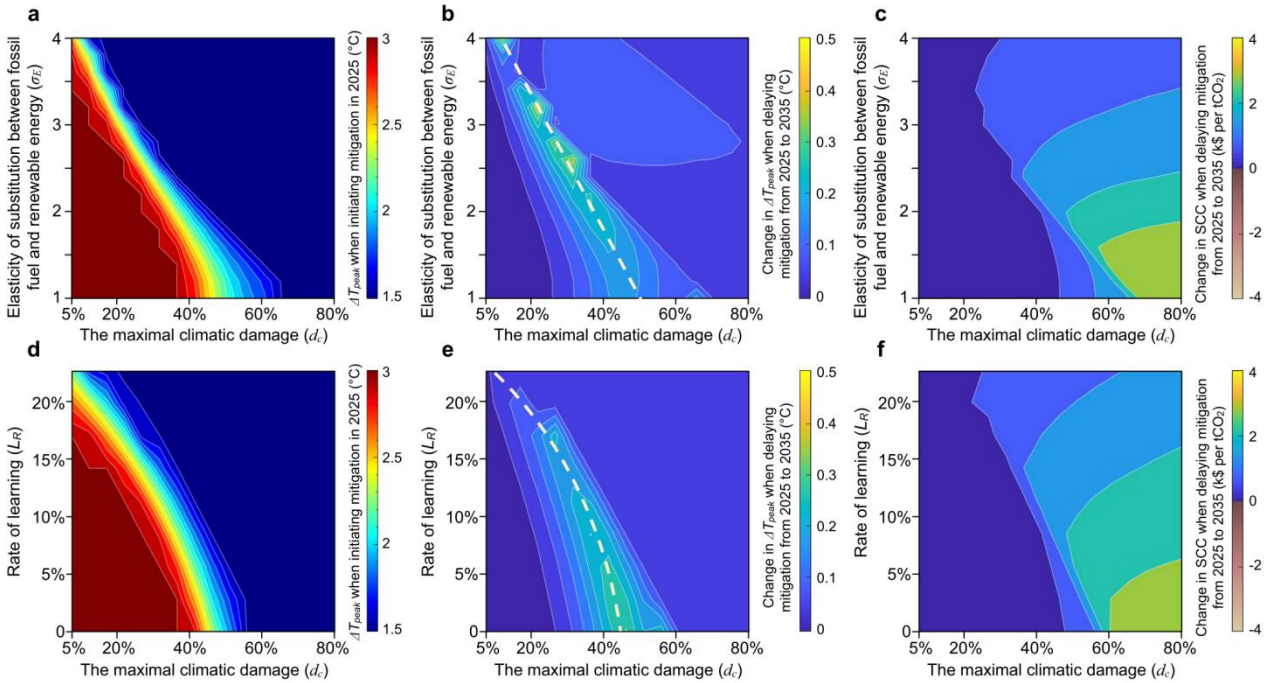

Supplementary Fig. S4. Responses in the projected peak warming by 2100 and the social cost of carbon (SCC) to early mitigation. (**a**) Prediction of peak warming by 2100 in scenarios of initiating mitigation in 2025 when varying the elasticity of substitution between fossil fuel and renewable energy (σ_E) and the climatic damages caused by catastrophic tipping points (d_c) simultaneously. (**b, c**) Responses in the projected peak warming by 2100 (**b**) and SCC estimated for the year initiating mitigation (**c**) to a delay in the year of initiating mitigation from 2025 to 2035 when varying σ_E and d_c simultaneously. (**d**) Prediction of peak warming by 2100 in the scenario of initiating mitigation in 2025 when varying the rate of learning (L_R) and d_c simultaneously. (**e, f**) Responses in the projected peak warming by 2100 (**e**) and SCC estimated for the year initiating mitigation (**f**) to a delay in the year of initiating mitigation from 2025 to 2035 when varying L_R and d_c simultaneously. Adopting a higher σ_E leads to a lower cost of replacing fossil fuel with renewable energy, while adopting a higher L_R leads to a faster reduction in the prices of renewable energy due to technological advances. The impact of varying σ_E, L_R, and d_c is examined while keeping other parameters unchanged (L_R=10%, τ_L=400 years, τ_R=10 years, T_{50}=2 °C, d_c=50%, σ_Y=0.5, σ_E=2, k_p=1% y^{-1}, B_S=0, and k_u=1% y^{-1}). SCC is estimated under a PRTP of 0.5% in the optimal path for welfare maximization.