



Project no. 4CE439P3

URBAN_WFTP

**Introduction of Water Footprint (WFTP) Approach in Urban Area
to Monitor, Evaluate and Improve the Water Use**

WP4.5.1

SWOT Analysis Common Index

Appendix No 4

SWOT Analysis Report (WP4.5.2)

Please tick a box, according to your region

Wroclaw

Vicenza

Innsbruck

Lead contractor for deliverable WP 4.5.1: alpS

Start date of project: 1 November 2012

Duration: 25 months

Submission date: April 2014

Guidance

1. Please collect the strengths and weaknesses, identified in step 2, using Appendix 2, and list them in appropriate sections “Strengths” or “Weaknesses” in the form of the successive page.
2. Please collect the opportunities and threats, identified in step 3, using Appendix 3, and list them in appropriate sections “Opportunities” or “Threats” in the form of the successive page.

Give name of Lab: Innsbruck

The analysis was performed within a small workshop with 6 participants on April 16, 2014.

Two different ways were chosen for the identification of strengths and weaknesses:

1. The evaluation of the questionnaires
2. A group discussion

The results of both ways were not contradictory, but still slightly different. In the group discussion more weaknesses were identified. The identified strengths were almost identical. The following list includes the results from the group discussion.

Strengths

- **The water supply of the region**
 - **The blue water footprint**
 - **The green water footprint**
 - **The low impact of industries with higher water consumption in terms of decrease of immigration**
 - **The low impact of industries with higher water consumption in terms of decrease of emigration**
 - **The capacity of own emergency backup systems for water supply and waste water**
 - **The high interconnectivity of the water network with those of neighboring regions**
 - **The measuring system for water distribution**
 - **The evaluation system for water distribution**
 - **The evaluation system for the blue water footprint**
 - **The evaluation system for the green water footprint**
 - **The evaluation system for the grey water footprint**
 - **The evaluation system for the virtual (indirect) water footprint**
 - **The monitoring system for water distribution**
 - **The lab's specific expertise**
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Weaknesses

- **The balance/handling of conflicts of interest**
- **The lab's low knowledge of the real (direct) water consumption profile of inhabitants and organizations**
- **The lab's low knowledge of the virtual (indirect) water consumption profile of inhabitants and organizations**
- **The lab's low knowledge of the sewage water generation profile of inhabitants and organizations**
- **The low awareness of inhabitants and organizations of their own real (direct) water consumption profile**
- **The low awareness of inhabitants and organizations of their own virtual (indirect) water consumption profile**
- **The low awareness of inhabitants and organizations of their own sewage water generation profile**
- **The low competence of inhabitants and organizations in terms of reducing their own real (direct) water footprint**
- **The low competence of inhabitants and organizations in terms of reducing their own virtual (indirect) water footprint**
- **The low competence of inhabitants and organizations in terms of reducing their own generation of sewage water**
- **The measuring system for the virtual (indirect) water footprint**
- **The monitoring system for the virtual (indirect) water footprint**
- **The lab's awareness of the decisive target groups and stakeholders**
- **The lab's knowledge of the impact of the decisive target groups and stakeholders on the overall water footprint**
- **The lab's knowledge of addressing and influencing the decisive target groups and stakeholders**

- **The lab's financial resources**
- **The lab's data resources**

Opportunities

- **Political/legislative occurrences**
 - **Privatization**
 - **Water Tariff system**
 - **Legal framework and regulations**
 - **Distinct property rights**
- **Economic/financial occurrences**
 - **Water Tariff system**
 - **public subsidies for infrastructure**
 - **cost efficiency**
 - **cost recovery and cost transparency**
- **Demographic occurrences**
 - **Migration**
- **Life Style/Trends/Public Awareness**
 - **Diets (consumption of regional, seasonal products)**
 - **awareness of consumers (sustainability)**
 - **urban farming/gardening**
- **Technology**
 - **Fittings**
 - **Devices (dishwashers, washing machines)**
 - **Irrigation equipment**
- **Bio-physical Environment / Ecology**
 - **climate change - changes in vegetation cover**
- **Businesses / Industries**
 - **snow farming**

Threats

- **Political/legislative occurrences**
 - **Privatization**
 - **Politicians (their interests)**
- **Economic/financial occurrences**
 - **Financial crisis**
- **Demographic occurrences**
 - **Migration**
 - **Structure of households (single person households, ageing society)**
 - **Rural exodus**
 - **Suburbanization**
 - **Shrinking society**
- **Life Style/Trends/Public Awareness**
 - **Living styles (e.g. swimming pools)**
- **Technology**
 - **Technical snowmaking**
- **Bio-physical Environment / Ecology**
 - **Land use change**
 - **climate change**
 - **changes in vegetation cover**
 - **changes in water balance**
 - **natural hazards**
- **Businesses / Industries**
 - **Tourism and consequences (technical snowmaking)**
 - **Industries moving in**
 - **food industry**
 - **chemical industry**

Comments

The natural climatic, topographic and hydrologic conditions are considered as privileges. Consequently, the water supply situation, the blue and the green water footprint are generally considered as important strengths.

The water demand of industries in the region is not critical with respect to the resources - there impact on the WFTP is thus considered as low.

The water infrastructure is at the state of the art, and possesses sufficient redundancy. This is very favorable and thus another big strength of the region.

The availability of hydrological data and data on the water distribution system are also considered as sufficient. Likewise, the tools for assessment are suitable and thus part of the strengths.

Finally, the expertise of the lab is at a high level and thus another strength.

The ways to solve conflicts of interest between different water users in the region should be improved. This includes also issues as hydropower or technical snowmaking.

Issues related to awareness and knowledge of the citizens are also considered as weaknesses.

Although many people consider water as an important resource, they are not aware of their direct water consumption and wastewater “production”.

The same applies for the indirect water consumption, where more awareness, but also data would be desirable.

To create more awareness, the lab would require more resources and data, in particular on indirect water consumption.

As can be seen from the list above, some occurrences are considered as both, threats and opportunities, e.g. migration or climate change. It was considered important how the occurrence actually takes place, which cannot be foreseen at the moment.

In general, a good legislation is considered as opportunity, as well as certain financial instruments (e.g. a good tariff system or the requirement for transparency of costs).

Demographic issues are more likely considered as threads. Changes in life style, trends and the public awareness are rather considered as an opportunity to improve the water footprint.

No clear trend towards threads or opportunities was identified for technological developments.

The most important environmental impact is climate change, which might provide some opportunities, but certainly some threads, e.g. natural hazards.

An increase in certain industrial activities is rather considered as possible threads for the region.

Interpretation

In general, the lab's region possesses a lot of strengths regarding real water consumption and water infrastructure. Although water is a very valuable resource in public perception, the main weakness are related to awareness and virtual water consumption. Measures and actions for awareness creation should thus consider this specific situation. More support and resources for such measures would be desirable. A better assessment of virtual water use would require better statistical data on production and consumption of goods on the regional or local level.

Conflicts of interest between different water users should be balanced carefully. This should be supported by adequate legal frameworks. Water issues should furthermore be discussed and considered exhaustively in politics, administration and legislation. The latter should provide a clear and distinct framework for all activities affecting water resources.