



VEIN, EmissV and eixport R packages for multiscale emissions inventories

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The study of chemistry of the atmosphere using air quality simulations has been largely based on top-down emissions inventories not well documented. The emissions inventories are the critical input in any atmospheric simulation. This presentation covers the development of three R packages: **VEIN** for bottom-up vehicular emissions inventories, **EmissV** for top-down emissions inventories and **eixport**, for exporting the inventories and creating inputs for other models. Currently, **eixport** can create inputs for the model WRF-Chem directly as a NetCDF file. This framework allows us to study the chemistry of the atmosphere and create scenarios. These packages imports functions from the following R packages: **sf**, **sp**, **raster**, **ncdf4** and some other.