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URBAN_WFTP

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

**WP 5.5.3 Corrective actions and improvement -WFFL will
determine corrective actions for the continuous improvement
of WF in the Urbanized Areas**

Vicenza Urban Water Footprint Lab

Start date of project: 1 November 2012

Duration: 25 months

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CONTENTS

<u>1</u>	<u>Introduction.....</u>	<u>3</u>
<u>2</u>	<u>Corrective actions and improvement.....</u>	<u>3</u>

1 Introduction

This paper aims to highlight which actions implemented by the Vicenza U_WFTP Lab, aiming at the realization of its Improvement Plan, may be revised and corrected to improve impact.

As the U_WFTP Lab is now come to the fulfilment of all the improvement actions that had set itself and that had as purpose the start of the reduction of the urban water footprint indicators, according to the calculation models applied by the University of Padua to the city of Vicenza, experience allows now to determine some corrective actions that may be useful if applied in the future Laboratory actions and of which could take into account also other towns who want to create an U_WFTP Lab.

2 Corrective actions and improvements

Vicenza U_WFTP Lab, as described in the document WP5.5.2, is substantially satisfied about the setting of its Improvement Plan.

Encountered difficulties

As already pointed out, the improvement actions have had a very short time to be implemented. The official results of the model C were announced officially only in May 2014 and the final version of the Improvement Plan, which had as its premise also the measurement of specific indicators (blue, green, grey) to allow us to start with any reduction interventions, took place between June and July 2014. Given that the end of the project is scheduled for the end of November 2014, so it is clear that lack of time.

The first suggestion that, inevitably, can not be applied by the end of the current project is to provide a reasonably more appropriate working period for the laboratories (at least one year from the actual start of the improvement actions). Hopefully this need of time will be taken into account for eventual new urban realities that intend to replicate the experience of U_WFTP Laboratory for the study of their urban footprint.

On the other hand, it is true that there are needs in addressing environmental issues, especially given the alarming phenomena of climate change that the planet is facing, and therefore those solutions, for the care and conservation of resources, can no longer be delayed.

Measures Improvements

As for any corrective actions that relate specifically the Improvement Plan elaborated by Vicenza U_WFTP Lab, and experience gained from the analysis, there were only a few aspects that the Laboratory would like to improve. These adjustments relate to the methods of self-monitoring proposed to citizens, municipal employees, public administrators and schools, through various channels.

Vicenza U_WFTP Lab has widely disseminate flyers on "Good Practices on water use" proposing also to build an appropriate model for the reporting of weekly household consumption of water of each family. The models have been disclosed as follows: e-mailed to the sample of 800 citizens who were already participating in the survey suggested by the U_WFTP Lab (composed of the 2 questionnaires sent in February and April and monitored by the Lab till 2016) published on the websites of the City of Vicenza and Acque Vicentine, sent to all the e-mailing list of Vicenza Municipality directors and employees, sent to all employees of Acque Vicentine and finally offered during "face to face" meeting during various public events sponsored by the Lab (workshops, local meetings, open days, school visits, training). Obviously, the aim of this work was to verify the possibility of autonomously reducing consumption associated with the application of the measures and suggestions.

Vicenza U_WFTP Lab, critically reviewing, in retrospect, the actions taken, found that the proposed model of self-monitoring has a limit, that is the fact that the request for the weekly household consumption requires the value expressed in cubic meters, as such data is easy to read from the meter. We believe, however, that this does not allow those who apply the "Good Practices" to verify the significant improvements in fuel economy. These are in fact more perceptible when taken as units per litre. Unfortunately, the counters applied to the water network of the city make the data immediately visible in mc, and to understand the value in litres required to read a special small ring present in the quadrant within others.

A weakness of the action taken is therefore not having the value of consumption in litres

and, consequently, not giving specific information to users on how and where to find that measure in the counter.

This intervention would probably favoured the possibility of self-monitoring especially for those families with few components and for which the value expressed in mc has not given any reason for efforts made and the small measures adopted to save water. This fact could lead to discouragement and the decision not to pursue measures to reduce consumption.

The corrective action that is deemed useful, therefore, is to express the consumption of water weekly report in patterns of self-monitoring proposed by the U_WFTP Lab, in litres instead of cubic meters, mainly to give the right consumption measurement and to show the results of greater efforts to reduce it.

We believe that this small adjustment could ensure the most successful action of "spontaneous" self-monitoring, which has proved rather weak.

As regards the monitoring programmed until 2016 on the sample of users of which is stated above, and that will be made by the company of the management of the water cycle, Acque Vicentine, this will be carried out through the control system centralised inside the Company and through periodic measurements related to billing.