

Geneva
September 8th 2014

The Isonzo/Soca river basin

Status and perspective on the possible Alpine river basin to be assessed



MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

The Alpine Convention

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- Water management, risk management and adaptation to climate change are crucial factors for the Alpine Convention
- Different working groups dealing with the main issues in these fields at international level
- Several transboundary river basins and lakes in the alpine region



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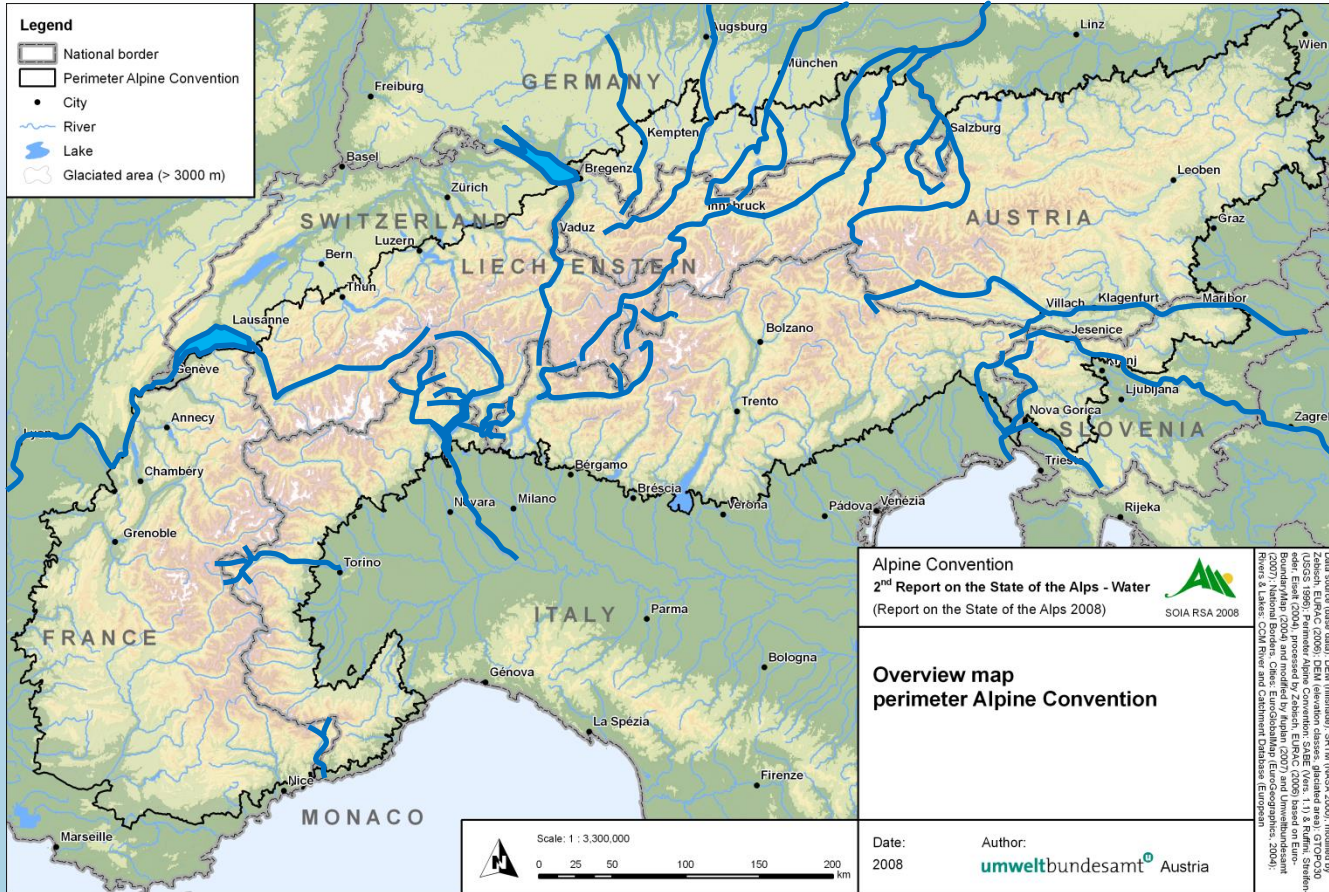
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Transboundary rivers and lakes in the Alpine Convention area

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The choice of Isonzo/Soca

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- 1st meeting Task Force Nexus: the proposal of working on an alpine transboundary basin was generally appreciated
- The Italian Presidency of the Alpine Convention proposed the opportunity of a Nexus' case study in the Alps to the working groups of the Convention
- Among the different proposals presented to the UNECE Water Convention, Isonzo/Soca seems to be the more appropriate to be assessed



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RIVER BASIN		Catchment sea
SOCA-ISONZO with NATISONE-NATECE and VIPACCO-VIPAVA rivers		Adriatic Sea (Mediterranean)
Involved Countries		
Slovenia (upstream), Italy (downstream)		
Lenght (Km)	Extension of the basin	Runoff at the mouth
140 (Soca/Isonzo); 60 (Natisone until its confluence into the Torre river); 49 (Vipacco river)	3400 km ² (34% in I, 66% in SI); 322 km ² (sub-basin Natisone); 600 km ² (sub-basin Vipacco)	173 m ³ /sec (average Isonzo); 2500 m ³ /sec (max runoff, 1924)



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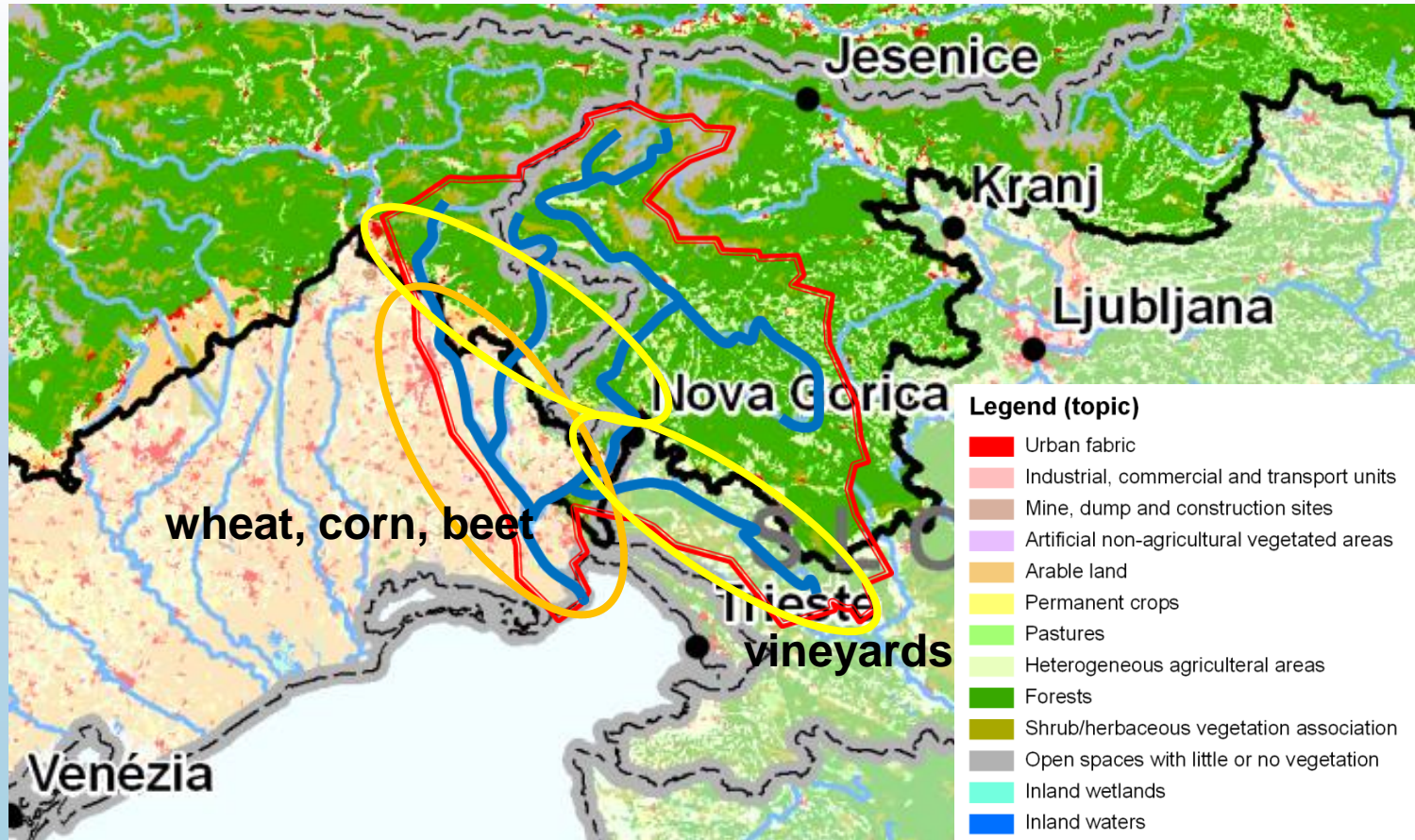
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The Isonzo/Soca river basin: land use

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The Isonzo/Soca river basin: river continuity

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Legend (topic)

Large Dams by purpose and lake volume

Purpose

- Hydroelectricity
- Flood Control
- Irrigation
- Recreation
- Water supply
- Multipurpose
- Others/not specified

Lake volume in 1,000 m³



- no information on lake volume



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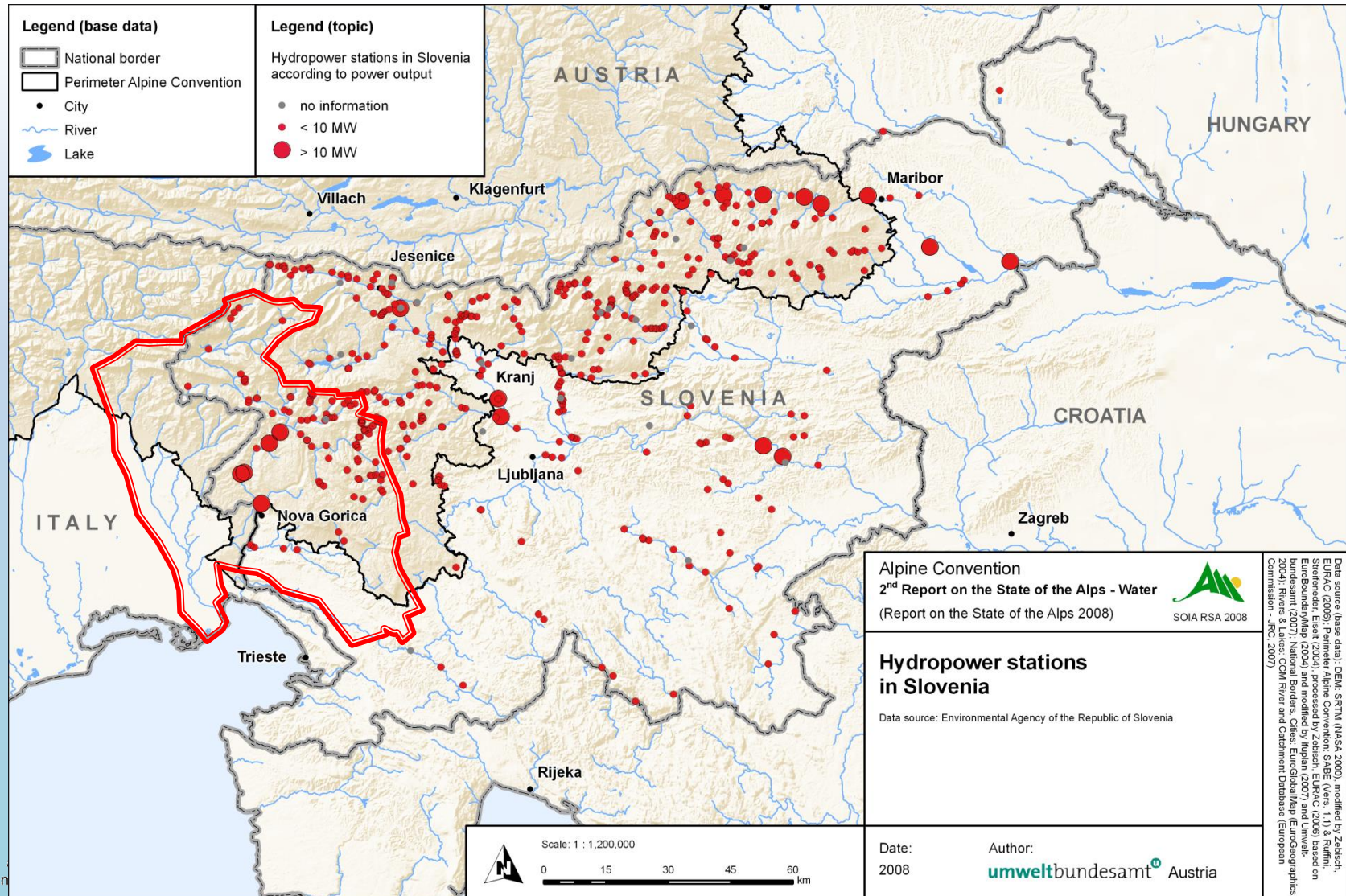
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The Isonzo/Soca river basin: energy production

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Isonzo/Soca river basin: strengths vs weaknesses

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Isonzo/Soca river basin: strengths (1)

- Limited population in the basin (about 280.000 people).
- High amount of precipitation.
- Underground sources feed the river also in times of drought.
- High quality of water and abundant biotic presence in the medium-upper Soca/Isonzo and in the Natisone-Torre -> good quality in the final section.
- The river widely recharges the groundwater aquifers through permeable soils and karst areas.
- Wetland of 2338 ha protected since 1996 at the Isonzo mouth.



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Isonzo/Soca river basin: strengths (2)

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- Good state of naturalness of the courses, excepted for hydro-morphological interruptions caused by hydroelectric exploitation.
- Generally high riverbanks and wide riverbed , with settlements in safe positions -> vulnerability not particularly relevant.
- Important transboundary aquifers: Rabeljski Rudnik, Kobariski Stol, Brestovica (the most important: divided into the aquifers of Osp-Boljunec and Brestovica), Vrtojbensko Polje (between the valleys of Soca and Vipacco) -> fundamental for the drinking water supply in karstic regions.
- Interventions of renaturation of slopes (e.g. in the Natisone valley) to reduce erosion and slope instability.



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Isonzo/Soca river basin: weaknesses (1)

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- Wastewater treatments plants must be improved.
- Intensive agricultural uses in the valley of Vipacco and in the Friuli plain (middle-lower Natisone-Torre and lower course of Isonzo) -> some impacts on water quality.
- Abundant water withdrawals for agricultural and hydroelectric uses.
- Intensive use of hydropower particularly in the Slovenian section of the Soca / Isonzo and along its minor affluents -> splitting of the hydromorphological and ecosystemic continuity with a little/no potential for flood lamination.



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Isonzo/Soca river basin: weaknesses (2)

- Flash-flood prone areas in particular along the Natisone, but the valley is scarcely inhabited.
- Some punctual pressures (including some problems concerning mercury) on water quality, mainly upstream
- Pressures for the use of water in times of drought.



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Isonzo/Soca river basin: threats

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- Significant increases in winter rainfall and moderate decreases in summer are expected (period 2070-2099, REG CM model, SRES A2 scenario) -> increase of the flood hazard, already significant.
- Limit the urbanization in flood-prone areas and in groundwater recharge areas (due to the lack of surface runoff in karst area).
- Need of a stronger coordination and transboundary management.



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Isonzo/Soca river basin: opportunities

- Willingness for a transboundary cooperation by Italian and Slovenian local and regional authorities -> i.e. CultuRisk, ASTIS and CAMIS projects, with pilot areas for the basin planning and management.
- Establishment of a Permanent Commission for the Italian-Slovenian water management, with competence on cross-border planning of the Isonzo basin.
- A wide monitoring network is in course of installation -> the network will be ready by 2015.
- Possible improvement of the transboundary cooperation and of the policy coherence (i.e. thanks to the Nexus case study).

Isonzo/Soca river basin: next steps

- Improvement of the transboundary dialogue with a round table on Isonzo/Soca in occasion of the 5th Water Conference “Water in the Alps - and beyond: Adapting alpine and mountain river basins to climate change” (Trento, Italy – 25th-26th September 2014), organized in cooperation with the UNECE Water Convention.
- A final decision on the opportunity of working on the Isonzo/Soca within the Nexus will be taken in occasion of the meeting of the Permanent Commission for the Italian-Slovenian water management (October 20th-21st).

Thank you for the attention

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