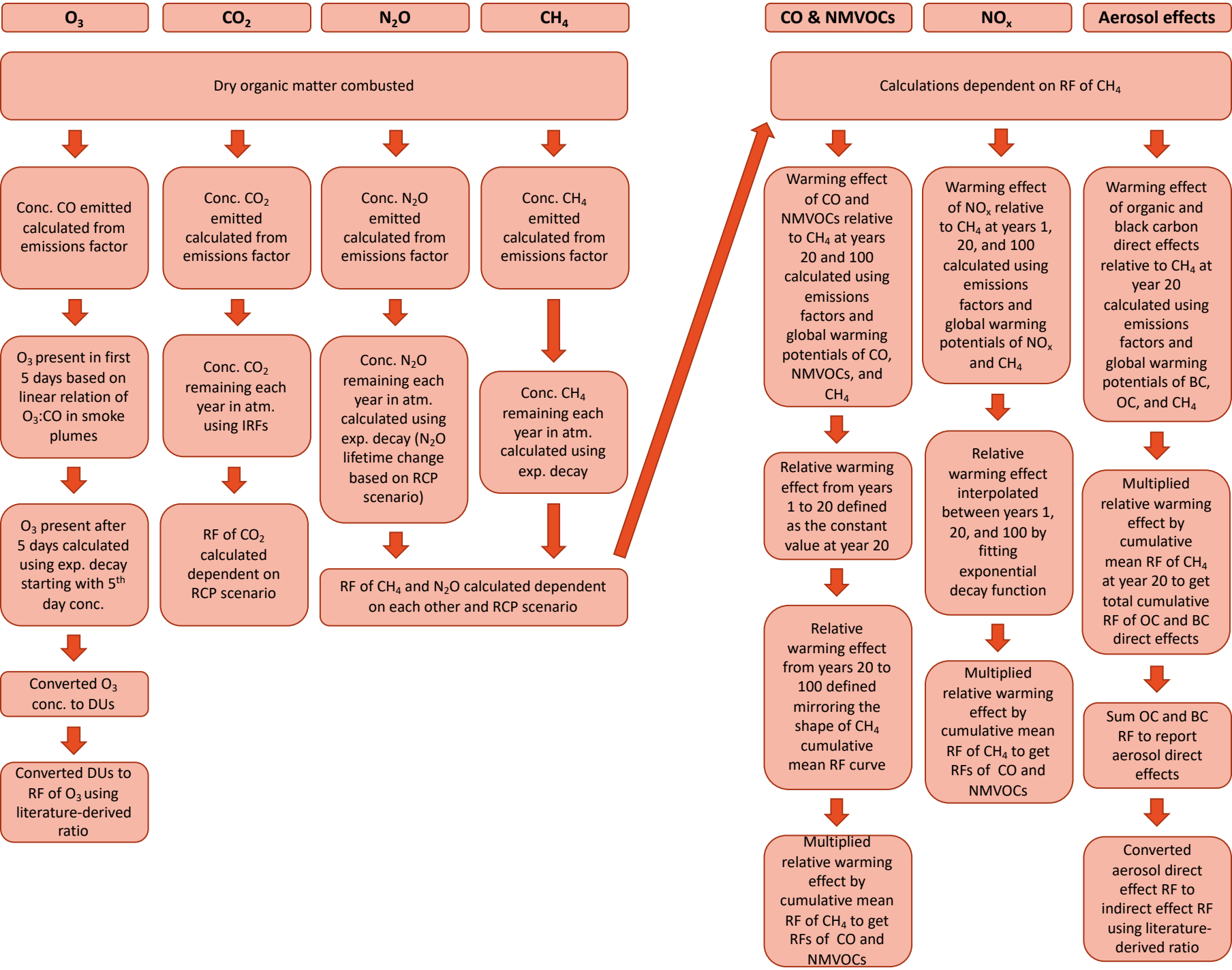
O_3
CO_2
N_2O
CH_4
CO & NMVOCs
NO_x
Aerosol effects
Dry organic matter combusted
Calculations dependent on RF of CH_4
Conc. CO emitted calculated from emissions factor
Conc. CO_2 emitted calculated from emissions factor
Conc. N_2O emitted calculated from emissions factor
Conc. CH_4 emitted calculated from emissions factor
O_3 present in first 5 days based on linear relation of O_3:CO in smoke plumes
Conc. CO_2 remaining each year in atm. using IRFs
Conc. N_2O remaining each year in atm. calculated using exp. decay (N_2O lifetime change based on RCP scenario)
Conc. CH_4 remaining each year in atm. calculated using exp. decay
O_3 present after 5 days calculated using exp. decay starting with 5th day conc.
RF of CO_2 calculated dependent on RCP scenario
RF of CH_4 and N_2O calculated dependent on each other and RCP scenario
Converted O_3 conc. to DUs
Converted DUs to RF of O_3 using literature-derived ratio
Warming effect of CO and NMVOCs relative to CH_4 at years 20 and 100 calculated using emissions factors and global warming potentials of CO, NMVOCs, and CH_4
Warming effect of NO_x relative to CH_4 at years 1, 20, and 100 calculated using emissions factors and global warming potentials of NO_x and CH_4
Warming effect of organic and black carbon direct effects relative to CH_4 at year 20 calculated using emissions factors and global warming potentials of BC, OC, and CH_4
Relative warming effect from years 1 to 20 defined as the constant value at year 20
Relative warming effect interpolated between years 1, 20, and 100 by fitting exponential decay function
Multiplied relative warming effect by cumulative mean RF of CH_4 at year 20 to get total cumulative RF of OC and BC direct effects
Relative warming effect from years 20 to 100 defined mirroring the shape of CH_4 cumulative mean RF curve
Multiplied relative warming effect by cumulative mean RF of CH_4 to get RFs of CO and NMVOCs
Sum OC and BC RF to report aerosol direct effects
Multiplied relative warming effect by cumulative mean RF of CH_4 to get RFs of CO and NMVOCs
Converted aerosol direct effect RF to indirect effect RF using literature-derived ratio