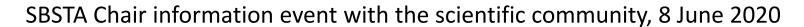
COVID-19 Implications for Scenarios and Modelling and Considerations Moving Forward:

Perspectives from the Integrated Assessment Modelling Community

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Keywan Riahi – IIASA (International Institute for Applied Systems Analysis)
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COVID-19 and transition modelling

Steffen et al. (2020) Navigating the Clean Energy Transition in the COVID-19 Crisis, Joule, https://doi.org/10.1016/j.joule.2020.04.011.

Short-term horizon (months)

Immediate crisis response

Mid-term horizon (years)
Economic recovery

Long-term horizon (decades)

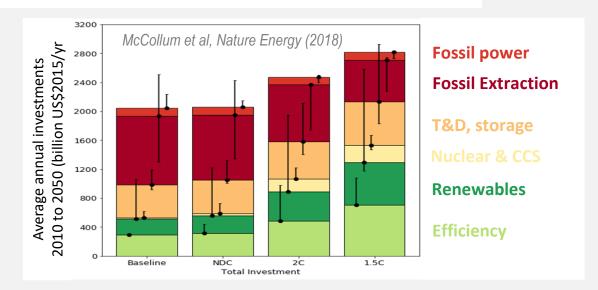
Making the energy transition shock proof

- Safeguard established and new energy transition policy frameworks, temporal waivers instead of structural change
- Do not expect "quick wins" from initial relief packages, but focus on creating future policy space, e.g. in bail-outs
- 3. Prepare comprehensive policies for the mid-term horizon, contingency planning

- Seize opportunity of low interest rates for deploying capital-intense renewables and energy efficiency solutions
- Actively address challenge of low oil prices for emerging alternative fuel technologies like electric vehicles
- 3. Use energy transition frameworks as roadmap for *green stimulus packages*

- In longer term, enact adaptive policies that mitigate the risks of low effectiveness or dismantling in case of shocks
- Use hybrid instruments like taxes with environmental integrity mechanism, or cap-and-trade systems with price collar
- Consider policy designs with automatic relief for those most affected by crisis

Recovery packages and catch-up effects will deliver investment boost (>8 trillion \$): Rebound or acceleration of zero emissions transition?



Long-term impacts of COVID-19 and recovery measures

Structural Change of Economy

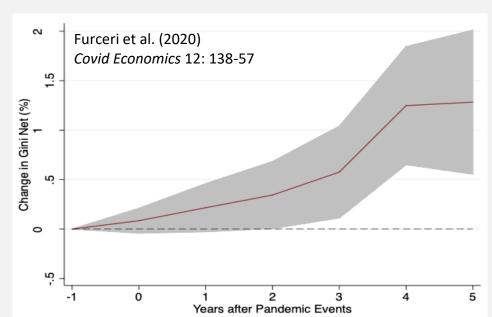
- Long-term growth impact
- Uneven impact on economic sectors accelerating structural change
- Changes to the workplace
- Impact on trade, energy markets, and supply chains

Changing Demand and Lifestyles

- Accelerated digitalisation and impact on lifestyles
- Changes to energy demand, in particular for mobility services

Societal Changes

Likely increase in inequality



IAM research on impacts of COVID-19 recovery measures And climate policy response on zero carbon transition



- Combined impact of climate policy and COVID recovery packages on economic growth and structural change: Challenges and opportunities
- COVID impact on energy demand and lifestyles and opportunities for accelerating the transition to low carbon lifestyles
- Implications of rise in inequality for climate policy responses: Tackling climate change and inequality together.



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- Impact of COVID-19 on feasibility of transition pathways
- Survey of policy makers on the potential impacts of the COVID-19 crisis on climate policy in different countries



themasites.pbl.nl/commit



- New climate policy entry points and challenges to existing entry points in a post-COVID environment
- In the medium term: Coordinated update of emission scenarios to reflect the shortand longer-term impact of COVID-19



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