8th Report on the state of the Alps
Air quality in the Alps

December 10th, 2020
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What is specific in mountains?

Pollutants are trapped within valleys by the inversion layer.

Diagram illustrating the process of pollutants being trapped in valleys due to the inversion layer.
How good is the air in the Alps?

No illegality, but PM$_{2.5}$ exceed WHO guidelines for health!
What kind of impact?

Decrease of mortality in cities of the Arve valley if there were no anthropic pollution

Exceedance of critical loads in Swiss ecosystems by nitrogen depositions
What are the main causes?

Graph showing the percentage of biomass burning, traffic, and secondary aerosol for Winter and Summer in Erstfeld (CH) and Chamonix (FR).
A set of examples of smart solutions dealing with:
- Biomass combustion and general heating
- Reduction of VOC/Ozone precursors
- Reduction of NO$_2$ and PM from transport
- Integrated planning (mobility and spatial planning)
- Reduction of ammonia emissions by agriculture

10 recommendations for policy makers:
- 2 on improving heating systems
- 3 on mobility management
- 1 on good agricultural practices
- 1 on local air quality initiatives
- 1 on reducing transboundary pollution
- 1 to support the AQ chapter of the EU green deal
- 1 to further develop in depth specific studies
2: Reduce domestic heating emissions by improving overall energy performance of buildings and renewing heating systems towards low emitters by support and guide to all operators by:
- improving the energy performance of buildings;
- replacing old heavy polluting heating systems and boilers;
- substitute traditional fuel to a cleaner one.

5: Promote the use of smart traffic management, e.g. speed limits, road pricing, favouring clean vehicles on alpine motorways and tunnels to lower emissions,
- encourage implementation of alternative transport technologies and combined transport,
- integration of public transport in multimodal mobility systems
- incentivise modal shift of passenger and freight transport

9: The Alpine convention contracting parties
- to support the Air quality chapter of the EU green deal
- to strive to achieve WHO air quality guide-lines.
Thank to all the members of the group for the work being carried out

And thank you for your attention