The iMONITRAF! monitoring network
Indicators interpretation

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Indicator dataset

- The IMonitraf! partnership analysed a set of 11 indicators in order to evaluate the transalpine traffic effects.
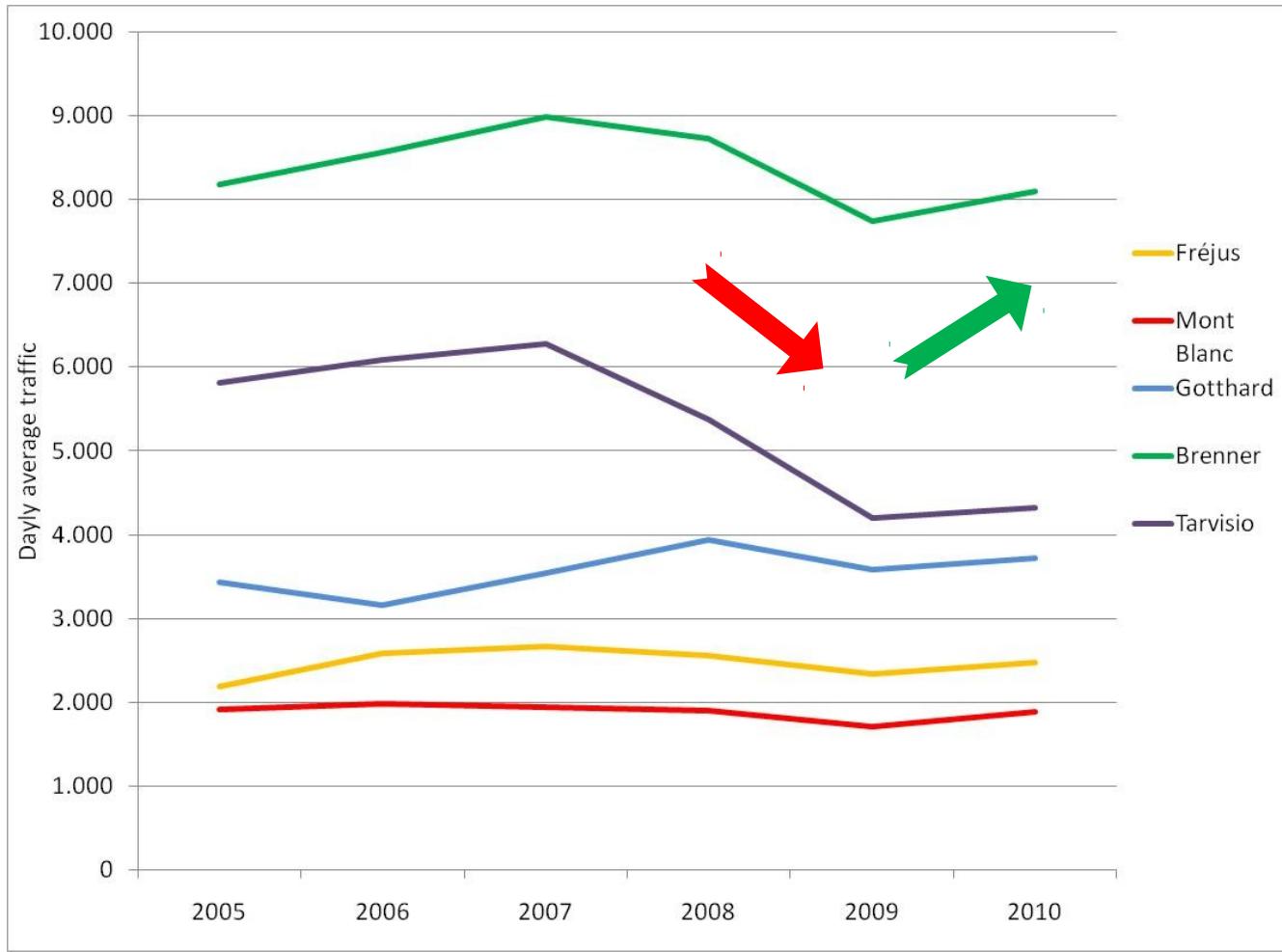
INDICATORS

n°01: Road traffic fluxes

n°02: Composition vehicle fleet

n°03: Rail traffic fluxes

n°04: Air pollutant emissions by road traffic

n°05: Air concentrations measured

n°06: Noise assessment

n°07: Toll prices

n°08: Fuel prices

n°09: GDP per inhabitant

n°10: Population exposed

n°11: Transport employments

n°12: Health impact
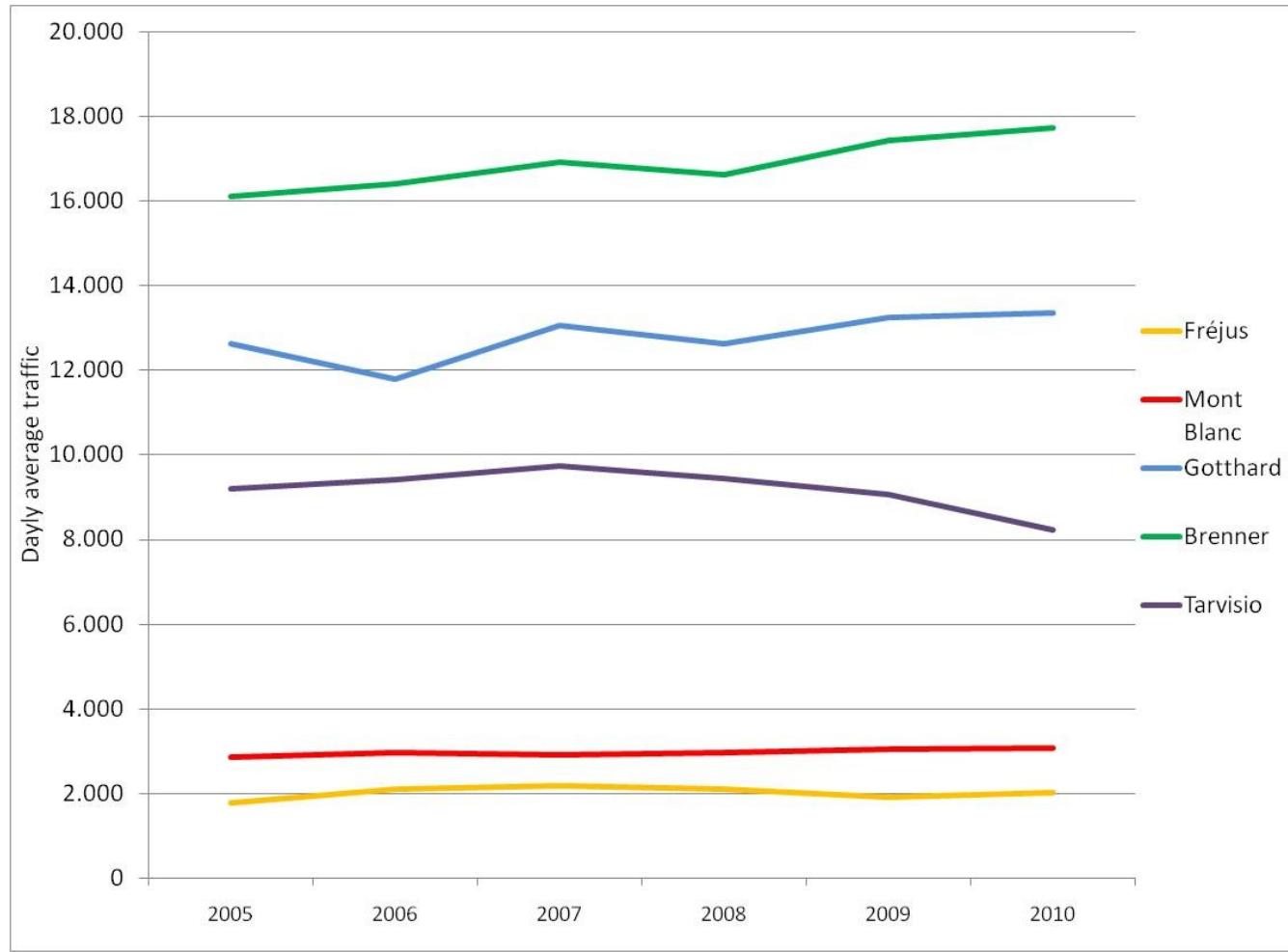
- Increase of HDVs fluxes for 2010, new situation "post crisis"
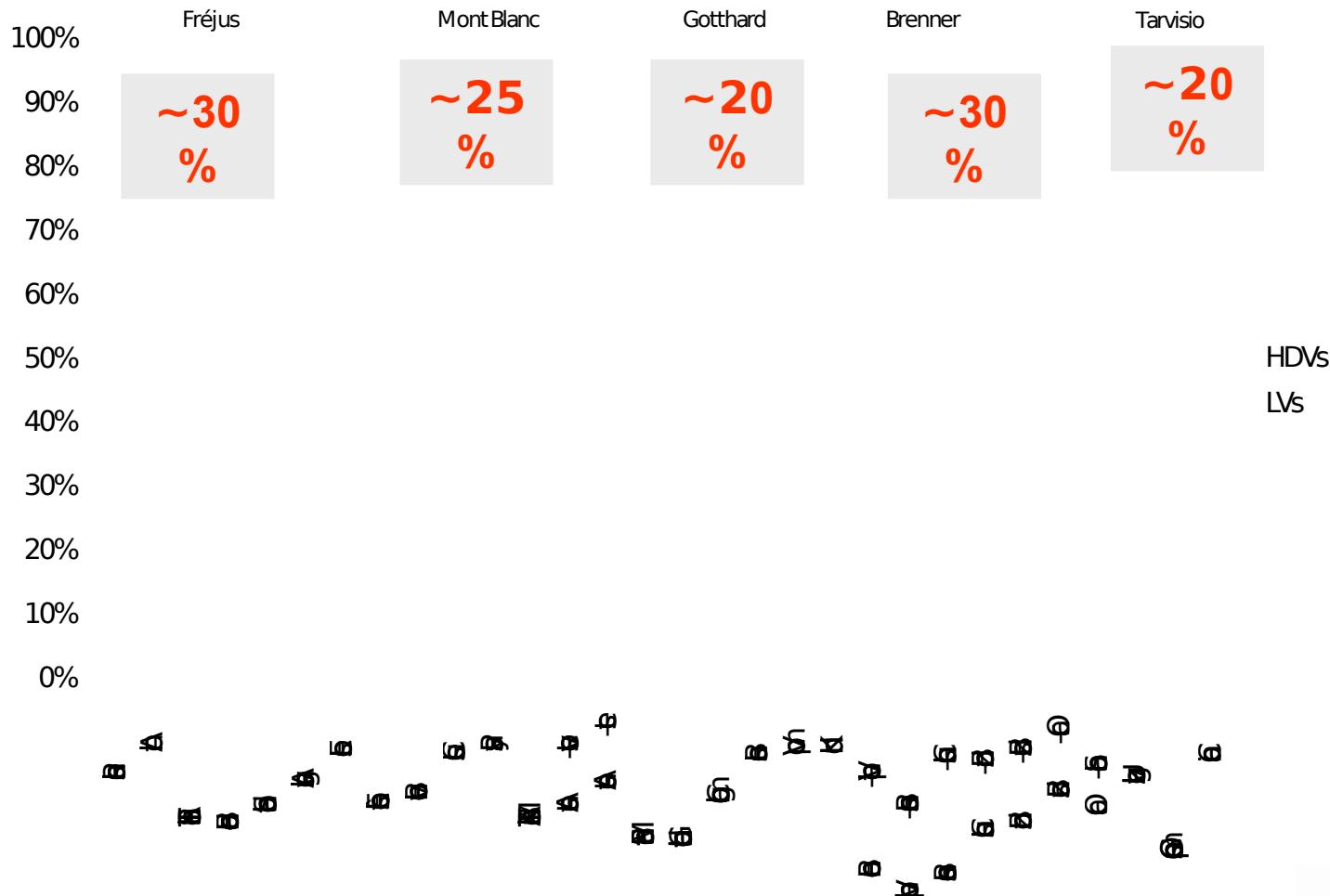
- Increase of the LV fluxes during the last years

•HDVs / LVs ratios

	Fréjus	Mont Blanc	Gotthard	Brenner	Tarvisio
100%	~30%	~25%	~20%	~30%	~20%
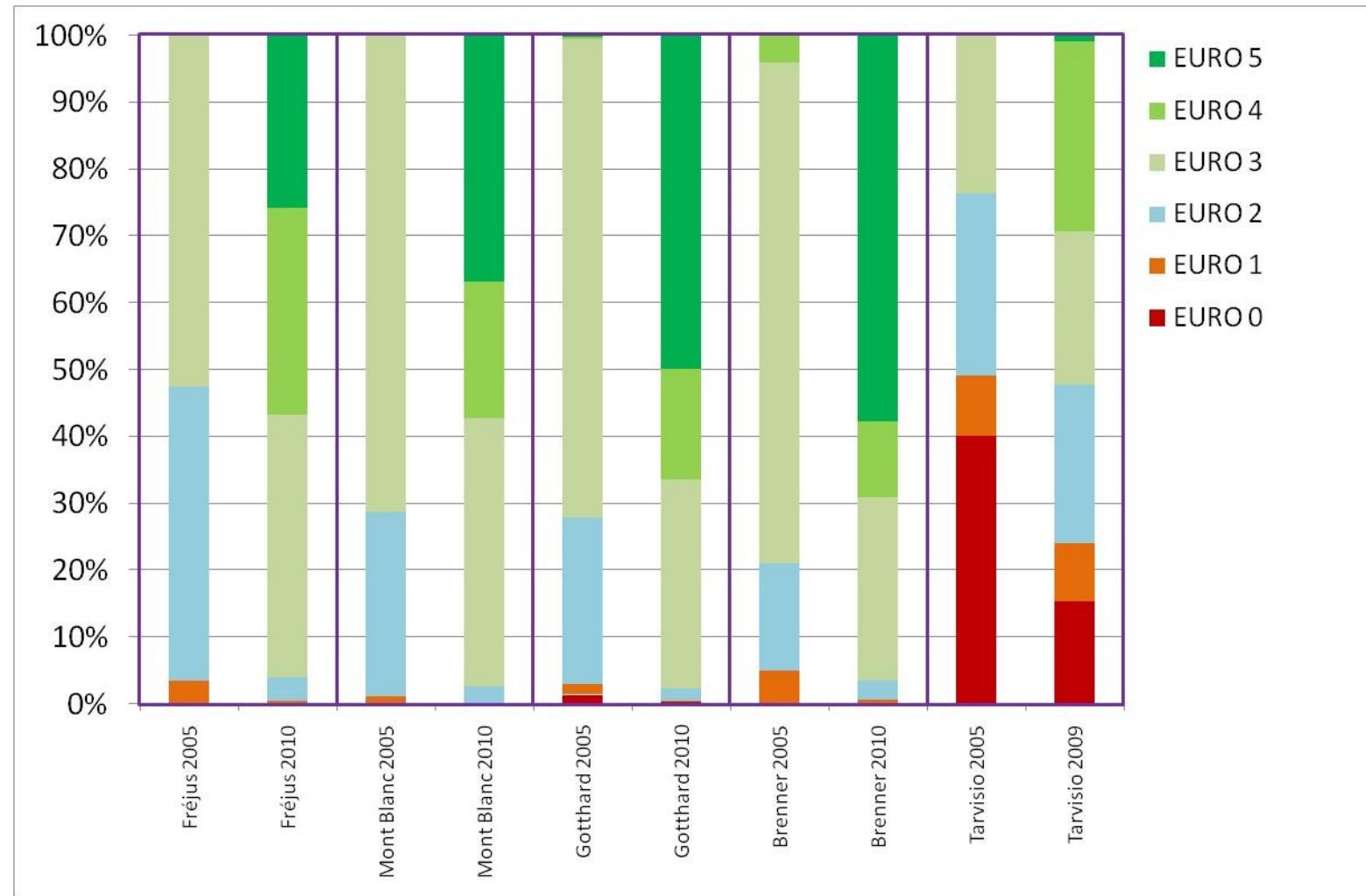
50% HDVs
LVs
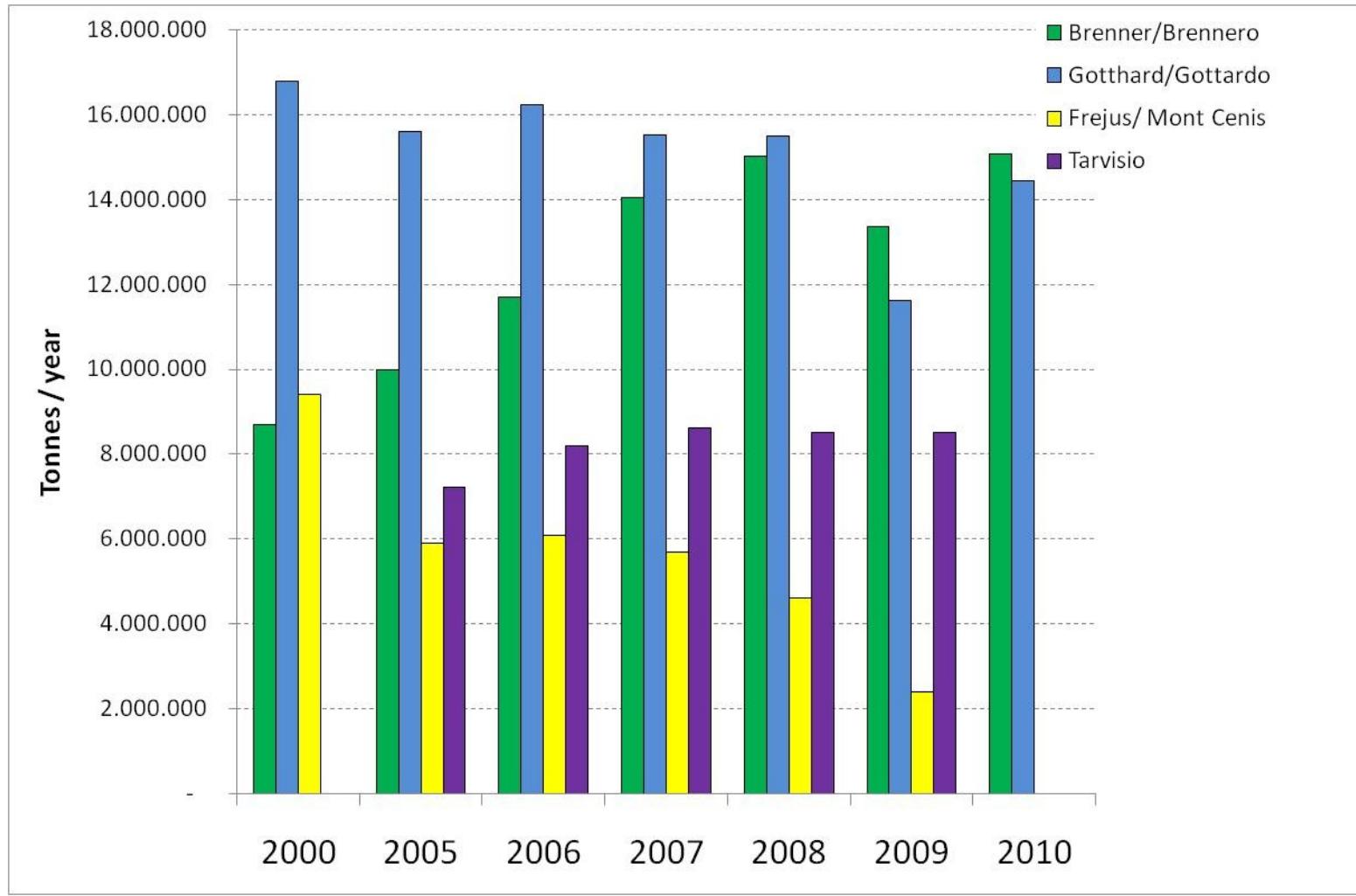
- HDVs fleets in the corridors: 2005-2010 trend

- Tonnes carried by rail: 2000-2010 trend

- Tonnes carried by road and rail (2008-2009 comparison)

ALPINFO data
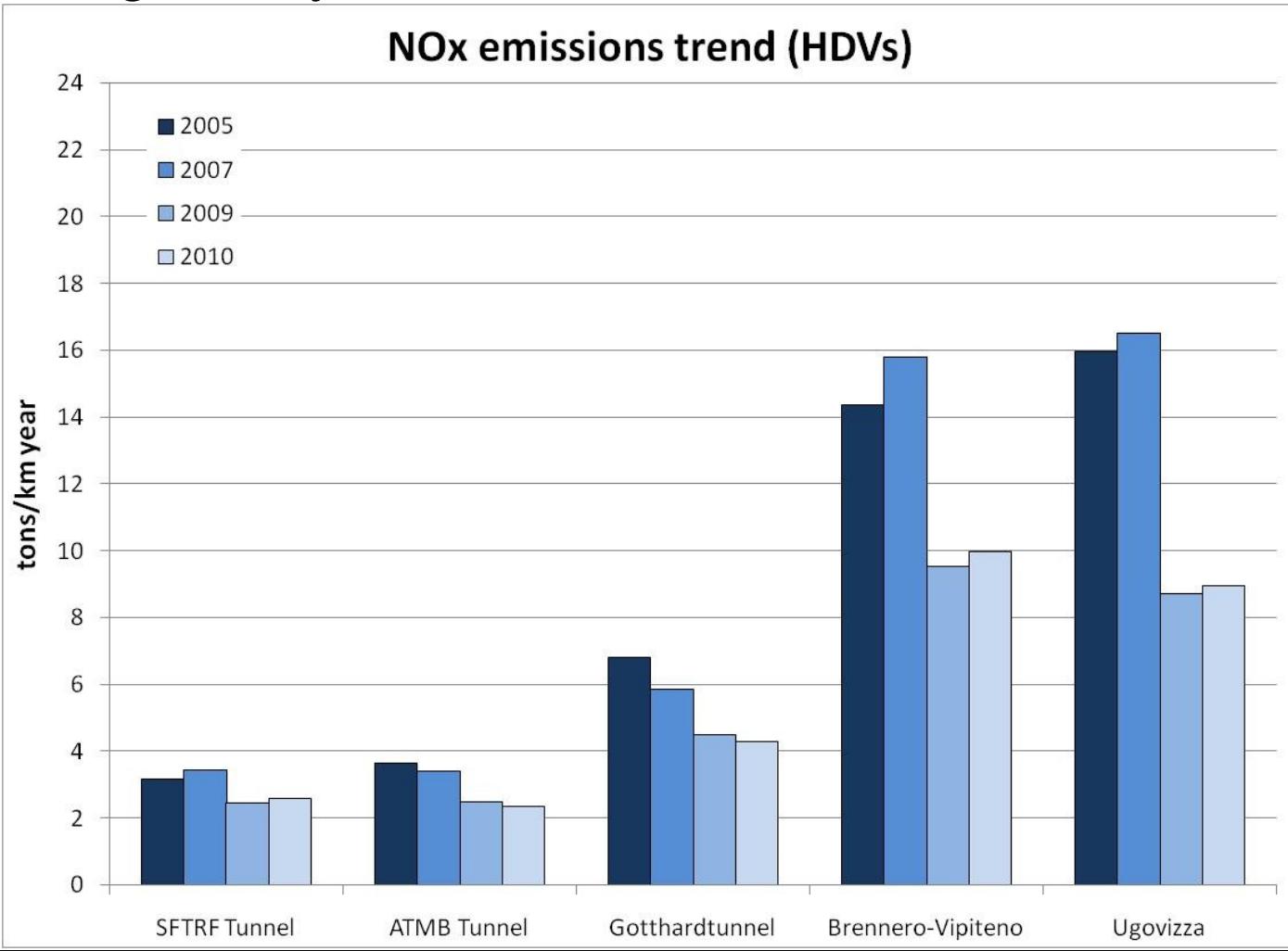
Air pollutant emissions by road traffic

- Nitrogen Oxydes

- Particulate PM10

PM10 emissions trend (HDVs)
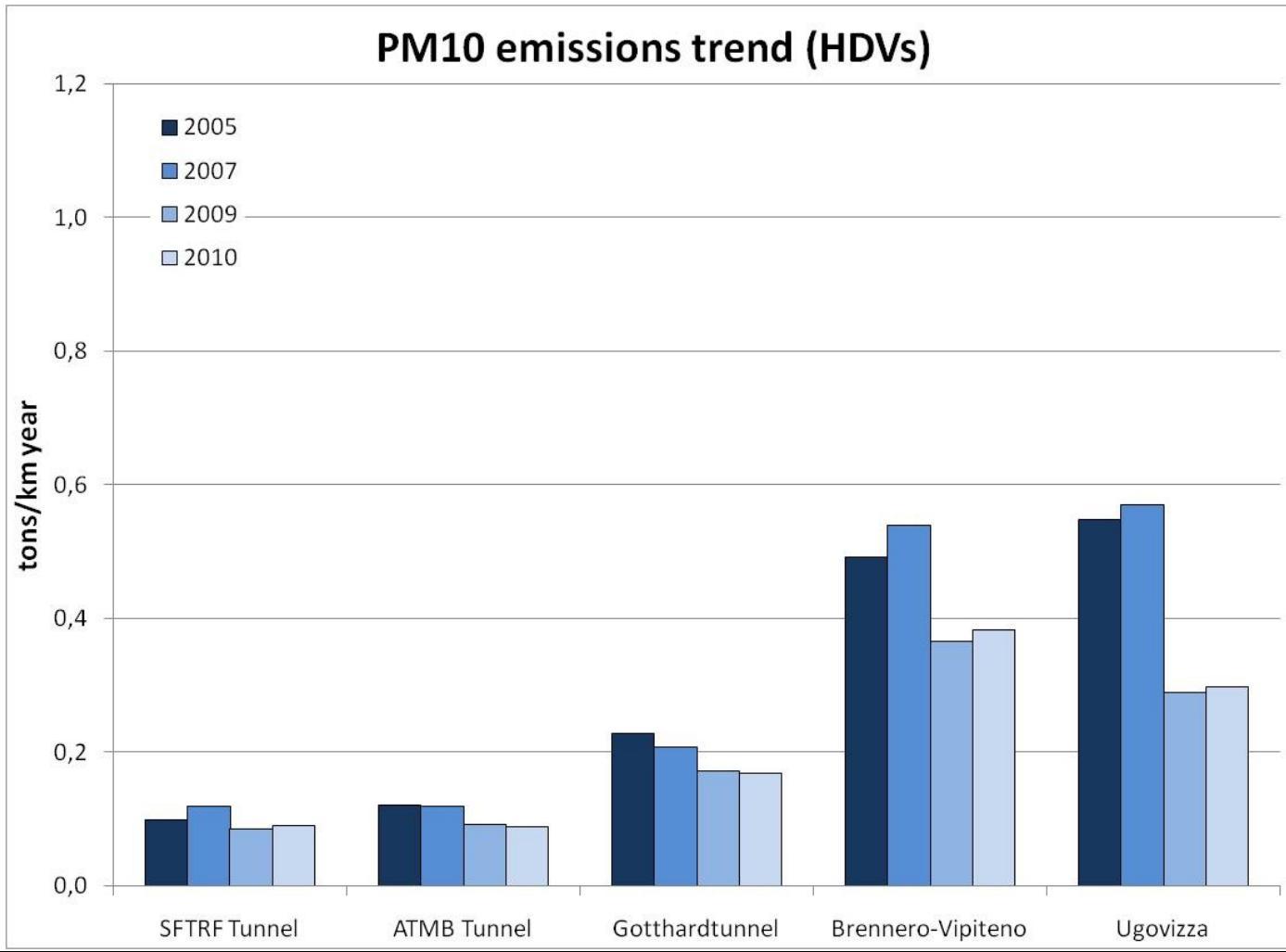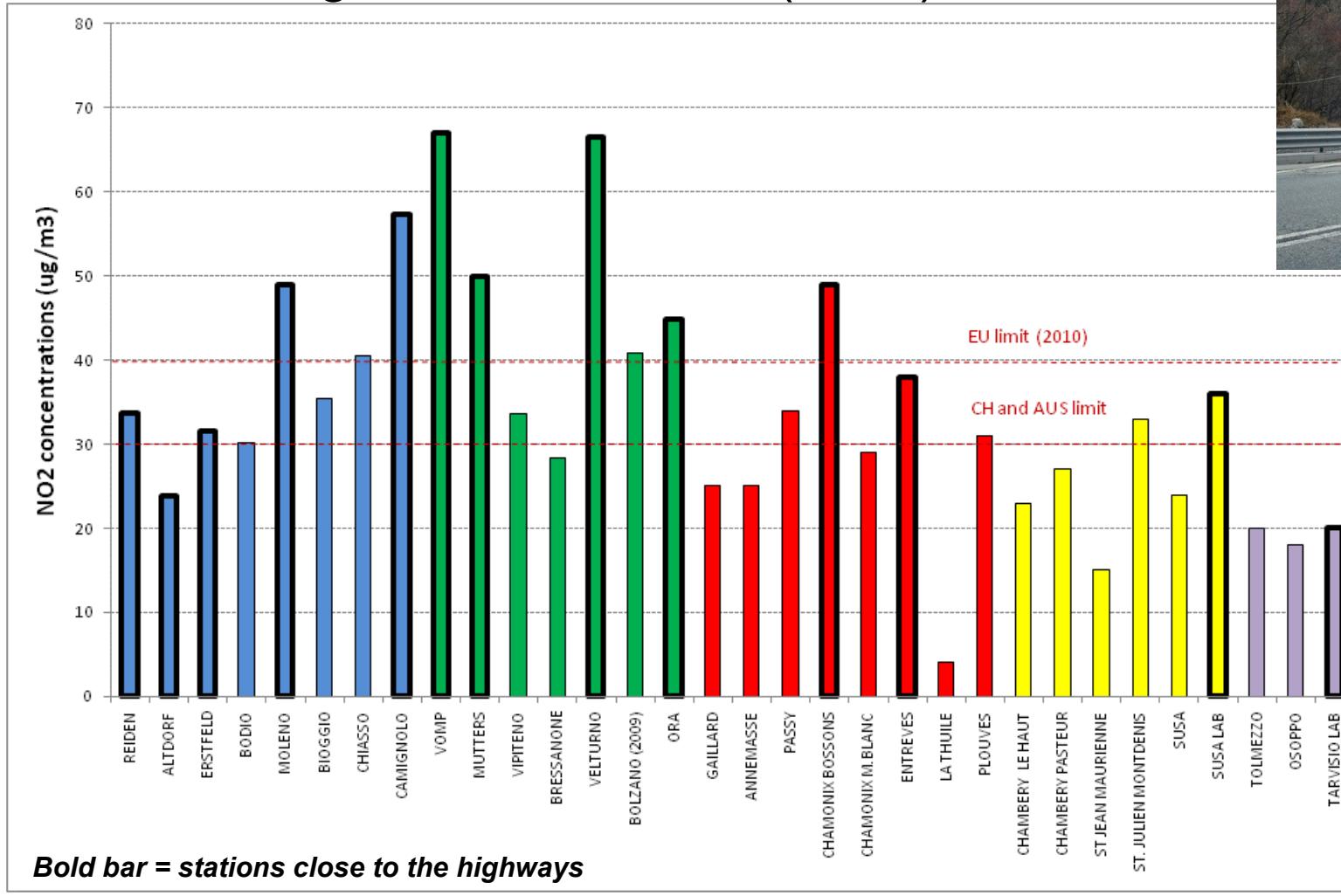
Air concentrations measured
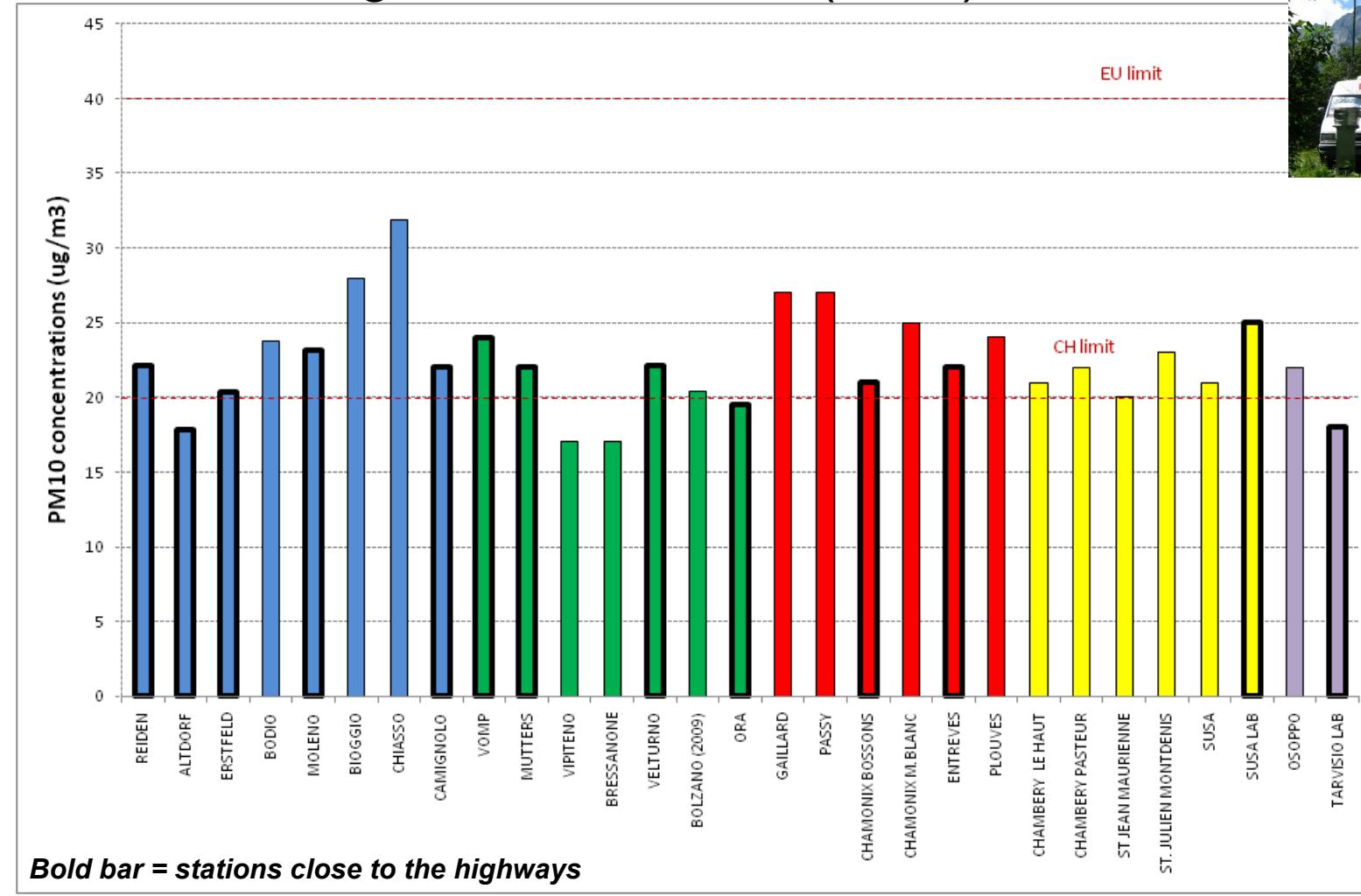
- NO$_2$ average concentrations (2010)

Bold bar = stations close to the highways
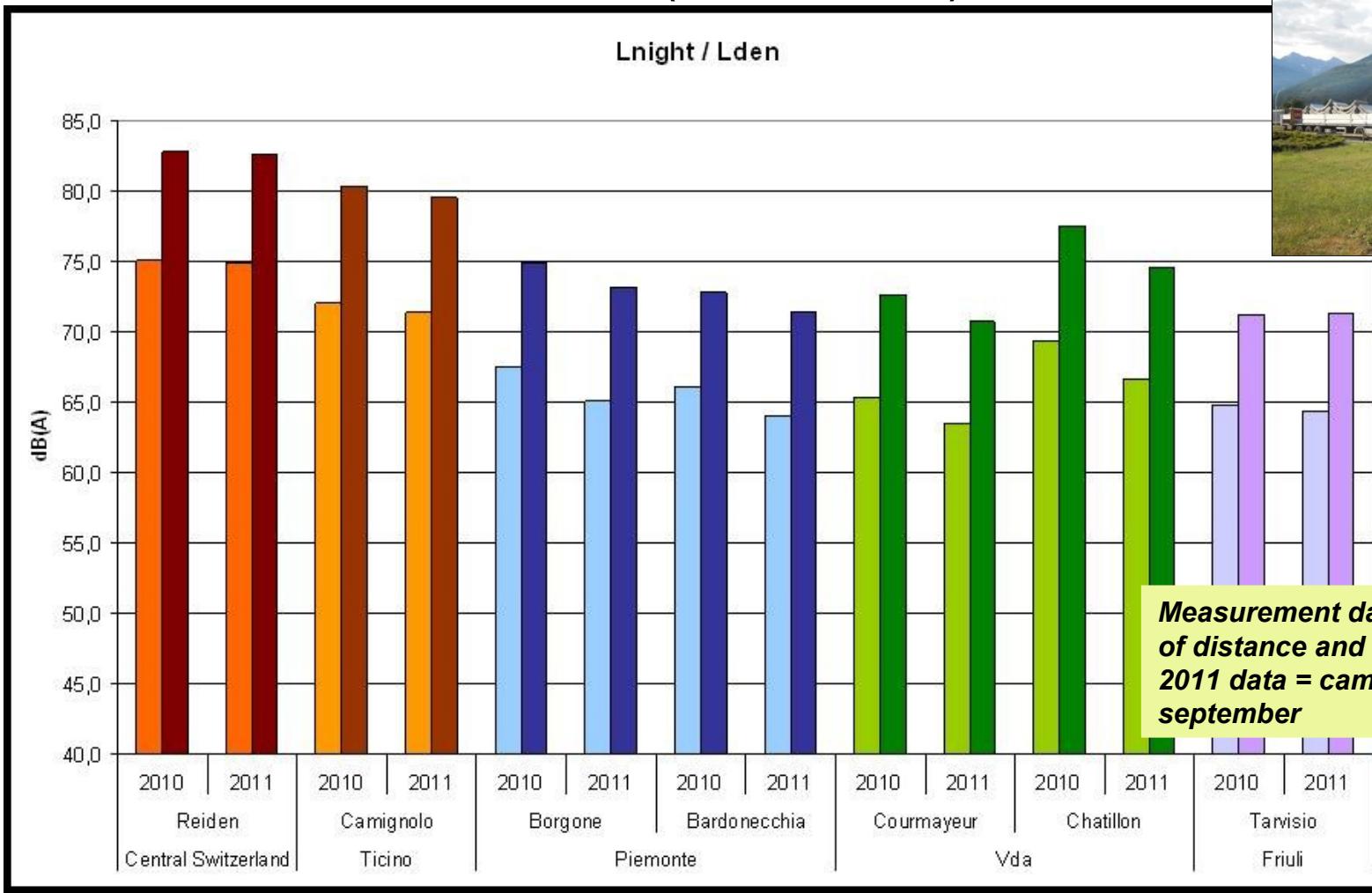
- PM10 average concentrations (2010)

Bold bar = stations close to the highways
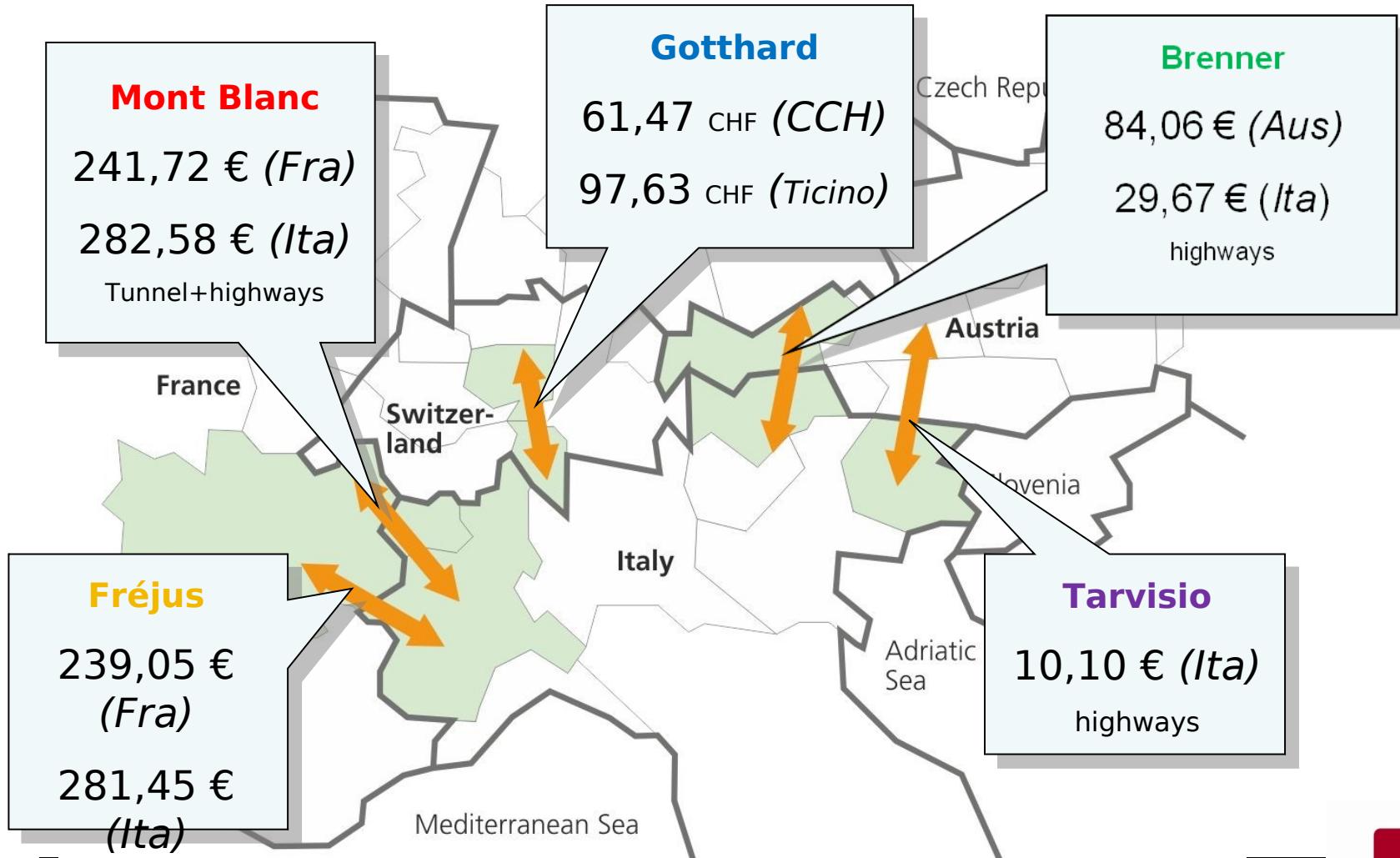
- Noise level measured (2010-2011)

Lnight / Lden

Measurement data harmonized to 10 m of distance and 4 m of elevation
2011 data = campaigns from january to september
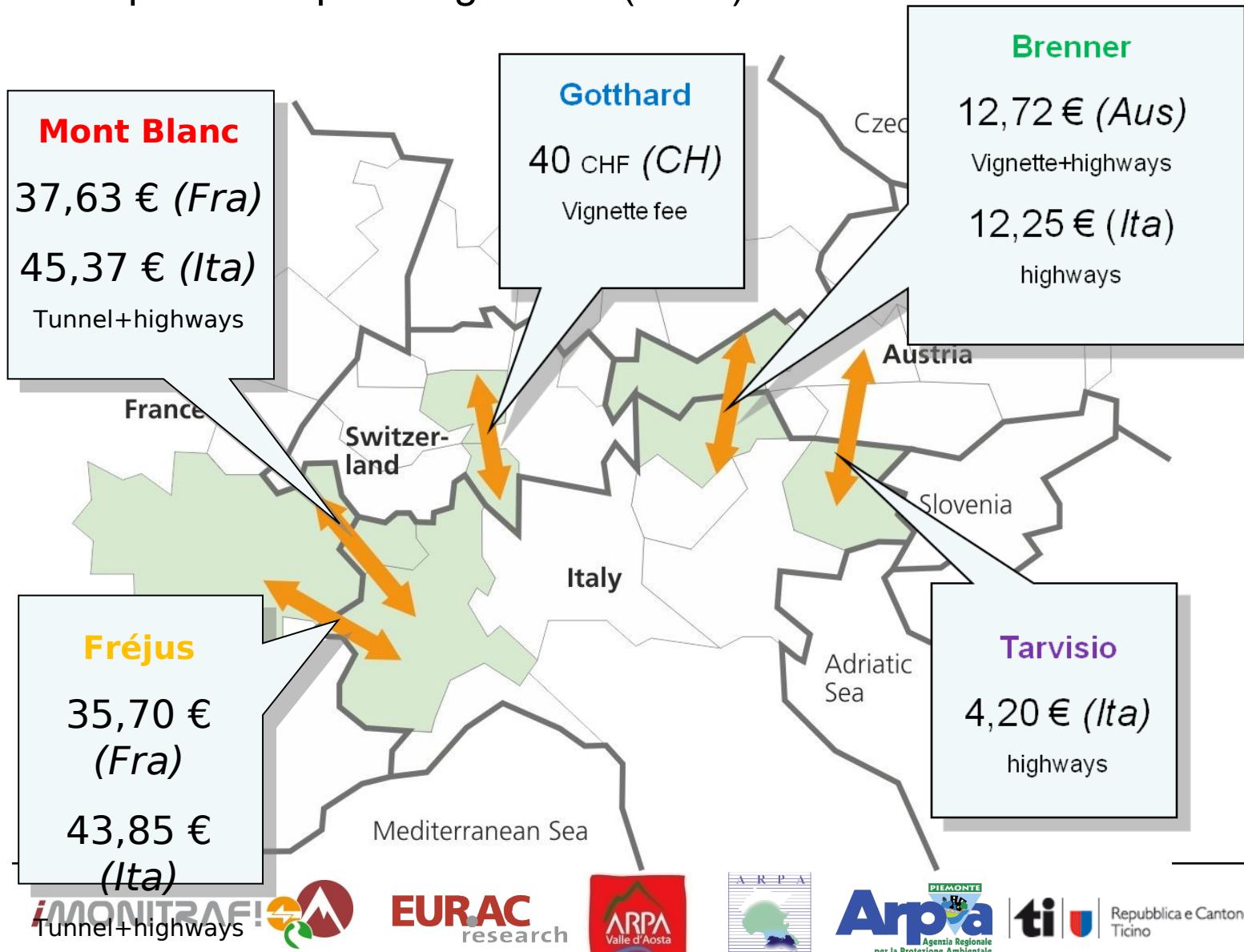
- Toll prices for Euro 5 Heavy duty vehicle, 40 t, 5 axes (2010)

Mont Blanc

241,72 € *(Fra)*

282,58 € *(Ita)*

Tunnel+highways

Gotthard

61,47 CHF *(CCH)*

97,63 CHF *(Ticino)*

Brenner

84,06 € *(Aus)*

29,67 € *(Ita)*

highways

Fréjus

239,05 € *(Fra)*

281,45 € *(Ita)*

Tunnel+highways

Tarvisio

10,10 € *(Ita)*

highways

France

Switzer-land

Austria

Italy

Czech Rep

Slovenia

Adriatic Sea

Mediterranean Sea

- Toll prices for passanger cars (2010)

Mont Blanc

37,63 € *(Fra)*

45,37 € *(Ita)*

Tunnel+highways

Gotthard

40 CHF *(CH)*

Vignette fee

Brenner

12,72 € *(Aus)*

Vignette+highways

12,25 € *(Ita)*

highways

Fréjus

35,70 € *(Fra)*

43,85 € *(Ita)*

Tunnel+highways

Tarvisio

4,20 € *(Ita)*

highways

Conclusions

- A synthetic evaluation comparing the 5 Imonitraf! Corridors of indicators 1-7 (2010 situation)

environmental analysis	Heavy duty vehicle fluxes (ind. 1)	Light vehicle fluxes (ind. 1)	Vehicle fleet (ind. 2)	Rail fluxes (ind. 3)	Road emissions (ind. 4)	Concentrations measured (ind. 5)	Noise levels (ind. 6)	Toll prices (ind. 7)	Score (average ind. 1-7)
FREJUS	2	2	2	4	2	2	3	2	2,4
MONT BLANC	2	2	2	NA	2	3	3	2	2,3
GOTTHARD	3	4	1	2	3	4	4	3	3,0
BRENNER	5	5	1	2	5	5	NA	3	3,7
TARVISIO	3	3	4	3	4	2	3	5	3,4

Legend for the values:
1 – very good
2 – good
3 – intermediate
4 – bad
5 – very bad

Conclusions

- A synthetic evaluation comparing the 5 Imonitraf! Corridors of indicators 1-7 (global trends 2005 – 2010)

2005-2010 environ. trend	Heavy duty vehicle fluxes (ind. 1)	Light vehicle fluxes (ind. 1)	Vehicle fleet (ind. 2)	Rail fluxes (ind. 3)	Road emissions (ind. 4)	Concentrations measured (ind. 5)	Noise levels (ind. 6)	Toll prices (ind. 7)
FREJUS	↑	↔	↑	↓	↓		↔	↑
MONT BLANC	↔	↔	↑		↓	↓	↔	↑
GOTTHARD	↑	↑	↑	↓	↓	↓	↔	↑
BRENNER	↔	↑	↑	↑	↓	↓		↑
TARVISIO	↓	↓	↑	↔	↓		↔	↑