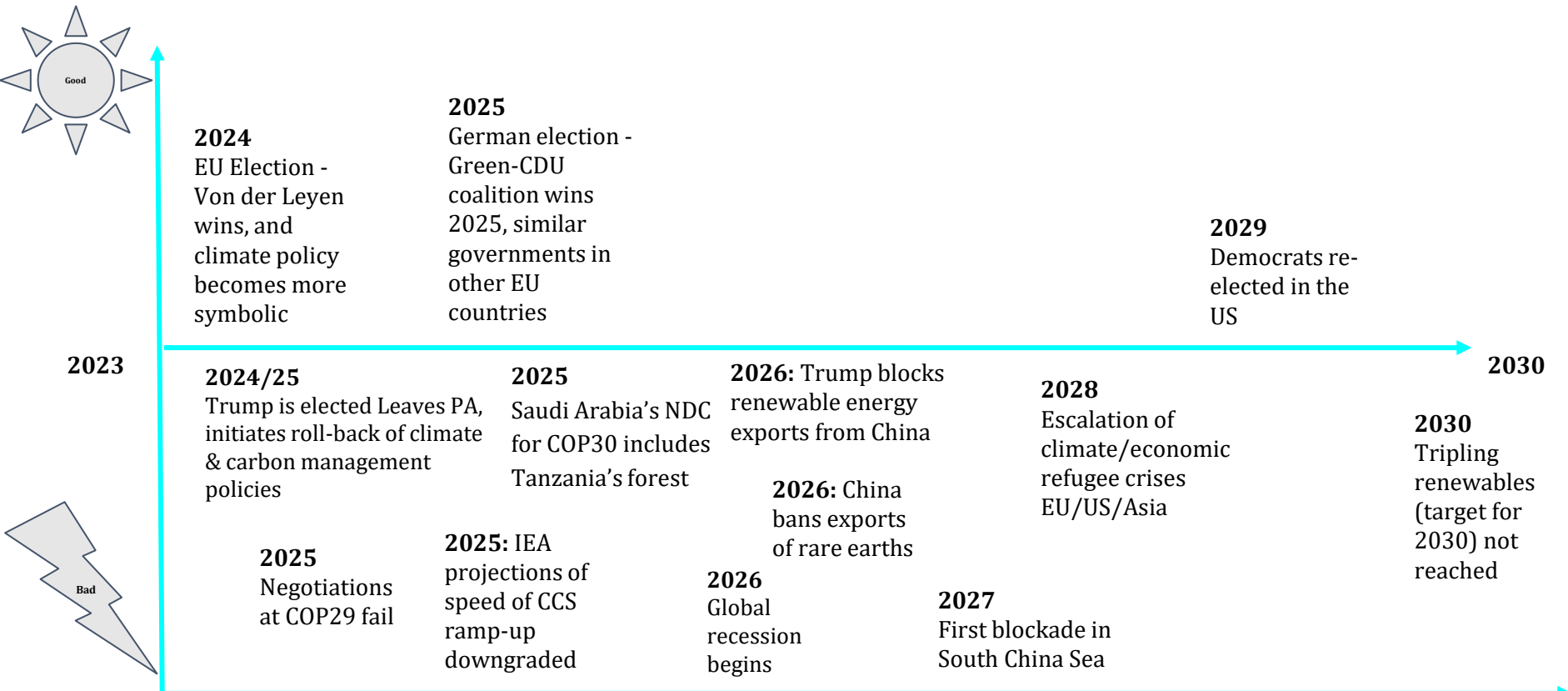
- In breakout groups, flesh out these scenario frameworks
- Create ‘**newspaper headlines**’ for each projection in your scenario framework
- Describe a **coherent descriptive “picture” of the future**, based on the projections in your respective scenario frameworks
- **Backcast** to create **timelines** of key events that lead to each described picture of the future
- Think about **dynamics driving developments**
- Create a corresponding **narrative “history”, or trajectory** that could plausibly lead to each of the futures outlined



Blue scenario

	Description	Projection	Headline in 2030
KU 1	Who's in charge (national political dynamics, electoral dynamics)	Only pro-climate parties (the good guys) rule	<ul style="list-style-type: none"> • Trump's anti-climate legacy in the US makes new Climate-First-Approach of the Democrats difficult • Second greenwave lacks teeth in Germany as economy & investment stagnates • Global polycrisis hamstrings Greens' ambitions
KU 2	Techno-economic advancements (H2, CCS, CDR, renewables)	Stagnation of all climate relevant tech (i.e due to increase in cost)	<ul style="list-style-type: none"> • How green-tech lost it's shine: Slow ramp up has killed H2 hype and expense has made people reluctant to switch to renewables. • CCS is an investment graveyard: Tech-optimism might not save us from climate change after all?
KU3	Non-climate crises (pandemic, economic)	Global, systemic instability, multiple ongoing global crises	<ul style="list-style-type: none"> • Economic progress stalled globally: Planetary polycrisis paralyses global trade
KU 4	Geopolitical rivalries	Dysfunctional rivalries block action and alignments (race to the bottom)	<ul style="list-style-type: none"> • No one thought decoupling would go this way - a slippery slope into de-globalisation? The return of the mercantile state.
KU 5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)	Fragmented, key decisions taken outside PA, claiming & shaming (promissory words with limited action). Thin layer of universal implementation (NDCs)	<ul style="list-style-type: none"> • International climate politics at a stalemate: All hot air and little action. • National leaders try to out-shine each other with promises, but don't follow through. • NDC implementation gap widening by the year. • Paris was supposed to be the beginning, not the end.
KU 6	Availability of public financing for climate, and private sector green investment	Very limited private sector, some public green investment, greenwashing	<ul style="list-style-type: none"> • The price is not right: the private sector turns away from greentech • Government investments derisk greenwashing rather than green transformation
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)	Too little, too late: Emissions still rising, climate impacts deemed very serious globally, perception of climate 'failure' (primarily mitigation failure & adaptation is not perceived as sufficient yet)	<ul style="list-style-type: none"> • Too little, too late: recent survey shows public belief in mitigation at all-time low • No one believes we can achieve PA temperature targets anymore • The race to adapt is on: Now is the time to invest in adapting to the inevitable!

Blue scenario



Core Dynamics **Blue scenario**

What are the core dynamics underlying changes in this scenario? What creates the interconnection between the events in your scenario? Max 3 - 4.

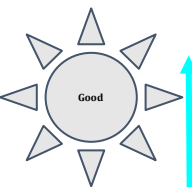
1. Global economic & geopolitical feedback dynamics structure domestic politics, reduce agency of (green) elected leaders in Europe
2. Nationalism surge as reaction to broader geopolitical developments (national developments conditioned by international dynamics)
3. Technology not a key driver of climate policy due to global economic downturn & geopolitical obstruction
4. Breakdown of perception in international ability to meet mitigation targets leads to shift to adaptation

Climate policy futures

- **6. Reporting back and group feedback**
- In plenary, each group presents their coherent descriptive “picture” of the future and the corresponding timeline of events
- Jointly, all participants discussed;
 - *Where were the strategic decision points on the scenario pathway?*
 - *What types of (policy) decisions could (have) be made to address the opportunities and risks presented in the scenario?*



Blue scenario



Whether EU/DEU follow global trend of subordinating climate goals as key decision-point

2024
EU Election - Von der Leyen wins, and climate policy becomes more symbolic

2025
German election - Green-CDU coalition wins 2025, similar governments in other EU countries

The choice of EU reactions vis-à-vis the US sanctions on Chinese green tech as pivotal

2029
Democrats re-elected in the US

2023

2024/25
Trump is elected Leaves PA, initiates roll-back of climate & carbon management policies

2025
Saudi Arabia's NDC for COP30 includes Tanzania's forest

2026: Trump blocks renewable energy exports from China

2028
Escalation of climate/economic refugee crises EU/US/Asia

2030

2030
Tripling renewables (target for 2030) not reached

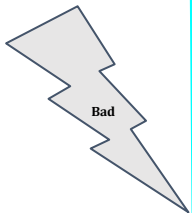
2025
Negotiations at COP29 fail

2025: IEA projections of speed of CCS ramp-up downgraded

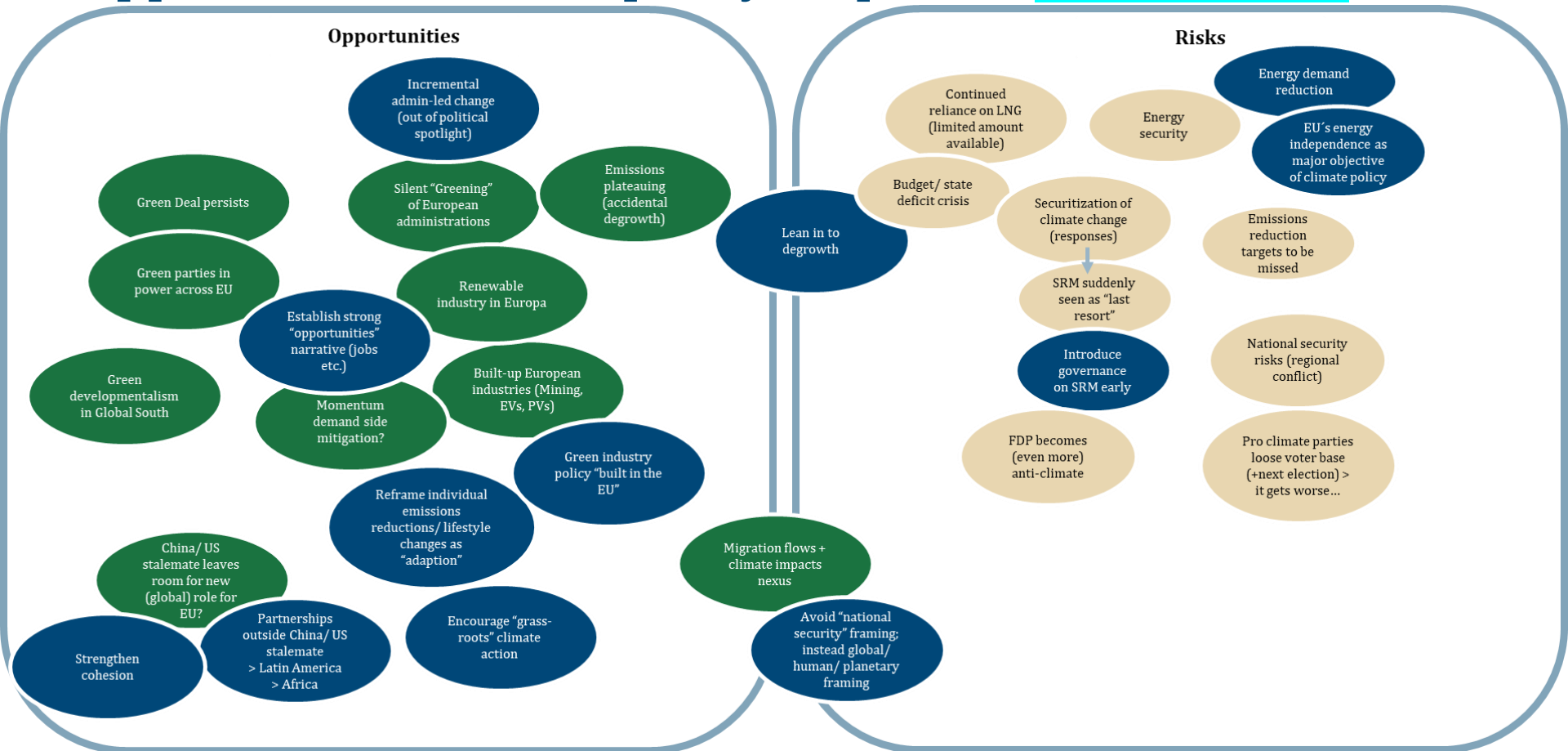
2026: China bans exports of rare earths

2026
Global recession begins

2027
First blockade in South China Sea



Opportunities, risks & policy responses **Blue scenario**



Climate policy futures

- **7. Comparative reflections**
- As a final step, reflect upon and discuss two questions:
 - (1) *What are key context conditions driving (policy) developments across all scenarios?*
 - (2) *What types of policy decisions/actions could help address opportunities and risks presented across (all) the scenarios?*



Key risks across all scenarios

- The outcome of national elections will play a key role for climate policy – a conservative/right shift may make climate policy less of a priority
- After the 2024 elections, the EU Commission and many EU Member States may no longer put the green transformation front and centre
- International climate governance and negotiations fail may to drive global mitigation efforts fast enough



Recommendations which could help address risks in (all) scenarios

- Work out the climate policy role of the EU in the China/US relationship
- Develop EU Green-tech diplomacy
- Emphasise co-benefits narratives of climate policy
- Further develop the adaptation discussion in the EU/globally
- Recognize emerging economies as climate actors



Take-aways

- **Climate policy is a multifaceted field** characterized by the interplay between domestic, regional, and international dynamics.
- **Thinking through the possible future complexities of EU climate policy** requires an approach that considers these interconnections
- **Foresight can help** anticipate of interactions between a range of political, economic, technological, and social factors that will play a role in achieving climate neutrality in Europe



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Foresight: Multilevel Climate Policy in 2030

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Sonja Thielges*

https://www.swp-berlin.org/publications/products/arbeitspapiere/WP_Boettcher_Adolphsen_Geden_Koenneke_Schenuit_Thielges_SWP_Climate_Foresight_2030.pdf

Thank you!

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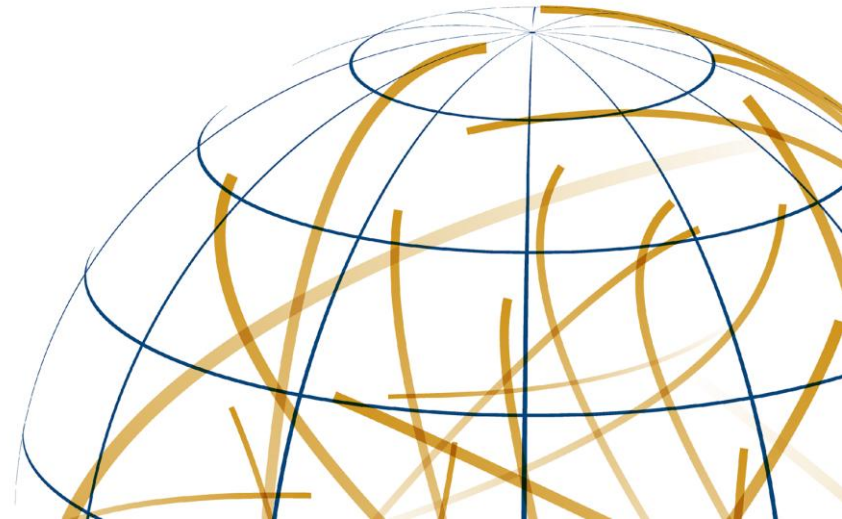
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Bonus slides
(if needed for discussion)

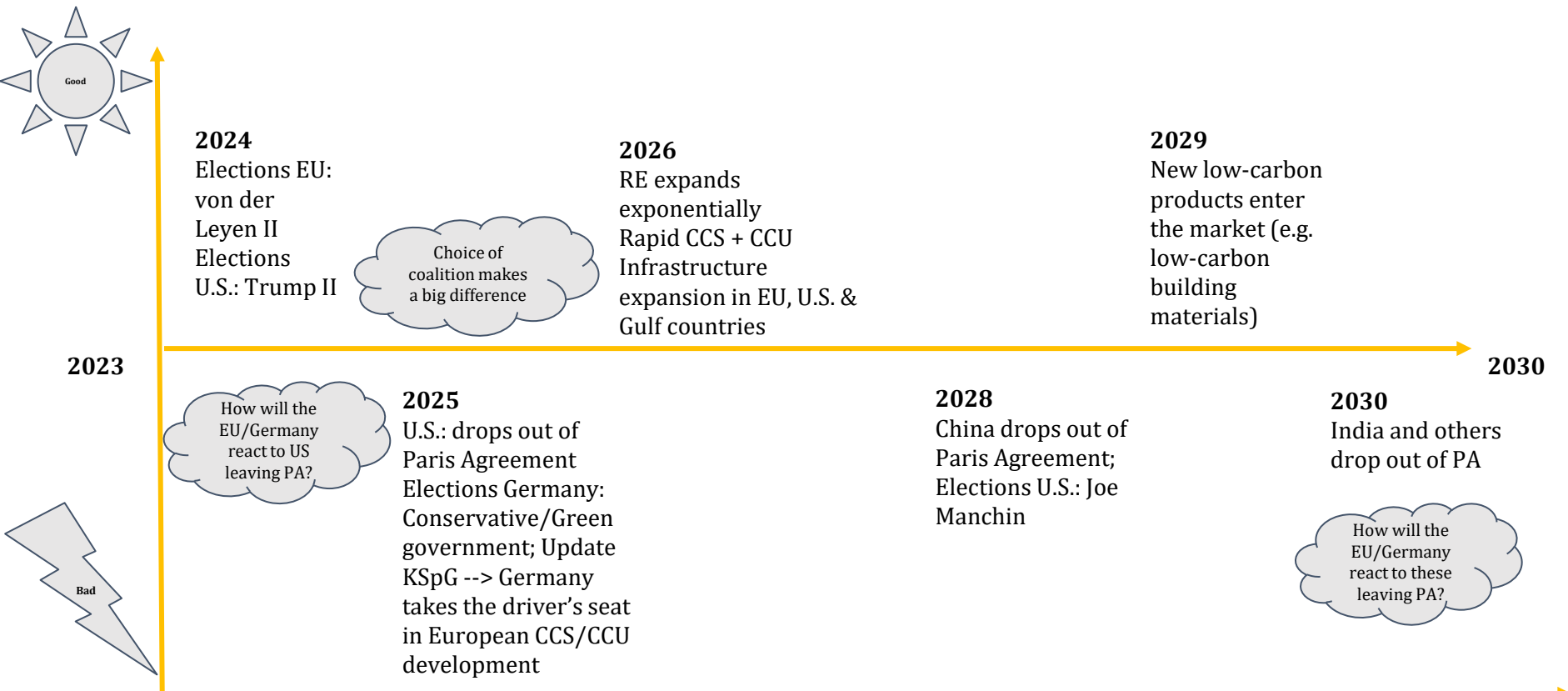
Yellow scenario

	Description	Projection	Headline in 2030
KU 1	Who's in charge (national political dynamics, electoral dynamics)	A colourful mixture of pro and anti climate parties in power, with a slight pro-climate improvement over time.	Three wins, two losses: voters still undecided over climate
KU 2	Techno-economic advancements (H2, CCS, CDR, renewables)	Breakthroughs and rapid upscaling of all climate relevant tech	Green technologies start to dominate markets
KU3	Non-climate crises (pandemic, economic)	Stability, no crises	Where have all the crises gone? 2030 to take off in stable political environment
KU 4	Geopolitical rivalries	Dynamic fragmentation, with some alignment differentiated by policy fields	Despite mixed climate ambitions, countries engage in green tech competition
KU 5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)	PA is considered irrelevant, key (high emitting) countries drop out	Death knell for the Paris Agreement: India announces drop out, follows U.S. and China
KU 6	Availability of public financing for climate, and private sector green investment	Public financing aligned with climate targets, green investment becomes a business model globally	With green infrastructure on the rise, investors more skeptical on future fossil fuel returns
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)	Incrementalism: Some progress, but perceived (by some) as not enough to achieve climate goals/prevent climate impacts (mitigation, adaptation etc.)	2030 climate targets missed despite tech breakthroughs, but revived hope for next decade

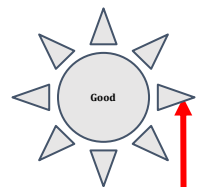
Red scenario

	Description	Projection	Headline in 2030
KU 1	Who's in charge (national political dynamics, electoral dynamics)	Only climate-agnostic parties rule	"Less is more": The new right-wing EU Commission is placing the "rightsizing" of climate policy at the center of its political priorities.
KU 2	Techno-economic advancements (H2, CCS, CDR, renewables)	Incremental but differentiated progress across different techs	Shattered dreams: How green hydrogen and CDR failed during the 'critical decade'
KU3	Non-climate crises (pandemic, economic)	Regional, sporadic, time-bound crises	Prepping for new crises: Why we need multi-dimensional resilience
KU 4	Geopolitical rivalries	Rivalries drive competitive action and alignments (race to the top)	Climate superpowers: China and the US are competing for a green future
KU 5	International climate governance mechanisms (does the PA work as intended and guides national policymaking)	Only carbon market mechanisms implemented, economic optimisation, market-based governance.	The good, the bad, the ugly: market instruments , the new heart of international climate negotiations and national climate policy
KU 6	Availability of public financing for climate, and private sector green investment	No public financing, private only	Green Growth for the win: climate policy relies increasingly on private investments
KU7	Political perception of progress on climate (how far off track are we, emissions trajectories, climate impacts)	Stagnation: no progress, but also no perceived negative climate impacts	Hyperbole around climate change: The planet is going to be fine.

Yellow scenario



Red scenario

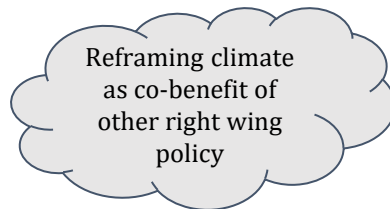


2025
Existing climate policy instruments and negotiations: initially resilient to new political pressure

2027
Some technologies scale (e.g. renewables) have a business case and avoid emissions

2023

2024
Climate downgraded from being a highly ranked problem



2028
A lack of appetite for investment in technologies without a business case and for the development of climate policy (except for those with a strategic advantage, i.e. energy security)

2030

2030
Climate agnostics rule the world...look how expensive energy transition was - and the climate is still getting worse

Core Dynamics **Yellow scenario**

What are the core dynamics underlying changes in this scenario? What creates the interconnection between the events in your scenario? Max 3 - 4.

1. Overall favourable political environment for climate tech innovation but most G20 governments shy away from overly regulating emissions
2. Widespread adoption of capital-intensive green technologies (low-emissions H₂; CCU; CCS; CDR, batteries) starts in G20, while existing ones continue to expand (RE, EVs) at increased speed, which in turn unlocks more green tech finance
3. PA loses perceived power and legitimacy with another U.S. drop out – this time followed by China and India. There is no momentum for creating a “Post-Paris” mitigation regime in context of UNFCCC, where attention is shifting towards adaptation and loss & damage.
4. Green technologies experience massive upscaling but fossil fuel infrastructure continues to exist, fossil fuel prices decrease, making phaseout more challenging

Core Dynamics **Red scenario**

What are the core dynamics underlying changes in this scenario? What creates the interconnection between the events in your scenario? Max 3 - 4.

1. The shift to the right at EU level and in European member states is leading to a deprioritisation of climate policy.
2. However, as current governments have done a very good job of translating the EGD into solid legislation, accompanied by functioning social compensation systems, existing climate instruments are largely resilient to the new pressure from the right for the time being.
3. State intervention in the market economy is rejected
4. No new instruments developed - no majorities for ambitious climate policy in (the next) critical decade between 2030-2040 beyond carbon markets