IMPACT OF DIFFERENT PROCESS ON THE AIR POLLUTION OVER THE BALKAN PENINSULA

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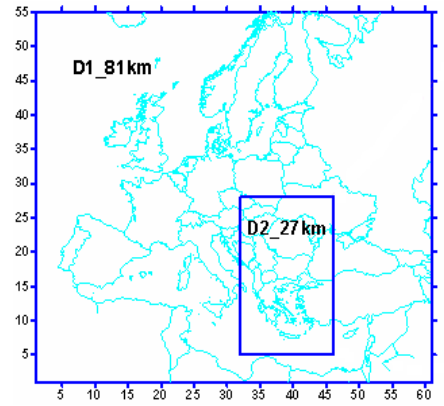
OBJECTIVE

To study the processes of the contributions of the horizontal advection, vertical advection, horizontal diffusion, vertical diffusion, dry deposition, chemical transformation, aerosol processes, cloud processes, and emissions to the change surface air composition of SO_2 and NH_3 in the Balkan Peninsula.

METHODS

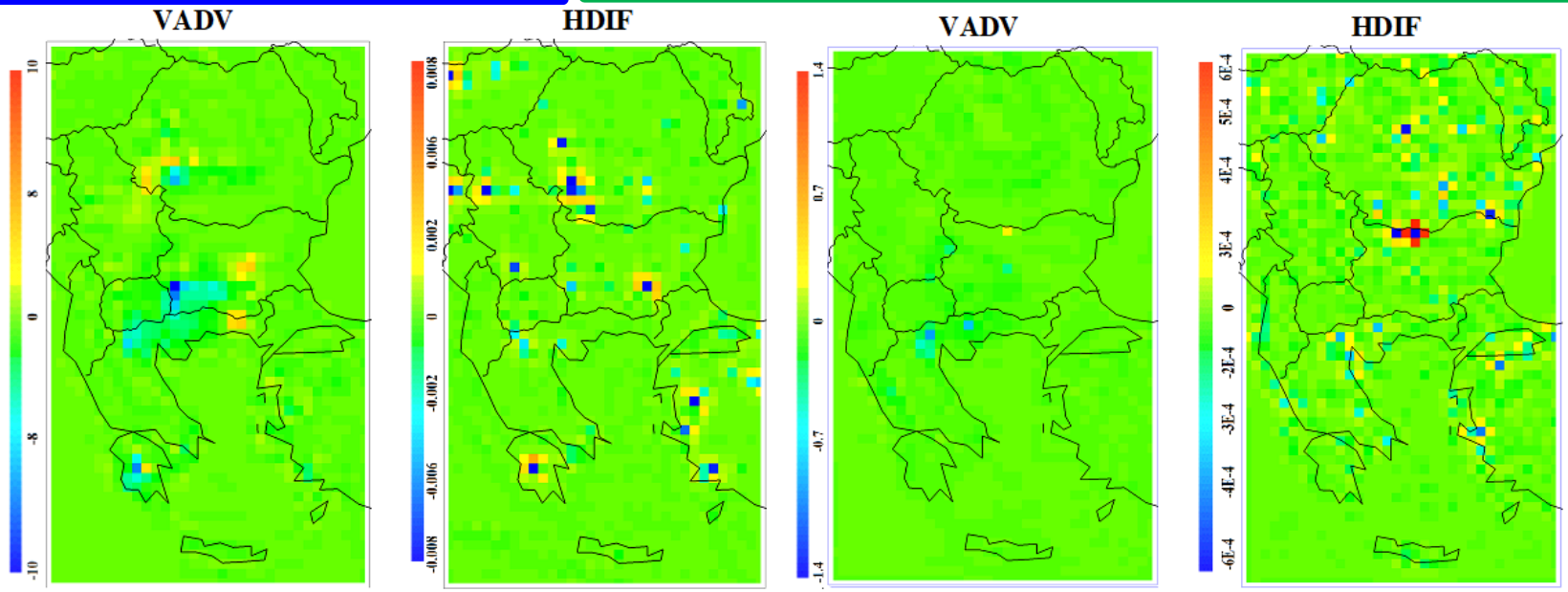


NCEP 1°x 1° → D1 WRF CMAQ → D2 WRF CMAQ SMOKE

National Emission Inventory (Bulgaria)

TNO high resolution inventory with resolution 0.25° x 0.125° (Balkan Peninsula)

- Simulations are carried out for the 2008 – 2014 period.
- Output concentrations for the air pollutants SO_2 and NH_3 with 1-hour frequency.



SO_2 NH_3

- The results from the numerical simulations reveal dominant factors with substantial impacts, often with opposing signs and phases.
- The magnitude and sign of these contributions vary for different pollutants.

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