2021

HAMBURG CLIMATE FUTURES OUTLOOK

**Assessing the plausibility of
deep decarbonization by 2050**

The *Hamburg Climate Futures Outlook* and other assessments of climate futures (1/2)

The first *Hamburg Climate Futures Outlook* evaluates the plausibility of achieving deep decarbonization by 2050, which is considered necessary to limit the average global surface warming to 1.5°C above pre-industrial levels and meet one of the core objectives of the Paris Agreement. The *Outlook* is by no means the first initiative to assess pathways that might lead to such a future. It joins reports such as the *IPCC Special Report on Global Warming of 1.5°C* (SR1.5), the *UNEP Emissions Gap Report* and reports from Climate Action Tracker and The World in 2050 initiatives. Why then, do we need another assessment of climate futures?

There are three critical aspects of the *Hamburg Climate Futures Outlook* that make its contribution to the existing reporting landscape unique.

1. Assessment of social drivers
Existing reports assess what is practically and technically required to achieve net carbon zero—such as coal phase-out and decarbonization of transport and industry (e.g., the SR1.5 and *UNEP Emissions Gap Report*)—but not the social drivers that would motivate and legitimate such a change. Existing reports acknowledge the importance of social drivers: The *UNEP Emissions Gap Report* for example describes *drivers of ambition* such as political motivation or social consumption preferences, while the SR1.5 acknowledges that the success of the transition is related to actor interactions and social values

(de Coninck et al., 2018: 383). However, the analysis of social drivers remains largely descriptive rather than evaluative. The *Outlook* seeks to fill this gap by performing a systematic assessment of social drivers that might motivate a transition to deep decarbonization, including their existing trajectory and potential future evolution.

The focus on social drivers also allows the *Outlook* to distinguish political intentions from deeper motivating dynamics. Whereas the Climate Action Tracker (New Climate Institute and Climate Analytics, 2019) assesses the policy intentions of nation states, the *Outlook* investigates the trajectories and dynamics of social drivers that may motivate political action in the first place. These drivers include for instance, climate protests and social movements, consumption patterns, and corporate responses (see Chapter 5).

2. Analytical not normative
Futures researchers often ask not only which futures are plausible, but which are desirable. In doing so they take a deliberate normative stance, which recognizes that the likelihood of a particular future is strongly influenced by societal motives or intentions to move toward that future (Robinson, 2003). For example, the reports of The World in 2050 initiative propose an aspirational narrative for achieving the Sustainable Development Goals (SDGs), including deep decarbonization by 2050 (TWI - The World in 2050, 2018). The research focus of The World in ▶

The *Hamburg Climate Futures Outlook* and other assessments of climate futures (2/2)

2050 therefore becomes how such a future can be achieved, leading to the proposal of cross-cutting transformations in the areas of human capacity and demography, consumption and production, decarbonization and energy, food, biosphere and water, smart cities, and the digital revolution.

Although the *Outlook* also recognizes the power of societal motives and intentions, its emphasis is placed on analyzing the present available evidence of relevant social dynamics. The *Outlook* is therefore not concerned with shaping the future, but with analyzing its plausibility based on the present.

3. Social plausibility rather than feasibility

Some existing reports explore aspects of climate futures using the concept of *feasibility*. The SR1.5, for example, analyzes the feasibility of mitigation and adaptation options based on potential barriers in six different dimensions. Although the *Hamburg Climate Futures Outlook* also considers feasibility in relation to carbon-dioxide removal methods (see Chapter 3), its goal is to assess plausibility. *Feasibility* is primarily concerned with the potential for barriers to a particular pathway, or the absence of such barriers (Allen et al., 2018). Some of the societal indicators used to assess feasibility of mitigation options in SR1.5 include absence of barriers in the areas of political acceptability, public acceptance, and institutional capacities (de Coninck et al., 2018). However, *plausibility* is concerned not only with barriers but with all the factors that influence how likely a pathway may be, so that a feasible pathway need not necessarily be plausible. As the discussion in Chapter 4 and the analysis in Chapters 5 and 8 show, making deep decarbonization by 2050 socially plausible requires more than public acceptance, it requires a strong political and societal will to move toward deep decarbonization and indeed to overcome the barriers that reduce the feasibility of such a socioeconomic transformation.