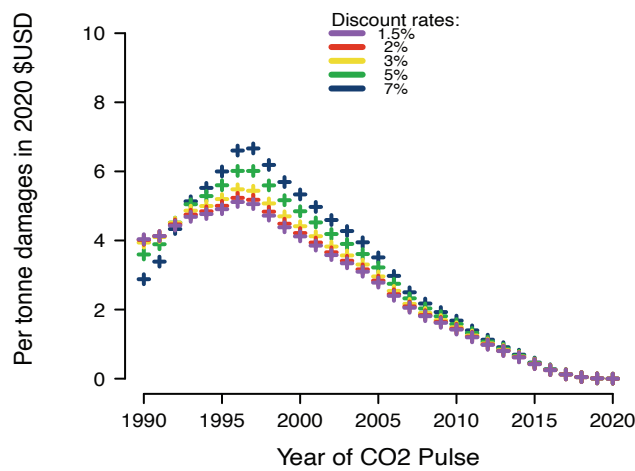
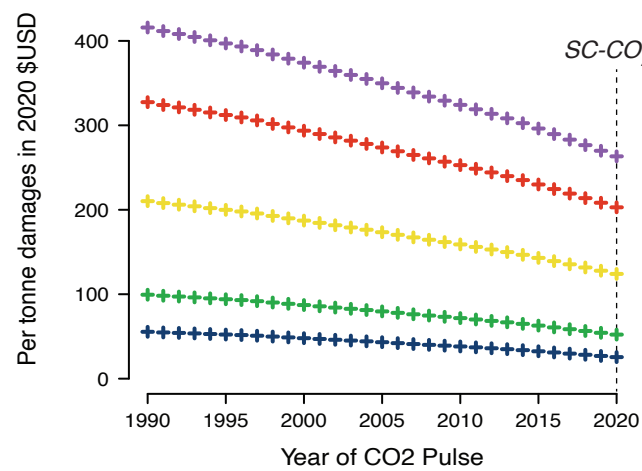


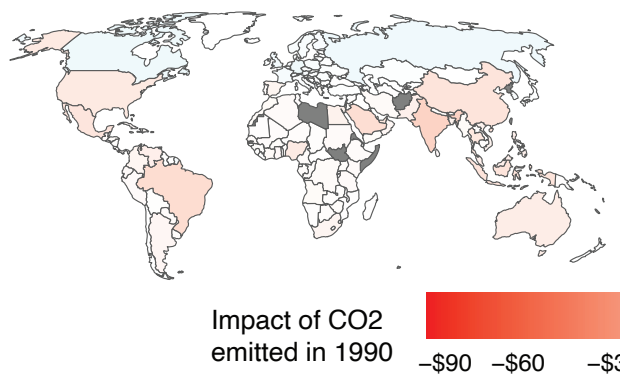
**a** Cumulative damage through 2020 ( $HD-CO_2$ )



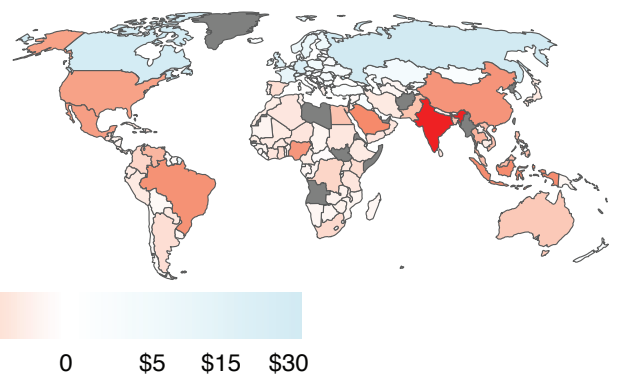
**b** Cumulative damage 2021-2100 ( $FD-CO_2$ )



**c** Impacts through 2020 of 1t pulse in 1990



**d** Impacts 2021-2100 of 1t pulse in 1990



**e**  $SC-CO_2$  estimates under different analytic scenarios

