

Theme 2: Science to take stock and assess progress on mitigation

Carbon budgets, historic baselines, and agricultural contribution to climate mitigation

Thorsten Kiefer, Future Earth

1) While carbon dioxide emissions are almost flat since 3 years despite large economic growth in parts of the globe, atmospheric methane concentrations are rising faster than at any time in the past two decades.

2) Human-induced climate warming commenced in many parts of the world as early as the 1830s, responding rapidly to even the small increases in atmospheric greenhouse gas levels during the early parts of the Industrial Revolution and suggesting a baseline for human-driven climate change before that warming onset.

3) To achieve the 2 degree target, agriculture must reduce emissions of nitrous oxide and methane by 1 Gt by 2030, requiring the rapid development of more transformative technical and policy options.