



Project no. 4CE439P3

URBAN_WFTP

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

WP 5.5.2 Water Footprint Improvement assessment

Vicenza Urban Water Footprint Lab

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1 Introduction

This document aims at doing an a posteriori analysis, few months after its drafting, of the planning effectiveness that the Vicenza U_WFTP Lab gave to the Water Footprint Improvement Plan, as defined in the WP 5.2.4 document.

An assessment will be made, which affects from one hand, the validity of the structural and conceptual underpinning the Plan and on the other, based on experience gained in the implementation and development of the identified actions, whether the measures put in place were fit for purpose and whether the desired results are achieved or not.

2 Improvement Plan Structure

Based on the assessment made by the Vicenza U_WFTP, the Improvement Plan developed (output WP 5.2.4) has been structured according to a correct approach.

The analysis of the problems that emerged from the SWOT Analysis and the results of the WFTP indicators provided by the study and the definition of the models A and C applied to the city of Vicenza from Padua University, revealed the fields of action in which the laboratory could act and, consequently, allowed the definition of the objectives to be pursued.

The objectives were focused on two groups of actions:

- The first set of actions aimed at raising awareness of municipal administrators on the need to improve the management of urban rainwater and increase effective infiltration, in order to achieve a structural intervention / legislation designed to improve it;
- the second group of actions directed to the general public in Vicenza, aimed at increasing information on issues related to water resources, viewed in the context of scarce resource to be protected and preserved and the growing awareness of the importance of saving water practised at both individual and community level.

The subjects to which the awareness interventions were directed, aiming at producing consequent actions for the reduction of the town water footprint, were the following:

- **citizens**, including the sub-category of **students**, that represent at urban level the main users of water resources, and that may therefore contribute significantly through the exchange of their habits;
- **municipal administrators** who represent those who have the ability to affect structural and regulatory decisions aimed at saving and reuse water.

3 Implemented Measures

The programming of the measures indicated on the Improvement Plan have all been implemented by the U_WFTP Lab, although in some cases there may have been a postponing of the deadline, some minor adjustments or some additional initiative, where very significant, compared as defined in a first time.

We believe that the quality of the implemented measures has to be considered satisfactory and that what was planned it has successfully completed.

Almost all other actions, from a timing point of view, can be placed after the establishment of the Improvement Plan (June-July 2014).

Among the actions that will help to achieve the two foreseen objectives we can list:

- administration of two questionnaires by e-mail to more than 1,700 citizens, users of water services;
- processing the results of the questionnaires to obtain information relevant to the work and objectives of the U_WFTP Lab;
- sending via email, to people participating in the survey, the results and the invitation to participate at the "Festambiente" workshop;
- the organization of workshops at "Festambiente" to illustrate the U_WFTP project and the Improvement Plan (sent invitations to the administrators, e-mail to the people who had participated in the online questionnaires, news on the website of the Municipality, printed flyers, info on local press media);
- the creation of an Open Day aimed at members of the Land Commission of the City of Vicenza for the illustration of the European project U_WFTP and the Laboratory Improvement Plan;

- the definition of Best Practices for a responsible consumption of water to be offered to Vicenza citizens;
- the spread of the flyer prepared by the U_WFTP Lab on Good Practices on water use with the simultaneous invitation to apply them and to self-monitor domestic consumption. The flyer was circulated by e-mail to the water service users who had joined the survey, all the email addresses of the City of Vicenza and on the Municipality of Vicenza and Acquevicentine web sites;
- the start of monitoring consumption by Acquevicentine on the sample of citizens participating in the survey. This monitoring will continue until the end of 2016;
- printed leaflets on good practices to be distributed in public events;
- a local meeting to Parco Querini addressed particularly to families and children to disseminate advice on Best Practices;
- during a census that took place from June to September 2014, provided by municipal ordinance for the complaint of artesian wells of water supply system, with proper form were also requested information about the mandatory closure systems flow. In addition, each owner who went to the offices of the Environmental Department to file the complaint was made precise recommendations on compliance with regional water saving prohibiting the provision in a continuous stream, unfortunately widely spread in the territory of Vicenza;
- three meetings in schools (two in middle school and one in a high school) giving information about the Central Europe U_WFTP project, knowledge of the water cycle and the theme of water savings;
- the "one week training" made for municipal employees, particularly from Private Building, Urban Planning and Environment departments;
- participation in the international conference on the issues U_WFTP organized by the CPV, held in Vicenza on October 30, 2014, to present the experience of the U_WFTP Lab of Vicenza, which was promoted by the media at city level by publication on the Vicenza Municipality web site.
- the preparation of a document to be presented to the City Council with the proposed "Technical Standards" to be taken into account when drafting the Municipal Building Regulations now being developed; these rules provide for the adoption of systems that encourage the reduction of water consumption and the possibilities /

opportunities for its reuse;

- the commitment of the Director of the Urban Planning Department to enter in the intervention plan statutory provisions that reinforce those already present today and going in the direction of reducing the waterproofing of soils.

4 Difficulties encountered in achieving the objectives

The major difficulty in the prosecution of the measures identified was the lack of time available.

Even for those actions started immediately after the opening of the U_WFTP Lab, as the administration-processing of the questionnaires, suffered from the lack of time available that did not allow in-depth reflections on the results, but only a rough guide on any bad habits on which to act (to be highlighted, however, that a substantial "virtuosity" of the families interviewed has emerged) and shortcomings information to the public on issues related to water.

Furthermore, being able to process the data to be used for the purposes of the project and to make known the same people participating in the survey and the entire city through publications on the website of the City of Vicenza Vicenza and water, has led to the deployment of considerable energy and economic work.

From the organizational point of view it was very difficult to be able to establish contacts with schools and be welcome to present the project and for training. Accomplish first of all the incoming summertime, but also the programming contained in POF (Educational Offer Plan) that had already defined the activities of the just started school year.

The completion of all planned activities have generally required a lot of organizational effort for the U_WFTP Lab.

5 Achieving planned results

The U_WFTP Lab of Vicenza, as mentioned, has made every planned action. Due to the nature of the objectives rather ambitious but essential for a serious improvement of the water footprint of the city, defining the percentage of the measure improvement, in the timeframe of the project, is really complex.

Considering that from the definition and preparation of the Improvement Plan - which took place between June and July 2014 - and the end of the project - foreseen by the end of November 2014 – there are only four months, two of which are in Italy the traditional summer period holidays.

This situation has forced the Vicenza U_WFTP Lab to concentrate in this very short time most of the actions envisaged, pushing hard its efforts.

In addition, as mentioned previously, the measurability of results from monitoring undertaken by Acquevicentine, which will last until the year 2016 on the sample of citizens participating in the survey, it would be offset by measurements carried out almost exclusively in a holiday period that usually do not characterized by a consumption similar to the other months of the year. Furthermore, we have to add that this year consumption has also been impacted by an abnormal summer, characterized by continuous and heavy rains that may have offset the normal city summer consumption. It is obvious that these data, to be reliable, must necessarily take into consideration at least a medium period of consumption.

As a result, the measurability of the reduction of the indicators of the impression which it was intended to do, which is the blue water and gray water, can not be returned within the timeframe of the project.

It is estimated rather optimistic about the action taken to owners of artesian wells, which was personally addressed information on the rules and penalties related to water saving, already existing but unanswered. It was proposed in the final document presented to the Town Council, to launch a serious campaign of controls on private wells to verify the attachment of sealing and the installation of flow meters. We expect this action to generate a

significant reduction in waste water.

The action from which we expect a major achievement, in this case not measurable in the short term, are the positive consequences that would result from the adoption of the Technical Standards proposed by the Vicenza U_WFTP Lab and submitted to the City Council for the inclusion of statutory provisions on "water-saving" in the Building Regulations and the Intervention Plan.

6 The budget

About the budget available for the Vicenza U_WFTP Lab, it can be said that the planned activities had no costs covered by the provided budget.

It is clear that if we want to implement structural measures on municipal buildings to adapt them to the standard "water-saving" or to implement interventions drainage, collection and reuse of water on roads, parking lots, roundabouts, etc., the city of Vicenza should provide a reasonable allocation that realistically, in this period of economic crisis, it does not seem feasible in a short period.