



D.T3.3.2 FUA-LEVEL COLLABORATIVE VISIONS ON CREATING ENABLING LOCAL FRAMEWORKS OF **CUW** USE

TURIN FUNCIONAL URBAN AREA

07/2020



CONTENT

INTRODUCTION	2
1. Determination of the territory covered by the strategy	3
2. Stakeholder involvement	3
3. Baseline assessment	3
4. Vision	3
5. Strategic goals and objectives	3



INTRODUCTION

Summary of chapters 1-5. The description of stage of local strategies on circular urban water management preparation covering vision creation, goal and objectives setting.

The territory of the FUA of Turin is about 1.701 km² and has 89 different municipalities. The FUA is completely covered by the Integrated water system, managed by SMAT (one of the member of the Stakeholder group). The water quality evaluation is between very good and adequate, but, since we have still the 24.97% of water losses, the main objective is to reduce this problem.

During the meetings the participation was large and quite active: all the information and data of the status quo assessment of the FUA were given to better create a strategic vision and to build a stronger action plan.

Co-creating process was based on many important thematics, in order to work first on good practice of any thematic and than to image new ideas and actions of each of them.

2030 stakeholders' vision is a more sustainable, green and resilient FUA built with a stronger cooperation between citizens and institutions.

1. Determination of the territory covered by the strategy

Description of FUA as territorial unit.

The functional urban area as definition by OCSE consists of a city and its commuting zone. Functional urban areas therefore consist of a densely inhabited city and a less densely populated commuting zone whose labour market is highly integrated with the city. The core of our FUA is Turin city.

Municipalities are strongly different in terms of urbanization and green areas, because some are mountain municipalities and others are urbanized cities. The criteria for determining the FUA territory elected by OCSE meet relevant problems when it comes to adopt laws, regulations, and policies on water management and to create a real governance system, because there is no administrative entity corresponding to the FUA. It would be more feasible to work in a different geographical area, such as "Città Metropolitana" or "Regione".

2. Stakeholder involvement

The description of the stakeholders, and the way of their involvement in strategy building process.



Stakeholders involved in the strategy building process have different expertise and belong to different bodies, as requested by the project. We succeeded in involving the expected number for each foreseen category. The main problem encountered concerns “large enterprises”, that are difficult to involve. SMAT was identified as belonging to the SAP, because it is the company that manages the Integrated Water Service of all the municipalities of the FUA and, therefore, at the territorial level it is the authority that mainly holds data on the water resource.

In the second Stakeholders group meeting and in the competence building workshop (both online) we were supported by facilitators and experts; the participation was large and quite active. The process was based on stakeholders’ knowledge and experience, on the status quo assessment of Turin FUA, and on the TMs in Italian.

Before the meetings we elaborate the results of the previous meeting and focus the goals we want to obtain, in order to make the work as fruitful as possible. We also point out simple examples of the answers we are looking for. After the meetings we send to all the stakeholders a short report and attach the presentations used, eventually asking to finalize the results or give us collaboration on some specific topic. We also sent the DLR in Italian to better understand and ideate solutions.

3. **Baseline assessment**

The synthesis of quantitative and qualitative assessment. The data and analysis essential for creation a common vision together with stakeholders.

FUA TOTAL AREA is about 1.701 km² and includes 89 Municipalities, measured data in 2018 count 1.784.753 habitants. The percentage of soil consumed in 2018 was 34,50%. Green area in the entire FUA is about 1.320 km². The average annual precipitation is 927 mm. The water quality evaluation for the rivers, the canals and lakes are in the range between very good and adequate.

The percentage of population with access to the water supply network is 100%. SMAT manages all system of purification and treatment: 93 drinking water plants are currently in operation (some plants simultaneously remove several pollutants).

The processes adopted by SMAT to guarantee the quality of the water supplied to users are as follows: aeration, chemical oxidation with chlorine, chlorine dioxide or ozone, clarification and precipitation, filtration on sand or on exchange resins, reverse osmosis, ultrafiltration, adsorption on activated carbon and other materials, disinfection with hypochlorite, chlorine dioxide and ultraviolet.

The index of real losses in distribution is 24,97% in the City of Turin, there are no dual water distribution system. In 2018 the extent of the sewerage network per inhabitant served (meters per inhabitant) remained stable compared to the previous year.

In order to optimize the treatment of waste water, these are divided into two separate dedicated networks; in this way the dilution of black water (which makes the purification processes more expensive) and unnecessarily “dirty” rainwater (which by its nature is little polluted and requires simpler treatments)



is avoided. For this reason, SMAT, in recent years, foresees the separation of the two types of network for new sewage constructions and for the remaking of the older ones.

SMAT manages a sewer development of 9.526 kilometers of municipal networks, white, black and mixed, corresponding to 4.2 meters per inhabitant served.

Most of the water withdrawn from the environment is of underground origin, i.e. from wells and springs (overall about 82%). Only 17,7% is of superficial origin (rivers, streams, rii). Water produced from wells: 71% Water produced from surface withdrawals: 17,7 % Water produced from springs: 11,3%.

In 2018, the water supplied by SMAT was 177,2 million cubic meters in total, of which almost 79,12% was used for domestic use. Considering that the residents of the municipalities served by SMAT are 2.247.449, an average of 171 l of drinking water per person for civil use was consumed per day in the Metropolitan city of Turin.

Starting from national considerations, it has been estimated that for 2018 in the FUA the annual water consumption was equal to: 290.000.000 of 1,5-liter bottles (approximately 0,66 liter/day per capita).

Use of Potable Water Domestic use 79,12%

Commercial and industrial use 13,61%

Public use 5,83%

Agricultural use and breeding 1,35%

Other uses 0,09%.

All the data was given during the workshop and the meetings; the SQ Assessment document was shared by e-mail.

4. Vision

The concise description of FUA's desired future state with suggested time horizon for the strategy 2030. The description of outputs of vision creating process (What visions were proposed by stakeholders? How was the joint vision chosen?)

During the competence building WS, a shared vision for 2030 was built towards a more sustainable, green and resilient FUA, more sustainability in the water management, and increased cooperation between citizens and institutions.

5. Strategic goals and objectives

The list of strategic goals and relevant objectives (incl. indicators, state-value and tasks).



The ideas and main themes collected at the WS individuated by the stakeholders as strategies that should be considered to build an effective circular water management process in the Turin FUA were elaborated in SGM2. Co-creating process was based on the following themes:

1. education/training/awareness raising;
2. co-working/co-design/governance;
3. finding funding;
4. law and regulations;
5. pricing system;
6. climate changes and ecosystem services;
7. data analysis;
8. technical and infrastructural interventions for the protection of water resources.

For each theme a short description was given. Some information to be gained for each theme were then individuated: existing good practices, ongoing projects and activities, new possible actions that could be part of Turin CWC action plan.

The process we are building with the stakeholders is leading to the individuation of possible actions and then to a first rough estimate of their feasibility, budget, and impact. In this way, we'll be able to select, together with the stakeholders, the focus of the Turin action plan.