

## Limiting global warming to 1.5°C: Why and how?

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The recent IPCC Special Report on 1.5°C global warming (IPCC SR15) has assessed differences in impacts associated with a global warming of 1.5°C vs 2°C (IPCC, 2018; Hoegh-Guldberg et al., in press). This presentation will provide an overview of the main IPCC SR15 conclusions as well as of the underlying evidence on this question (e.g. Seneviratne et al. 2016, 2018a; Wartenburger et al. 2017). Projections show substantial differences in extremes at 1.5°C vs 2°C global warming, as well as associated irreversible impacts when global warming reaches 2°C or higher. This highlights the importance of stabilizing global warming to 1.5°C, and thus **why** this should be a focus of current policy, consistent with the 2015 Paris Agreement.

The IPCC SR15 report also shows main emissions and development pathways on **how** to achieve the goal of limiting global warming to 1.5°C and associated impacts (IPCC, 2018). Changes in land processes and land use play an important role in these projections, both through land-atmosphere feedbacks as well as through changes in land forcing, for instance associated with re-/afforestation, the expansion of biofuels, and/or agricultural management (Vogel et al. 2017, Hirsch et al. 2018, Seneviratne et al. 2018b). Some of these aspects and associated open questions will be highlighted, focusing on conclusions from the recent European Research Council “DROUGHT-HEAT” project.

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