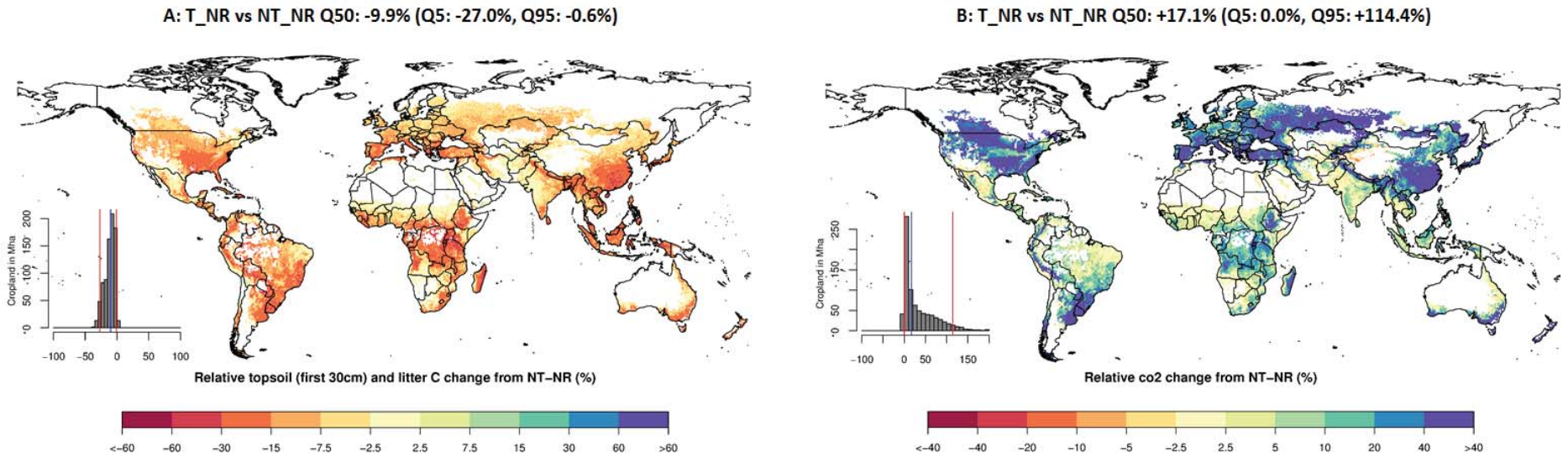
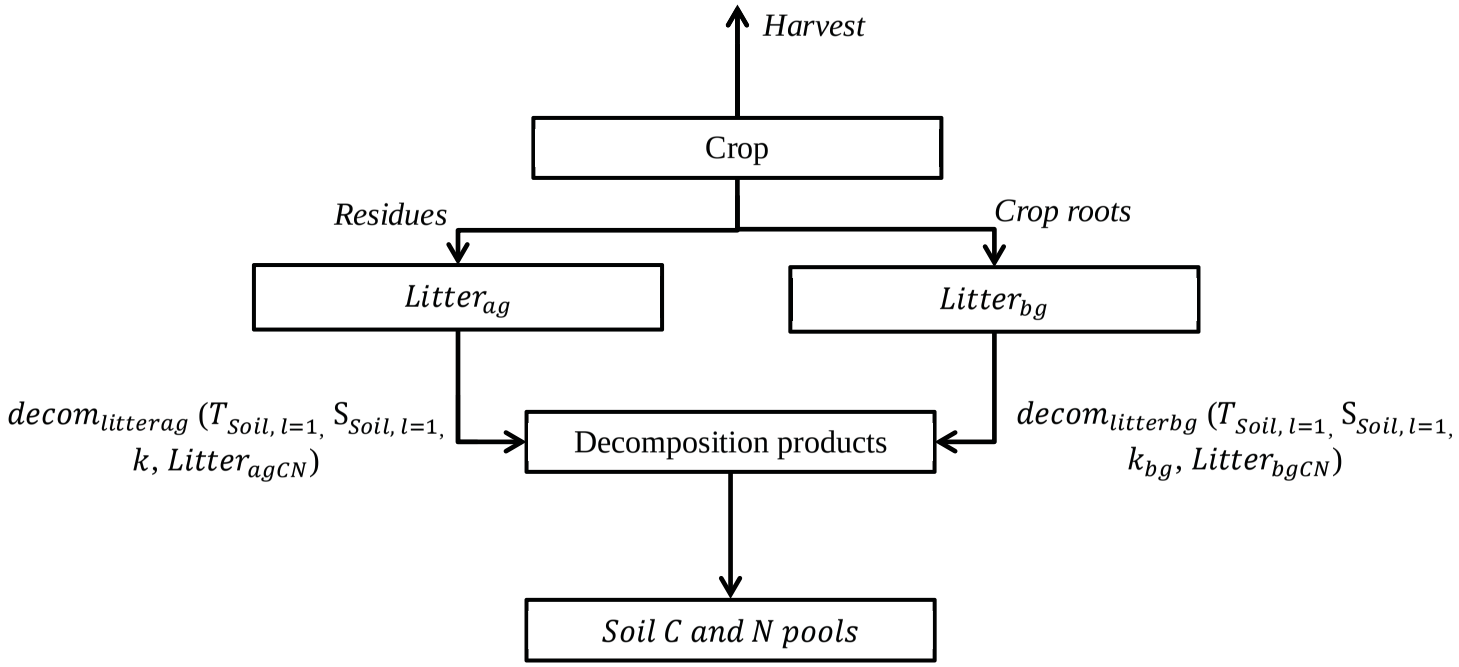
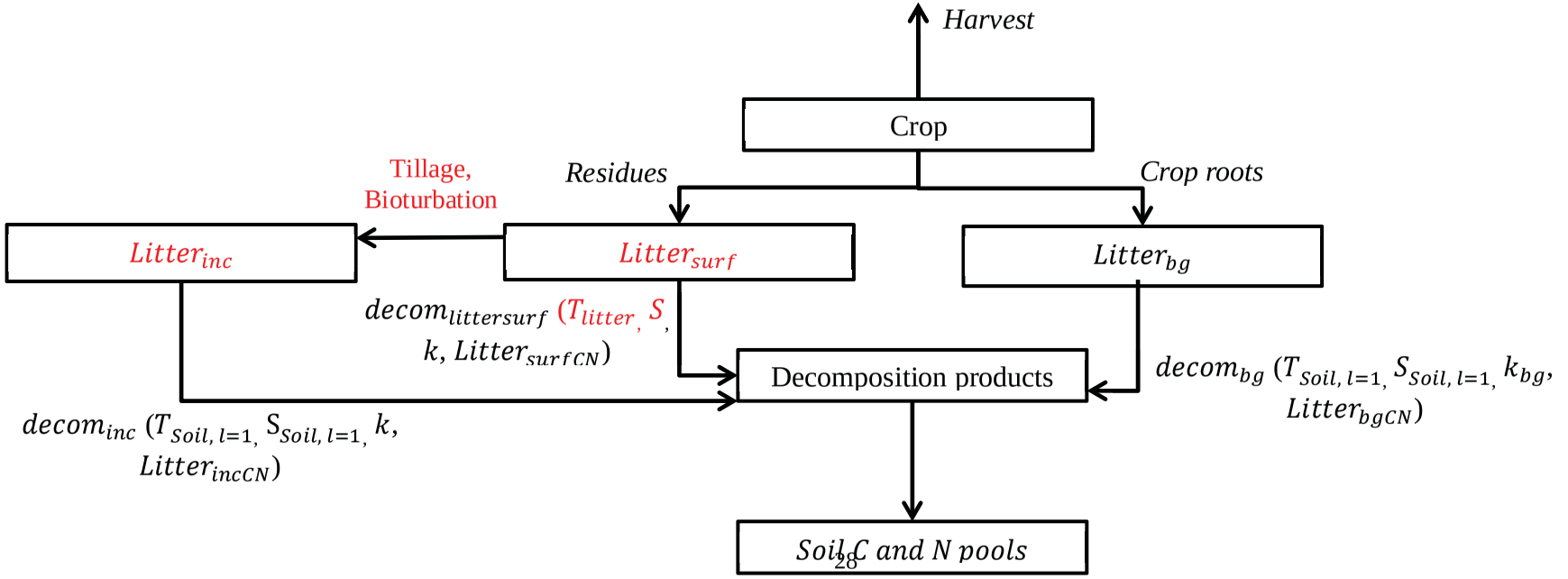


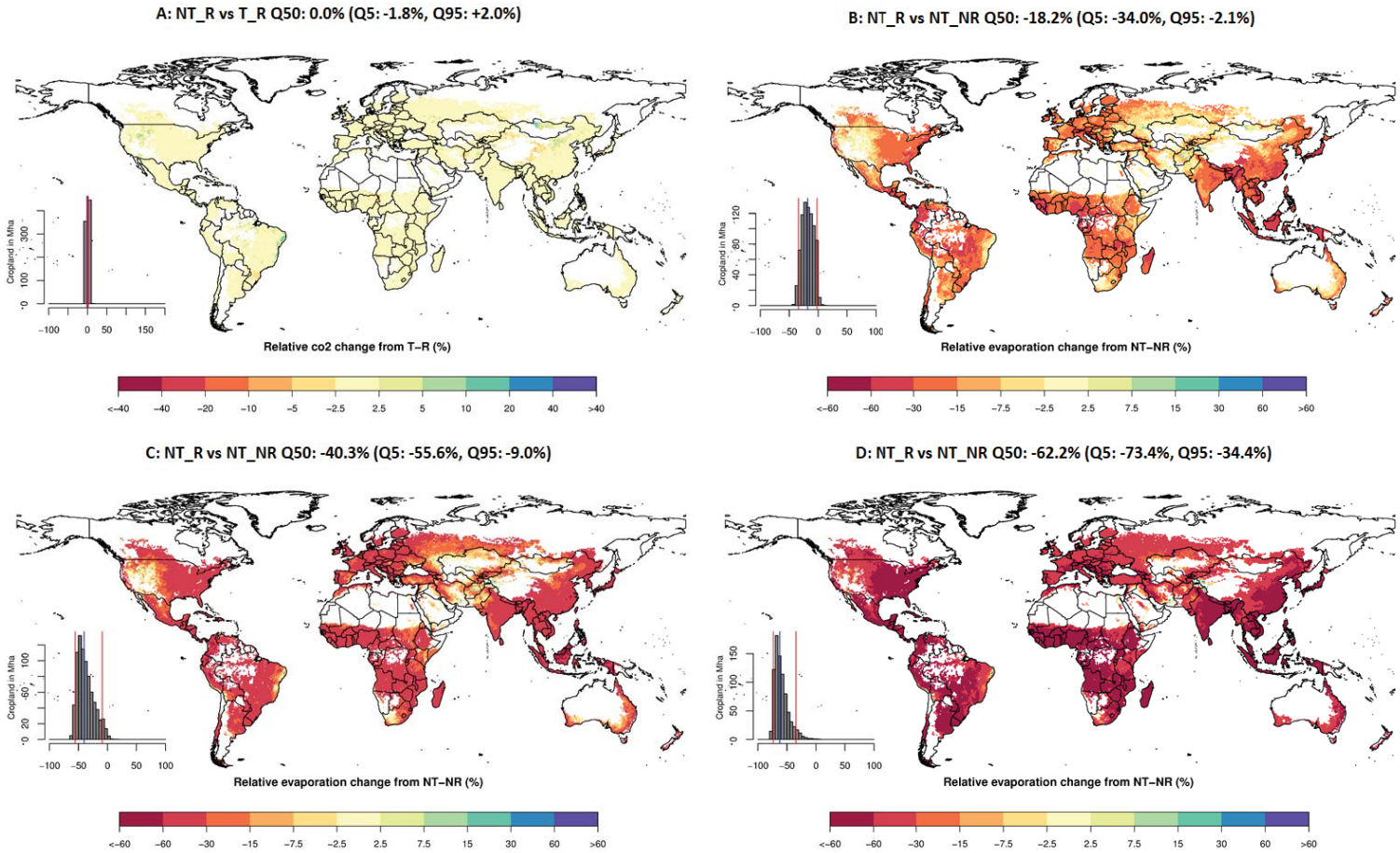
Appendix – Fig. 4: Relative topsoil and litter carbon change for T_NR vs. NT_NR after ten years of experiment duration (A), Relative CO_2 change for T_NR vs. NT_NR after ten years of experiment duration (B).



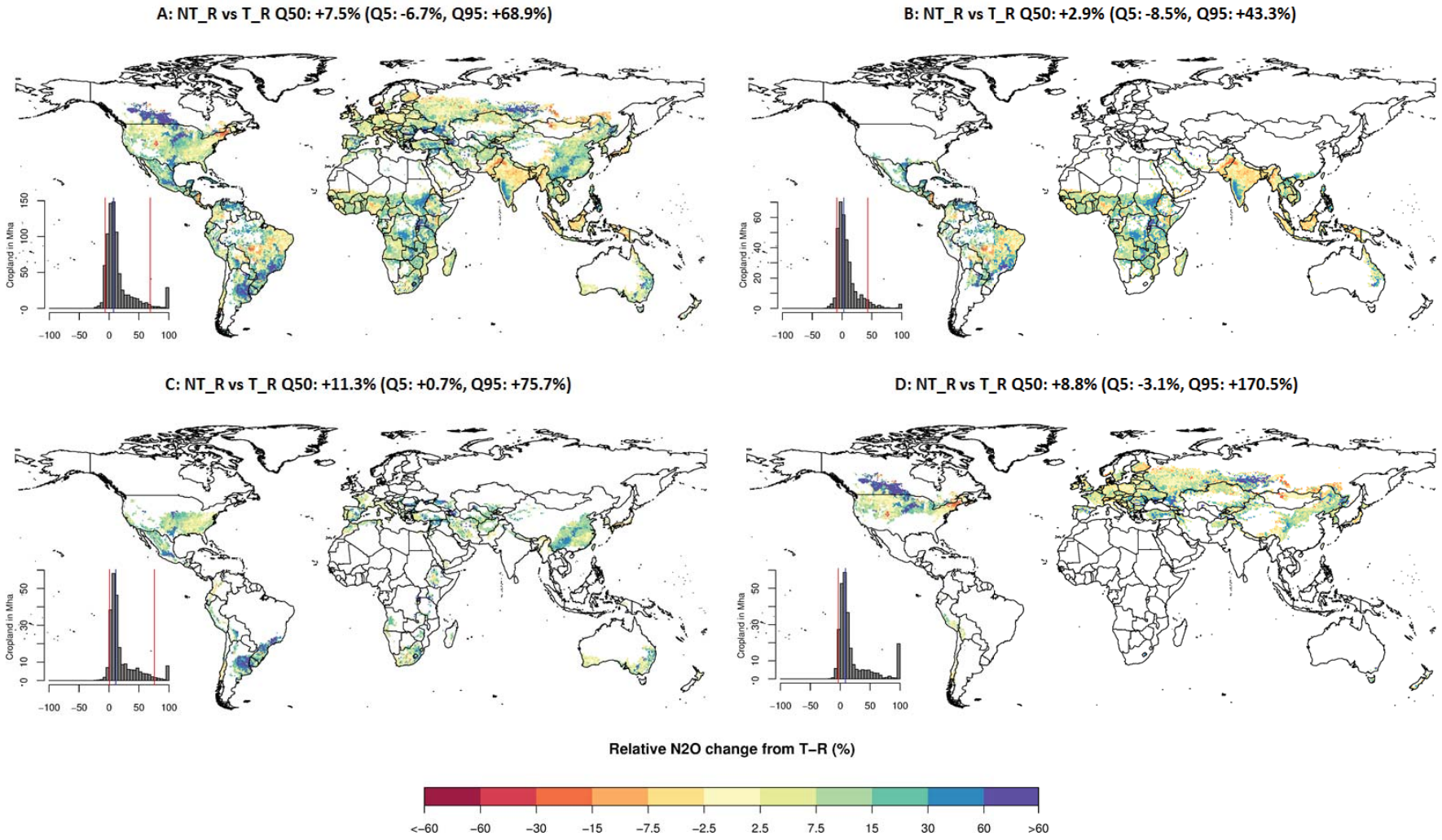
Appendix – Fig. 5(A): Overview of residue pools with corresponding decomposition variables.



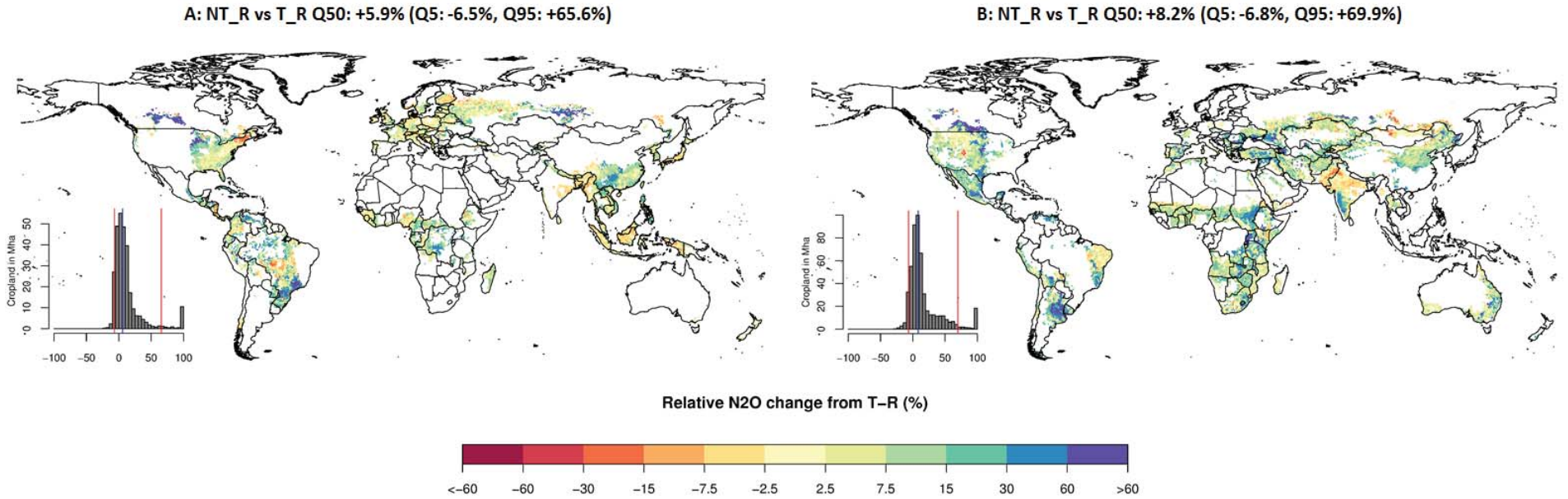
Appendix – Fig. 5(B): Overview of residue pools and the new pool for incorporated residues with corresponding decomposition variables.



Appendix – Fig. 6: Relative CO_2 emission change for NT_R vs. T_R from bare soil experiment for the first three years with C m^{-2} yr^{-1} fixed residue amount input (A), relative soil evaporation change for NT-R vs. NT-NR from the bare soil experiment for the first three years with 75g C m^{-2} yr^{-1} fixed residue amount input (B), relative soil evaporation change for NT_R vs. NT_NR from bare soil experiment for the first three years with 150g C m^{-2} yr^{-1} fixed residue amount input (C), Relative soil evaporation change for NT_R vs. NT_NR from bare soil experiment for the first three years with 300g C m^{-2} yr^{-1}fixed residue amount input (D).



Appendix – Fig. 7: Relative changes in N_2O emissions compared to T_R (A), Relative changes in N_2O emissions compared to T_R in tropical regions (B), Relative changes in N_2O emissions compared to T_R in the warm temperate regions (C), Relative changes in N_2O emissions compared to T_R in the cold temperate regions (D).



Appendix – Fig. 8: Relative changes in N_2O emissions compared to T_R in the humid regions (A), Relative changes in N_2O emissions compared to T_R in the arid regions (B).