

D.T4.1.2.

ANALYSIS OF EXPECTATIONS

Czech Republic Case Study

in term of training and direct assistance

Made by UCT on 03/11/2019

ANALYSIS OF EXPECTATIONS

A) METHODOLOGY

The analysis of feedback is essential for determining what the expectations of participants from the workshop are. The expectations help to improve the effectiveness of the workshop.

UCT team used the following approach to collect feedback to the workshop from public administration and operators:

- Preparation of a list of participants
- Phone call if they are interested in a workshop
- Personal interviews for getting feedback

The feedback includes the prepared questions and data on REEF 2W from Analysis of Expectations Template made by REGEA.

We interviewed 10 potential participants.

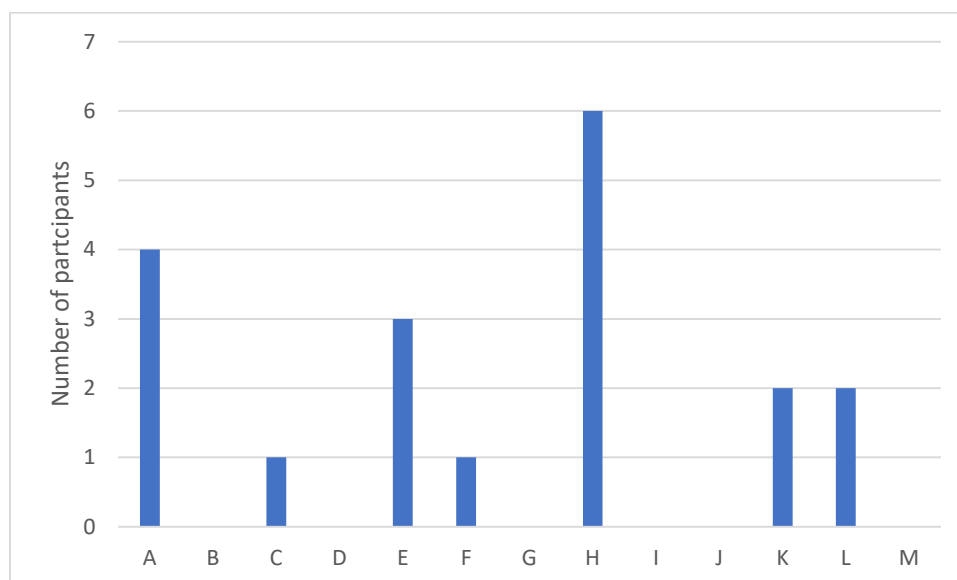
B) RESULTS (THEMATIC AREAS)

During personal meetings, all participants were asked to choose one or more of the possible answers to the question "What are the topics you are most interested in from the REEF 2W project". Possible answers were prepared and are listed below:

- a) **integration and processes optimization** of wastewater treatment plants and municipal waste management systems.
- b) **sharing knowledge and competences** for conceiving WWTP as plants generating renewable energy for own needs and even more (WWTP renewable energy positive)
- c) studying and developing models of WWTP **maximizing renewable energy production** through processes compatible to different input biomass types.
- d) studying and developing models of WWTP **diversifying energy outputs** to manage different forms of energy and vectors (electricity, heat, bio-methane, hydrogen)
- e) modelling WWTP taking into account internal processes integration and technology hybridization to **obtain relevant energy savings**.
- f) **modification of WWTP to accept organic fraction of urban waste**, recovering more energy, optimizing water cleaning process and stabilizing treatment costs;
- g) **revamping of the sludge line of WWTP** to receive the organic fraction of urban waste, mixed with public green waste, in order to improve biogas, to be turned in bio-methane and feed existing grids;
- h) Improvement of technologies and processes, e.g. **implementation of a pre-treatment in the sludge process, aimed at generating a mix of energy outputs** (biogas, electricity, excess of heat to be used for drying sludge, bio-methane through the application of new cleaning technologies);
- i) **Applying additional energy efficiency/energy production models** from renewable sources such as solar PV systems or wind turbines on existing WWTPs sites.
- j) demonstration of the **validity and effectiveness of models**

- k) **overcoming differences in the legal and administrative constraints** between waste water treatment and organic solid waste treatment and removing barriers standing in the way of implementation of mentioned models
- l) **impact on local community:** making these energy consuming plants not only more efficient or self-sustainable, but also producers of surplus of renewable energy, preferably to be used in local territories becoming key enablers for virtuous low-carbon local communities.
- m) **exchange of information and knowledge** between countries where an integrated approach is still at the beginning (i.e. Croatia, Czech Republic) and other countries where experiences in this field are instead more advanced, and where some good practices already exist (i.e. Italy, Austria, Germany)

The answers from 10 personal meetings that were held separately are shown in the following chart:



Most participants, according to the collected responses, are interested in (h) Improvement of technologies and processes followed by (h) Integration and processes optimization of WWTP. The next important topic for the participants was (e) in terms of possible energy savings. According to the respondents, the workshop should also include (k) overview of differences in the legal and administrative constraints between wastewater treatment and organic solid waste treatment and removing barriers standing in the way of implementation and summarize possible (l) impact on the local community.

(c) Studying and developing models of WWTP maximizing renewable energy production through processes compatible with different input biomass types.

(f) Modification of WWTP to accept an organic fraction of urban waste, recovering more energy, optimizing water cleaning process and stabilizing treatment costs

Besides, the participants of personal meeting made the following comments and remarks on the Tool and information presented:

- The abbreviations that appear in the project description and its tools are not described and explained clearly.
- In training, input data such as P2G technology should be better explained; there is no obvious meaning and what design and investment requirements will not only be imposed on this innovative technology.
- The results of the instrument should clearly and unambiguously define the individual results, together with the precise addition of the individual parameters, especially concerning their graphical expression.
- In training, the results obtained from the Tool should be discussed in accordance with Czech legislation.
- Closer acquaintance with technologies implemented within the project, not only concerning the Czech Republic but also those solved by other partners
- In the case of the cost of implementing new environmental technologies that have an impact on the balance of substrates for anaerobic processing, it is unclear whether and how transport costs are taken into account. Emphasize whether and how it will be taken into account.
- When evaluating a part of the UCA instrument, the input of data to the Tool should be better specified and explained, e.g., Degree of connected heat consumers
- Training should be suitable only for those who are well versed in the issues of WWTP and new technologies; it is necessary to adapt the training to the professional level of expected knowledge of trained persons.
- The training should be designed in a timely manner to familiarize the participants with everything essential and does not contain unnecessary details causing unnecessary incomprehensibility.

C) CONCLUSION

Thanks to the prepared questionnaire, we were able to identify the areas of interest of the respondents. As a result, we will be able to prepare a more thematically accurate workshop. In the workshop, we would like to reflect to the maximum possible extent the individual required areas of interest. The analysis of expectations helped us to determine the level of knowledge of individual participants, and we will be able to adapt the workshop to their needs. As well as the comments and remarks of individual participants, which helped us to identify areas that should be better specified and explained.