

## D.T2.21 FIVE TRAINING COURSES IN THE 5 REGIONS FOR UTILITIES PARTNERS AND STAKEHOLDERS ON PILOT ACTIVITIES

ITALY

13/12/2018



## 1. Executive Summary

The conduction of a training course in each of five project participating countries is the main goal of this deliverable (D.T2.2.1). Probably the term Training course is not completely appropriate because the aim of this action was double from our side it was important to present our activities, and in particular the Tool, showing its potential and explaining which could be the energetic fallout for the integration and the interactions between waste and wastewater treatment and the connected territory. From the other side we would like to understand where the Tool is still weak and need for improvements or modification. For this reason the training was more a peer to peer discussion.

The document will be composed of an agenda and a description of the training's key parts; a participant list complemented by a group picture; and a list of the materials provided to the participants. The trainings have the main purpose to present and interactively test the Integrated Sustainability Assessment (ISA) tool that can be used to systematically assess technical innovations for energy optimisation of wastewater treatment plants (WWTPs) on different sustainability criteria. In this way it helps potential users such as utility operators or decision-makers in municipalities to determine whether and how the implementation of measures to increase energy efficiency and renewable energy production are useful. This is done by making predictions about potentials to improve energy efficiency, the technical feasibility or the environmental sustainability of the REEF2W solutions.

## 2. Agenda

Ora	Descrizione
9.00 9.30	Registrazione partecipanti
9.30	Saluti del Sindaco di San Leo
9.45	Introduzione al seminario Montefeltro Servizi
10.00	Presentazione Progetto REEF 2W
10.30	Coffee break
11.00	Idrogeno produzione e utilizzo negli impianti di trattamento rifiuti
11.20	Esperienza di utilizzo di biomasse negli impianti di depurazione

	a scopo energetico
11.40	Integrazione tra depurazione e città
12.10	Presentazione del TOOL REEF 2W
13.00	Pranzo
14.00	Esercitazione con il TOOL REEF 2W
15.30	Discussione con i partecipanti

After the introduction of the Major of the city of San Leo, one of the municipalities served by Montefeltro Servizi, a general presentation of the program as well as of the project has been conducted by ENEA.

After it the link between wastes, energy and hydrogen production was presented by Eng. Giuseppe Nigliaccio ENEA .



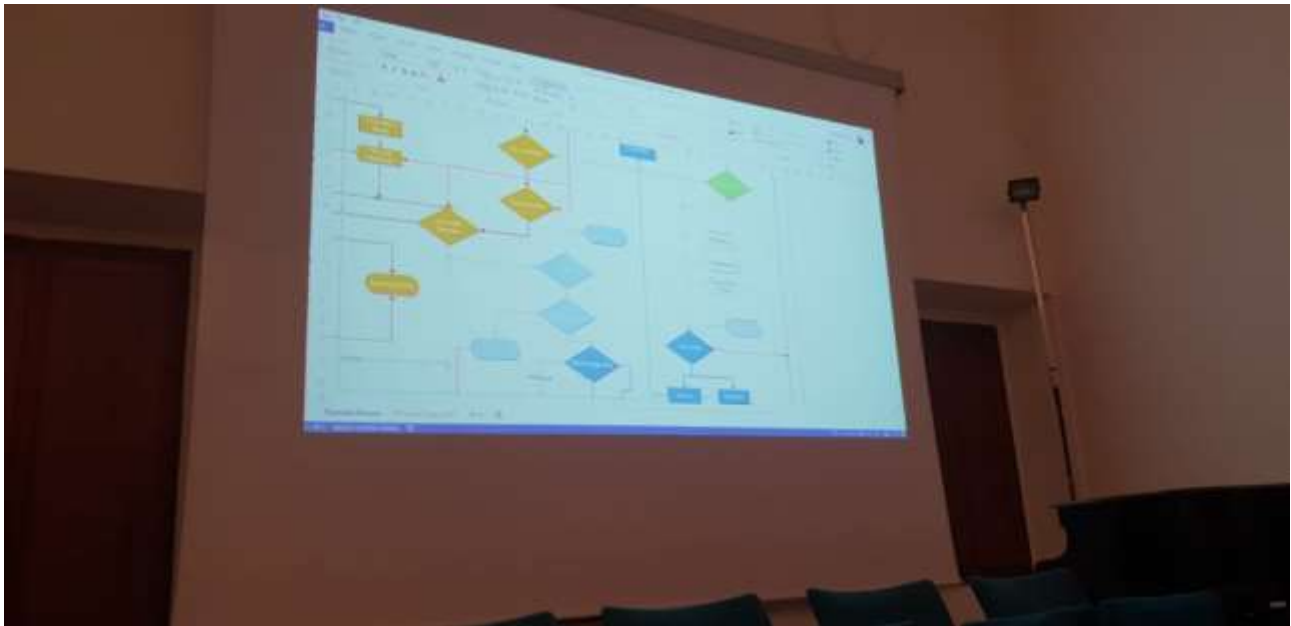
**Figure 1: Participants at the Training Course**

The remaining time was used to show how the tool works and which benefits it could have in the region for the support at the decisions that policy makers have to take.

During the course several materials were presented, in particular a flow chart explaining the connection from waste to energy and the possibilities that we have to transform an economic and environmental cost in a resource that can reduce costs of treatments.

The presentation of the Tool was done in two ways: The first was through a snapshot of the different parts of the tool explaining the general interconnection and the

calculations involved. The second was done through a practical approach using practical examples. During this phase real data was used to test the tool. In particular the tool was tested for the results obtained as well to understand if the information provided during the general introduction was sufficient to allow the users for an autonomous use of the tool.



**Figure 2: presentation of the general logic scheme of the Tool**

To stimulate the final discussion the questionnaires have been provided and asked to be filled.



**Figure 3: Discussion during the course**

### 3. Participant and speaker list

Two different lists have been prepared, one for the participants and one for the speakers. Unfortunately the lists were not used according to their purposes. Instead participants just filled in their names randomly. .



First training course REEF 2W- Participant List- **SAN LEO - 16/11/2018**

Number	Name	Surname	Company	Country	e-mail address	Signature
1	JARA	CARLI	GRUPPO CARLI	ITALY	JARA CARLI@GLOBEONLINE.IT	
2	FABIAN CARLO	FABBR	FREE ENERGY	ITALY	BOENAGHIEFABR@GLOBEONLINE.IT	
3	MAUR	QUEM	SAV UCO	ITALY	guerrini@913@gmail.com	
4	GIUSEPPE	GIACCHERON	Montefeltro Savi	ITALY		
5	PAOLO	FRERI	Montefeltro Savi	ITALY	P. FRERI@MONTFELTROSAVI.IT	
6	PIERO	PATTINI	MONTFELTRO Savi	ITALY	PIERO PATTINI@GLOBEONLINE.COM	
7	GIULIO	PIRELLA	ADRIANO F.	ITALY	adriano@adriano.it	
8	LUIGIANA	BONDI	Comuni S. Leo	ITALY	l.bondi@comuni.it	
9	GUIDO	BRANDINI	M.P. COMUNE S. LEO	ITALY	BRANDINI@COMUNE.IT	
10	GIUSEPPE	GLORIA	MONTFELTRO Savi	ITALY	info@montefeltrosavi.it	
11	GIUSEPPE	N. GLORIA	ENEA		giuseppe.nigliccio@enea.it	
12	MARCO	PUCI	IRCI	ITALY	marco@irci.it	
13	GUGLIELMINO	CERBARA	COMUNE DI S. AGATA F.		f. cerbara@comune.it	
14	DOENICO	CHARI	MONTFELTRO Savi	ITALY		
15	ANDREA	DE LUCA	MONTFELTRO Savi	ITALY	andreadeluca.m@gmail.com	
16	TONIA	VICINI	MONTFELTRO Savi	ITALY	amministrazione@montefeltrosavi.it	
17	ALESSANDRA	SORU	MONTFELTRO Savi	ITALY	alessandra.soru@gmail.com	



1st training course REEF 2W- Speaker List- **SAN LEO 16/11/2018**

Number	Name	Surname	Company	Country	e-mail address	Signature
	Roberto	FORNICE	ENEA	ITALY	roberto.fornice@enea.it	
	MARCO	PULC	IRCC	ITALY	marco.pulc@ircc.com	

Regarding the participants there was a good mix of competences among the industrial part some industry, and some utility, but there was also a strong presence of public administrators interested in a decision support system that could help them to have a look on different technologies available, and help them with an objective tool to take some policy decision.

## 4. Training Materials

Type of material	Description
PowerPoint on REEF 2W project	Introduces the project, its objectives, potential benefits, and country partners as well as the different pilot sites and the specific fictive technological upgrades and their differences among one another were presented.
PowerPoint on ISA-tool	Introduces the tool by showing snapshots of its key components of the excel version, allowing the participants to understand the methodology step by step.
Power point presentation on hydrogen	Introduce the technological aspects and the

<b>production and use</b>	economic evaluations for the use of hydrogen in the biogas upgrading and explain the reasons linked at the decoupling of electricity production from renewable sources, and the possible use of methane as energetic storage system.
<b>Prototype of ISA-tool (Excel)</b>	Used to show structure and content of ISA-tool and to fill in values together with participants in order to gain feedback on strengths and weaknesses.
<b>Summary of the guideline for the ISA-tool (DT.5.1)</b>	Presents the ISA-tool in detail as well as the technological upgrades being undertaken during REEF 2W and benefits expected to arise from their implementation.
<b>Training Curricula (DT1.5.5) in Italy</b>	Summarises the general approach taken in REEF 2W to conduct the trainings and provides information on potential participants, trainers, and the methodology.
<b>Technical satisfaction questionnaire</b>	Some specific questions on the different parts of the Tool have been presented to better understand the evaluation
<b>Methodological satisfaction questionnaire</b>	