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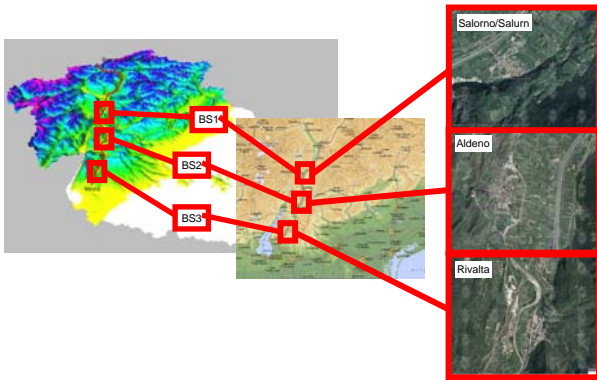
Air-Quality Along the Brenner South Transit Route: Outline of Monitoring and Modeling Strategies

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The Brenner South Target Area

The Brenner South Target Area comprises the Adige Valley between the Brenner Pass and Verona. Particular attention will be given to three sub-areas, displaying similar characteristics both from a meteorological point of view as well as from an emission one.

These areas are the surroundings of the towns of Salorno/Salurn (Prov. of Bolzano), Aldeno (Prov. of Trento) and Rivalta (Prov. of Verona), and will be the object of intensive observations as well as numerical simulations with the aim characterize the pollution levels at a local scale.



The Field Phase

The strategy behind the monitoring phase is following:

- Focus on winter seasons
- Special attention to persistent anticyclonic conditions
- Simultaneous use of 4 mobile air-quality stations for a detailed spatial characterization of the pollution levels
- Use of advanced meteorological instruments for the identification of all relevant physical processes.

Month	JANUARY				FEBRUARY				MARCH	
Week	2	3	4	5	6	7	8	9	10	
Day	09 - 15	16 - 22	23 - 29	30 - 05	06 - 12	13 - 19	20 - 26	27 - 05	06 - 12	
Intercomparison										
BS1-TA: Salorno/Salurn										
BS2-TA: Aldeno										
BS3-TA: Rivalta										

The timetable of the field phase starts with an intercomparison of the mobile air-quality stations and is followed by the deployment of the complete experimental setup in the three Target Areas. At least two weeks for each sub-area are foreseen, depending on the weather conditions.



The Modeling Chain

The complete modeling of air-quality impact assessment will be performed in three steps:

- 1) emission estimate which will be performed through the COPERT methodology
- 2) meteorological and air quality modeling through the CALMET-CALPUFF numerical models
- 3) health risk assessment through a multiple path exposure method

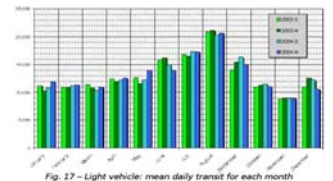
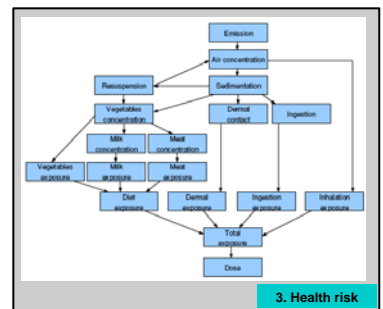
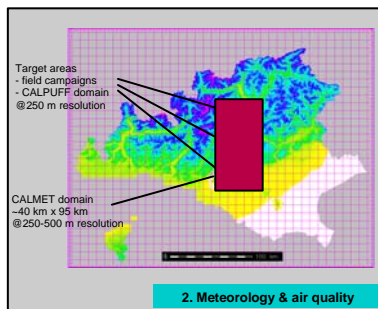
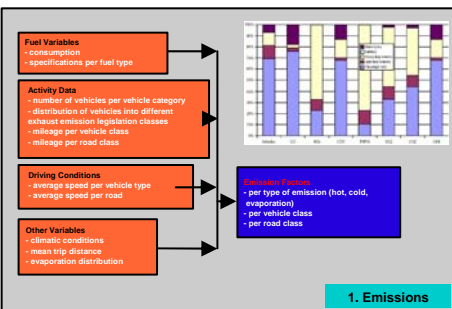
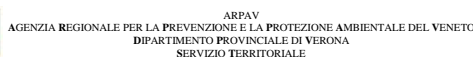
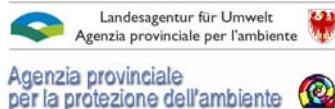


Fig. 17 - Light vehicle: mean daily transit for each month



Participants to the Brenner South Activity



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