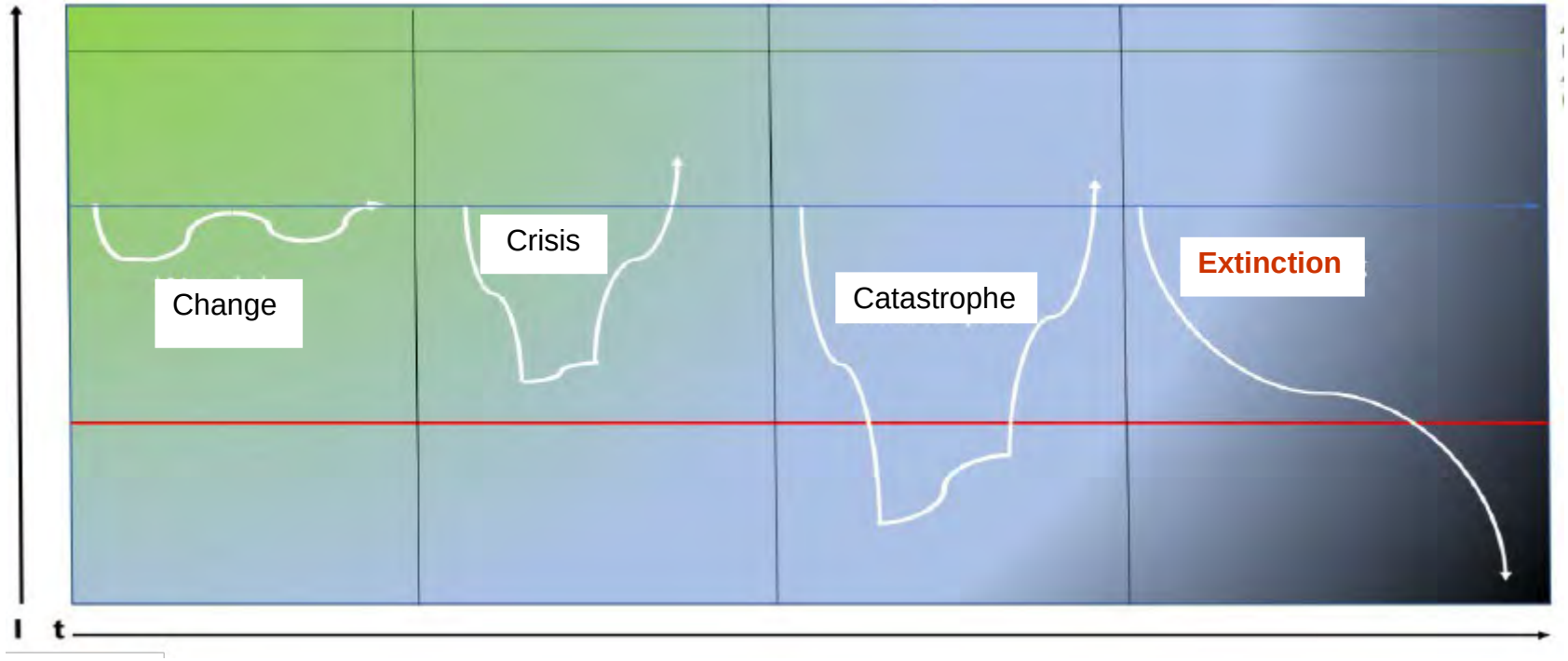
Climate change, crisis, catastrophe, or even worse

Assess what's at stake:



Good iving conditions for most (= target)

Good living conditions for the wealthy (= as today)

Mere subsistence, below great sufferings and loss of lives (= immenent now)

l = Quality of live, t = time durations

Change => can happen, it is easy to adapt and fine (e.g. mobility – from riding horses to driving cars)

Crisis => are to be overcome or resolved, soon all is in best order again (e.g. Financial crisis 2008)

Catastrophe => as of the day after recovery begins, gradually overcome (e.g. World War II)

Extinction => beyond a certain point it is getting worse without a chance to slow down, for a long time nothing will be in order again (e.g. Climate, Loss of Species issue insufficiently abated now)

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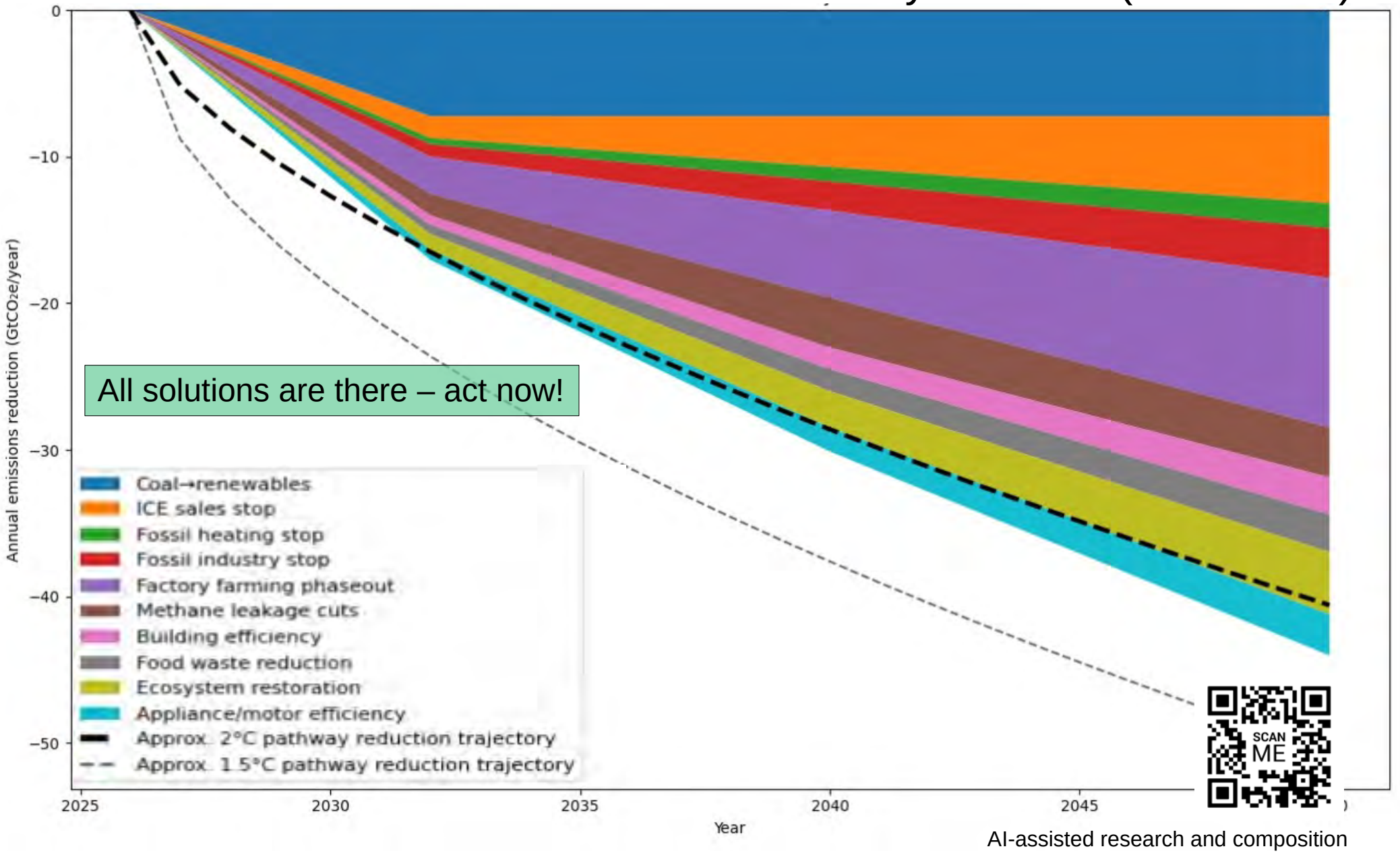
All solutions are there – act now!

Just a general illustration here

Estimated annual GHG emission reduction by measure (2026-2050)



AI-assisted research and composition

Estimated annual GHG emission reduction by measure (2026-2050)

Procedure:

All measures chosen/designed with these conditions & objectives:
- easy and really actionable in principal
- effectful for GHG emission reduction at scale globally
- potentially ready to start off right away
- hardly public disruption – except Factory farming phaseout!

Note: thanks to giant, ongoing progresses all this would pay off economically soon too. As Renewables and related products, as e.g. EVs, heat pumps, are just CHEAPER than the fossil counterparts!

Trajectories for +2, +1,5 C based on the IPCC AR6 report, considering some recent findings are worse than that; likewise potential measure overlappings.
Important: all stipulating a zero-growth GNP model on average worldwide!
Note: figures would look **devastingly** different with real GNP developments in recent years (around ca. +3,1% p.a.).

As common all figures given as median values of the actual probability ranges.

= SwitchCoal initiative implemented 1:1 as suggested
= right away stop of sales of new Internal combustion engine cars and lorries
= immediate stop of installations of new gas or oil heatings
= likewise stop of building new industrial facilities fired with fossil fuels
= end of factory farming and corresponding intensive farming
= Immediate global methane leakage elimination standard
= Mandatory deep efficiency standard for all new buildings and major renovations
= Halve global food waste (not more as hard to achieve)
= Stop deforestation, initiate large-scale ecosystem restoratior
= Massive efficiency standard for appliances, motors, lighting, electronics and industrial drives

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Key findings:

- **+2 C goal still in reach**
  Note: may be our last line of defense – there is no actionable, let alone gentle adaption to +3 C at scale globally

- SwitchCoal initiative unique means for short term GHG emission cut

- Main effect of most other measures: end continuation of fossil structures

- Largest potential: special stop of Factory farming - needed to avert loss of species too!
  could start off directly in theory, yet actually new way of live, so takes time

- Measures could kick in directly, but due to life cycles or implementation times full effects take long

- More speed-ups hard: would require early decommissionings, face resource limits

- Some further measures possible, but less fitting to the procedure or simply minor

- Standard global GNP growth, ca. +3,1% p.a., would close this barely still open door forever
  Note: this applies on average, so in particular for the poorest countries there is still some space to grow

Note: except Factory farming the **outstanding quality** of the measures is they come along with hardly public disruption and do not demand early decommissionings;
so e.g. people could continue to use their ICEs as long as they like, just not buy any new ones

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Estimated annual GHG emission reduction by measure (2026-2050)

Detail assessment:

Simplicity / cost / public disruption comparison

No. of stars (* to *****) indicates quality; so the more the better

Measure	Reduction by 2050 ($GtCO_2e/yr$)	Simple	Cheap	Public disruption
Coal→renewables	8.5	★★★★	★★★★	★★★★★
ICE sales stop	7	★★★	★★★	★★★
Fossil heating stop	2	★★★★	★★★	★★★
Fossil industry stop	4	★★★	★★★	★★★★
Factory farming phaseout	12	★	★	★
Methane leakage cuts	4	★★★★★	★★★★★	★★★★★
Building efficiency	3	★★★★	★★★★	★★★★★
Food waste reduction	3	★★★	★★★★	★★★★★
Ecosystem restoration	5	★★	★★★	★★★★
Appliance/motor efficiency	3.3	★★★★★	★★★★★	★★★★★

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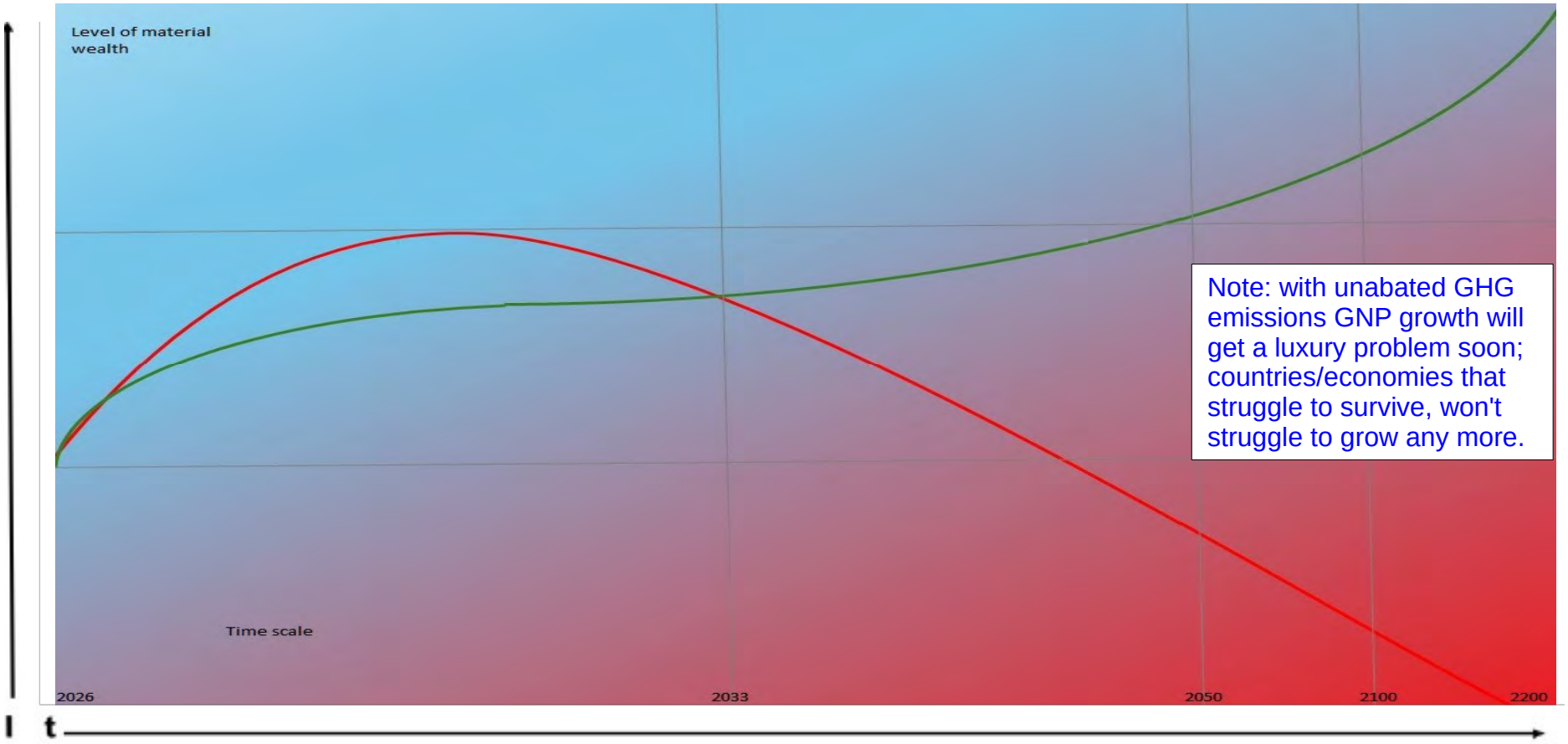
Potential trajectories of material wealth

Out of control?



Green line = growth stand still agreement until GHG emissions are sufficiently down, then growth can proceed agair
Red line = continuing 'business-as-usual' until that breaks down adamantly (when global warming gets out of humar control a permanent disaster is likely, up to entire countries/regions that won't be inhabitable any more)

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Just a general illustration here

SwitchCoal in a nutshell

SwitchCoal

Globally replace Coal Plants 1:1 by Solar-Wind-Battery nearby

Reusing network connection saves years of implementation

Blends in exactly in existing distribution & demand structures

Pays off for 90% of all plants, with $6 trillion extra profits as Renewables are cheaper

Feasible within **just 7 years**

Outstanding cost/performance ratio

Litmus test for serious climate action

Once done saves up to **10 Gt GHG emissions p.a.**!

Collaborate, not compete – plant owners can stay in business

1st step, full project planning, will cost merely $1,3 billion

A unique solution – act now!

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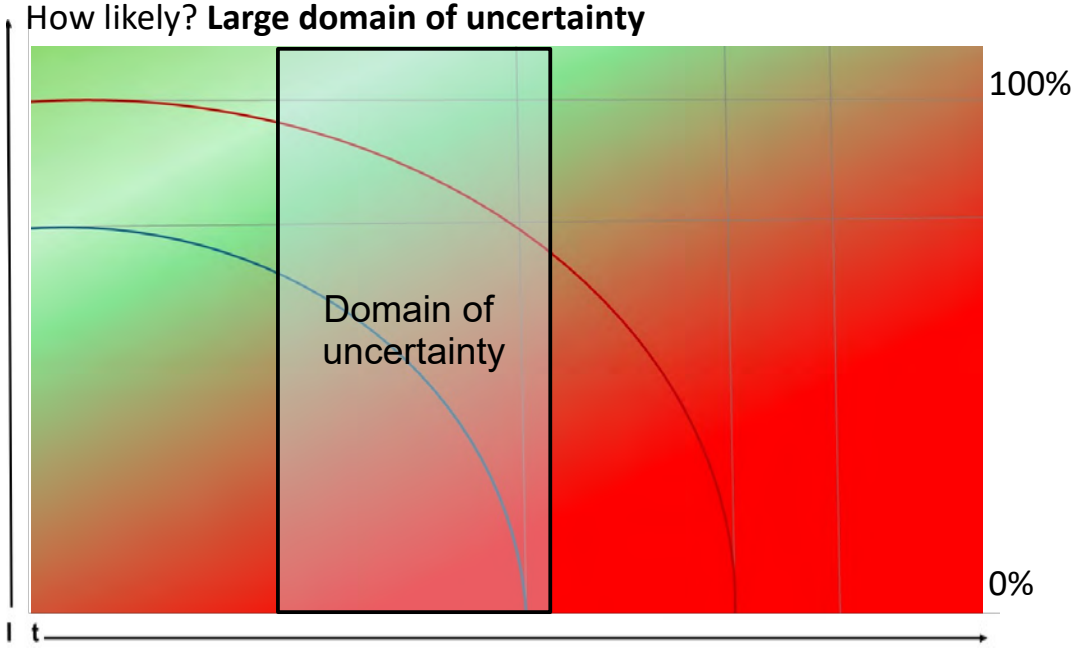
www.switchcoal.org

Final warning and outlook

Too late is too late:

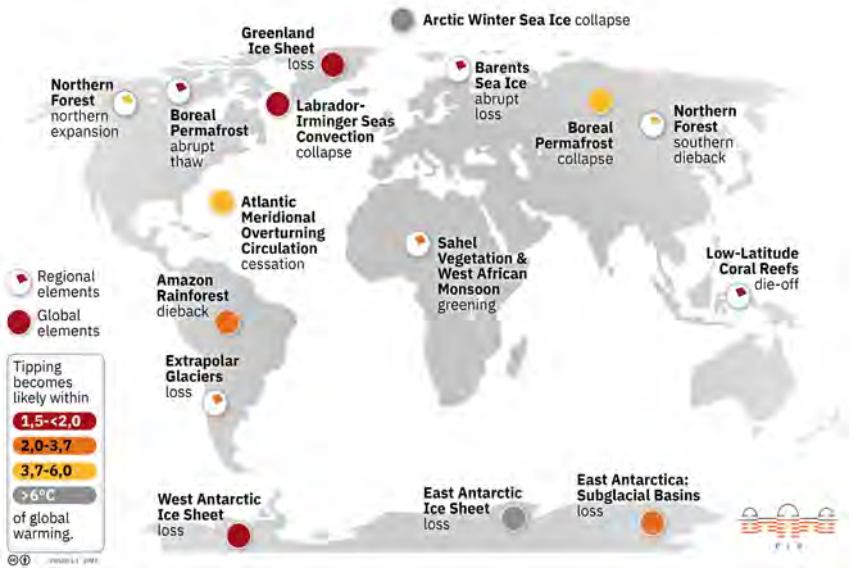
Where are we now? Can we still make it?

How likely? **Large domain of uncertainty**



Climate science seems to be **wrong at the wrong end** according to latest findings.

Tipping points are just one major uncertainty factor



I = likelihood to avert worst consequences of the climate issue, t = length of time

Blue line = 10 measures, largely with hardly public disruption (as presented)

Red line = Maximal emergency measures, everthing applied that is possible theoretically

(note: yet that will never work politically)

All solutions are there – act now!

There is no global adaption to +3 C!

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Just general visualization