FIVE TRAINING COURSES IN THE FIVE REGIONS FOR UTILITIES PARTNERS AND STAKEHOLDERS ON PILOT ACTIVITES

AUSTRIA

D.T2.2.1

1. Executive Summary

The main goal of this deliverable is to capture the most relevant information about the first set of trainings (D.T2.2.1) carried out in all five of the pilot countries in 2018. 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 economic feasibility or the environmental sustainability of the REEF 2W solutions.

2. Agenda

Tab. 1: Agenda of the training/meeting

Time	Description
10:00	Presentation of the REEF 2W Project
10:15	Presentation of the REEF 2W Excel tool
10:45	RHV Data-input and tool application
11:15	REEF 2W evaluation and feedback
11:45	Discussion
12:00	Lunch
13:00	Project Presentation at Eurotherme Bad Schallerbach
13:30	Presentation of spatial analysis in both case municipalities
14:00	Discussion about potential district heating network between the WWTP and the thermal spa
14:45	End of Meeting

It was intended to carry out the training in two parts: The first part (morning session at the WWTP) focused on a detailed tool application and discussion. Consequently, it

only involved the local WWTP operator. The second part (afternoon session at the local thermal spa) additionally involved a potential case study partner and a local planning office. Therefore, the focus was more on a general presentation of the REEF 2W project ideas and goals as well as on a follow-up discussion concerning the potential REEF 2W application in the specific local context.

3. Training and project discussion

Franz Zach (AEA) and Peter Lichtenwöhrer (BOKU) moderated the meetings in Wallern an der Trattnach (at the WWTP RHV Trattnachtal) and Bad Schallerbach (at the thermal spa in Bad Schallerbach). The training course during the morning was attended by Harald Bala (CEO of RHV Trattnachtal), which resulted in detailed and constructive discussions. At the beginning, the REEF 2W project approach was presented and discussed in detail, also including other pilots in the REEF 2W project. Based on the project presentation the ISA approach was clarified and thoroughly described. Based on the ISA, the REEF 2W tool was presented using a powerpoint presentation and later by directly presenting the Excel tool (also the concept was reflected). While presenting the Excel tool, data from the WWTP pilot site was directly put into the tool. Data input and final results in the "report" section of the tool were discussed and verified. Continuous feedback was given on-the-go during the tool application. After the tool application the questionnaire was used and further issues were discussed.

After the lunch Harald Bala, Franz Zach and Peter Lichtenwöhrer met with the head of facility management at the thermal spa (Herbert Aigner). Additionally, Hannes Linninger (M&P; engineering company) joined for the discussion at the spa. The goal of the meeting was to discuss the case study application of a potential district heating network between the WWTP and the thermal spa in the Trattnachtal (valley of the river "Trattnach"). At the beginning Franz Zach and Peter Lichtenwöhrer presented the general REEF 2W approach and the research project. Based on the general presentation further technical and energetic aspects, including potential district heating network configurations, were discussed. Thus, also challenges were addressed. Additionally, first assessments concerning the urban compatibility in the Trattnachtal were presented and reflected upon together. After the official meeting, we also got the chance to present the REEF 2W project to the new CEO of "EurothermenResorts", who is the head of multiple thermal spas. He gave a very positive feedback on the project approach. At the end of the meetings Harald Bala introduced Franz Zach and Peter Lichtenwöhrer to the WWTP, by presenting the facility in detail.

The following pictures were taken during the meeting/training in Wallern an der Trattnach.

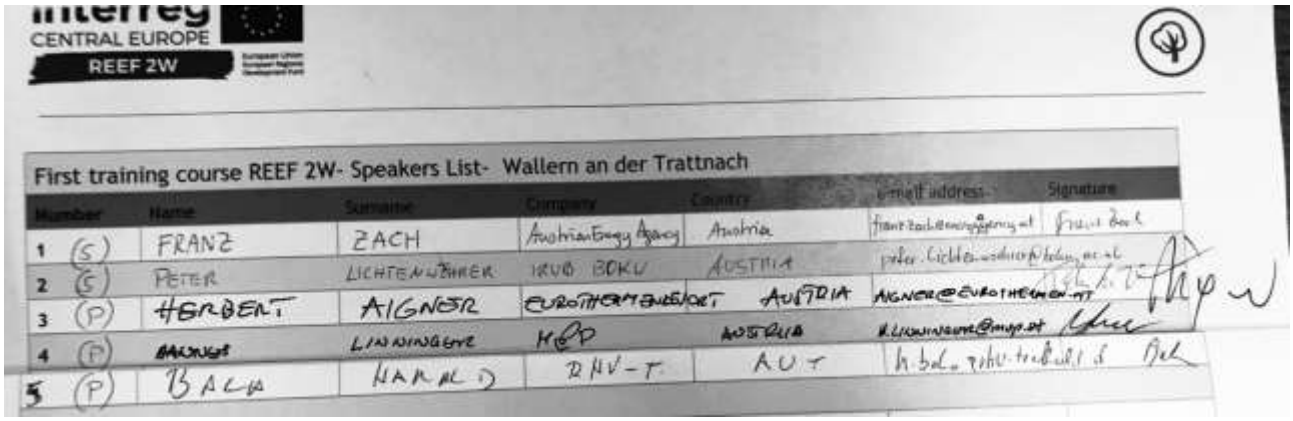
Fig. 1: Presentation of the research project at the WWTP

Fig. 2: Presentation of the research project and gathering data for input at WWTP Trattnachtal

Fig. 3: Picture of participants at the training course

Fig. 4: Excursion to the WWTP in Wallern an der Trattnach

4. Participants and speakers list



(S)…Speaker
(P)…Participant

Fig. 5: Scan of the list of attendees

5. Training Materials

Tab. 2: Training material used

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 potential technological upgrades and their differences among one another.
PowerPoint on REEF 2W tool	Introduces the tool by showing snapshots of its key components and the ISA approach of the excel version, allowing the participants to understand the methodology step by step.
Prototype of REEF 2W tool (Excel)	Used to show structure and content of the REEF 2W-tool and to fill in values together with participants in order to gain feedback on strengths and weaknesses.
REEF 2W rollup, flyers, USB-sticks and bags	Information and promotion material concerning the REEF 2W project
ISA Poster	Visualising the methodological approach for integrated sustainability assessment

The training material is based on training curricula DT1.5.5 and the ISA approach.

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

CROATIA

12/12/2018

1. Executive Summary

The main goal of this deliverable is to capture the most relevant information about the first set of trainings (D.T2.2.1) carried out in all five of the pilot countries in 2018. The document will be composed of an agenda and a description of the training's key parts; a participant list complemented; 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

Time	Description
10:00	Presentation and introduction of the REEF 2W-Projekt
10:20	Short discussion on current legislative framework in Croatia
10:50	REEF 2W-Tool introduction
11:30	Feedback, Discussion
12:00	Site visit
13:00	End of the training

Table 1: Agenda of the training

The training course was held on November 14, 2018 in the premises of ZOV (Zagreb Wastewater Ltd). The training course was organized and guided by North-west Regional Energy Agency (REGEA) and supported by Zagreb City Holding Ltd. The aim of the training was to introduce the REEF 2W project and the ISA-tool developed

within the project to the company which operates and manages the Zagreb wastewater plant in order to receive their feedback and to involve them in the project activities.

The training was comprised of five key parts. Mr Velimir Šegon from REGEA moderated the training and together with other colleagues from REGEA guided the participants through the tool. The core content of the training course was a power point based presentation and tool in excel file. The first part of the training introduced the different participants from two companies and one energy agency and gave a short overview on the REEF2 W project. Here, the different pilot sites and the specific technological upgrades and their differences among one another were presented. The second part aimed at discussing the main legislative barriers regarding the incentive mechanisms and disposal of the sludge from WWTP.

Picture 1: Velimir Šegon from REGEA presenting REEF 2W project

The third part of the training directly proceeded to introduce the tool. The tool was introduced through the excel file which included its key sections followed by detailed explanation. Each tool component was discussed which allowed to receive the participant's feedback on what could be eventually updated or revised in the next version.

After the discussion a short site visit was organized and held by employees from WTE in order to present Zagreb WWTP to REEF 2W project partners.

Picture 2: Ms Astrid Verbolle from ZOV is guiding the training participants through site visit

Picture 3: Wastewater treatment plant in Zagreb

3. Participant and speakers list

Figure 1: Participant list with signatures

First training course and workshop for public utilities and energy agencies - **REEF 2W**- Participant List - **Zagreb, 14.11.2018.**

Number / R.br.	Name / Ime	Surname / Prezime	Company / Organizacija	Country / Država	E-mail address / E-mail adresa	Signature / Potpis	I hereby confirm my consent (on condition that written revocation by me is possible at any time) to the REEF 2W project partners to collect, process, use, and circulate my personal data exclusively for the purpose of this project. I confirm my consent that pictures taken of me during this event may be used for publication on/in the REEF 2W homepage/social media.
1	VALERIJA	VRČEK HABAZIN	REGEA	HRVATSKA	vrcek@regea.org		
2	MARTINA	KRIZMANIĆ	REGEA	HRVATSKA	mkrizmanic@regea.org		
3	ELKE	[illegible]	WTE	[illegible]	[illegible]		
4	Renè	Matthies	WTE	hrvatski	rene.matthies@zoviplus		
5	ROBERT	KOSTIĆ	ZCH	HRVATSKA	[illegible]		

6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
7	ŠEGON	VELIMIR	REGEA	HR	vsegon@regea.org		
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

The training course addressed the two project target groups: public utilities and energy agencies. Velimir Šegon, Valerija Vrček Habazin and Martina Krizmanić were

facilitating the training (REGEA). The training course aimed at involving representatives of the ZOV (Zagreb wastewater Ltd) company that is responsible for the design, financing, construction and operation of the Central wastewater treatment plant Zagreb (CWWTZ) and related infrastructure. Two employees of WTE Wassertechnik GmbH, a part of a consortium that owns ZOV in charge of the management of the CWWTZ, were participating at the training – Mr Rene Matthies and Mr Elvis Kešetović.

Also, project partners from Zagreb City Holding Ltd., Bojan Ribić and Robert Kostić were participating at the training and presented the design and development of the pilot MODEL A: "Modification of WWTP to accept Organic Fraction of Urban Waste to recovery more, stabilize and lower the treatment costs in the circular economy view."

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.
Prototype of ISA-tool (Excel)	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.
Long version of guideline for the ISA-tool (DT.5.1)	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.
Abstract of guideline for the ISA-tool (DT.5.1)	Produced by adelphi and Kompetenzzentrum Wasser Berlin specifically for the training (in English and German). It summarizes the long version, yet including more graphical elements.
Training Curricula (DT1.5.5) in Croatian	Summarises the general approach taken in REEF 2W to conduct the trainings and provides information on potential participants, trainers, and the methodology.

D.T2.2.1 FIVE TRAINING COURSES IN THE 5 REGIONS FOR UTILITIES PARTNERS AND STAKEHOLDERS ON PILOT ACTIVITIES

CZECH REPUBLIC 19-20/10/2018

Training courses in each of five participating countries are the main goal of this deliverable is (D.T2.2.1) with the aim to capture the most feedback to presented materials. 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

Čas	Program
9:00	Představení projektu REEF 2W
9:30	Představení pilotního zařízení pro výrobu biomethane realizovaného v Praze
10:30	Prezentace „TOOLS" nástroje k hodnocení
11:30	Přestávka, občerstvení
12:00	Praktická ukázka využití „TOOLS"
12:30	Diskuse, náměty na zlepšení, zpětná vazba
14:00	Neformální diskuse během oběda

Tab. 1: Agenda of the training courses

The Czech project partners, UCT Prague and Veolia, carried out the training course successfully. We organized two separate courses one mainly focused for technical staff of partner utility (20.11) and second one for other interested parties (19.11).

Training start with presentation about the REEF 2W project and its goals and ideas and the introduction of each pilot case in general. Then the presentation went smoothly into the detailed description of the Prague pilot case and a description of how the tool itself works together with ISA approach.

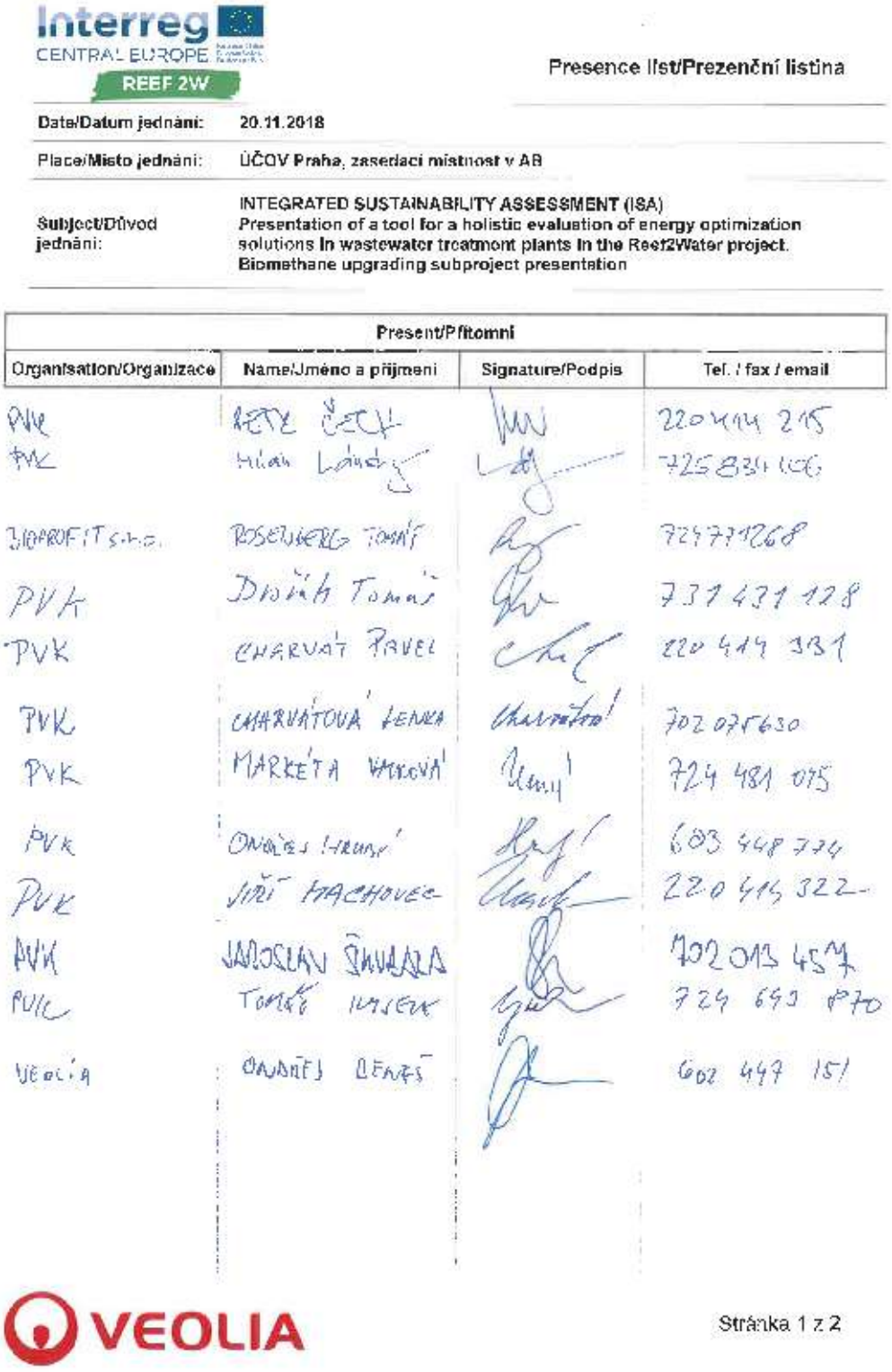
Fig. 1: Presentation of prof. Jeníček about REEF2W ideas and goals at training for operators of WWTP (20.11.)

This was done through presenting snapshots of its key components, allowing the participants step by step to understand the methodology. Before the coffee break, general questions (e.g. first impressions on the REEF2W approach and the selected solutions) were asked. In the last and most important part values (obtained from a PVK Prague) were entered into the first version of the REEF2W decision support tool. It was decided spontaneously to have questions and remarks on the go, which proofed useful to receive specific feedback.

Fig. 2: Presentation of Ing. Ondřej Beneš, Ph.D., MBA, LLM. about Prague pilot case (20.11)

Fig. 3: Zdeněk Varga Introducing the TOOL and its part (20.11)

3. Participant list



Presence list/Prezenční listina

Date/Datum jednání:	20.11.2018
Place/Místo jednání:	ÚČOV Praha, zasedací místnost v AB
Subject/Důvod jednání:	INTEGRATED SUSTAINABILITY ASSESSMENT (ISA) *Presentation of a tool for a holistic evaluation of energy optimization solutions in wastewater treatment plants in the Reef2Water project.* *Biomethane upgrading subproject presentation*

Present/Přítomni			
Organisation/Organizace	Name/Jméno a příjmení	Signature/Podpis	Tel. / fax / email
PVK	PETR ČECH		220 444 215
PVK	Milan Láník		725 831 [illegible]
BIOPROFIT s.r.o.	ROSENBERG TOMÁŠ		724 771 268
PVK	Dušák Tomáš		737 431 128
PVK	CHARVÁT PAVEL		220 414 331
PVK	CHARVÁTOVÁ LENKA		702 075 630
PVK	MARKÉTA VAŠKOVÁ		724 481 075
PVK	ONDŘEJ HRUBÝ		603 448 774
PVK	JIŘÍ MACHOVEC		220 415 322
PVK	JAROSLAV ŠNAJDR		702 013 454
PVK	TOMÁŠ HAVLÍK		724 693 870
VEOLIA	ONDŘEJ BENEŠ		602 449 151

VEOLIA

Stránka 1 z 2

Fig. 4: Participant list from training for PVK company (20.11)

Pavel Jenicek, Ondrej Benes and Zdenek Varga (UCT Prague, Veolia) were facilitating the training. Participants in the training were from the operator of the WWTP in Prague – PVK company.

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.
Prototype of ISA-tool (Excel)	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.
Long version of guideline for the ISA-tool (DT.5.1)	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.
Training Curricula (DT1.5.5) in Czech	Summarises the general approach taken in REEF 2W to conduct the trainings and provides information on potential participants, trainers, and the methodology.

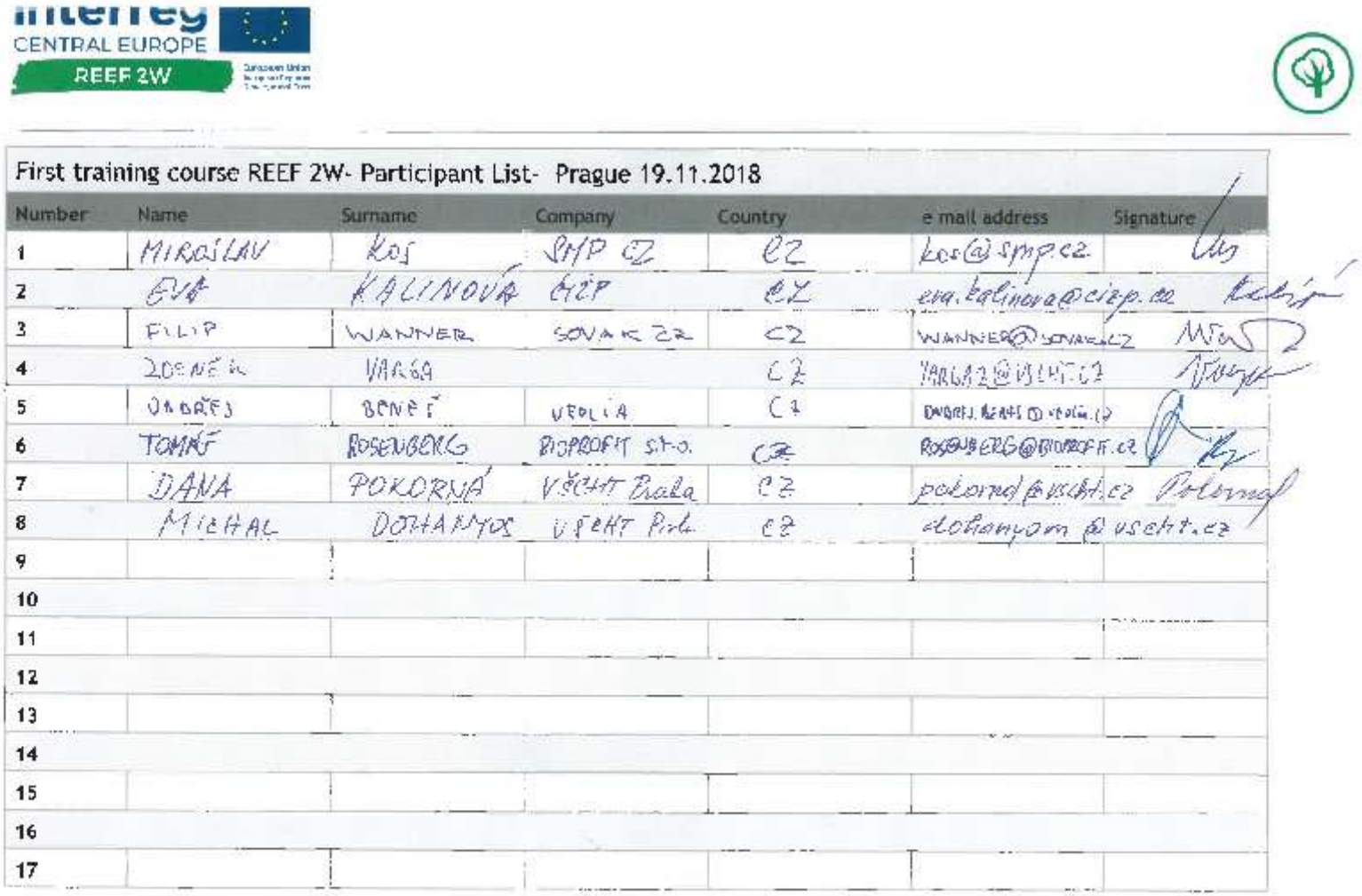
Tab. 2: List of materials used during the training courses

5. Second training course for stakeholders

The training course for the stakeholders was organized separately from first one on the 19.November 2018. The training was separated from the second one due to the time schedules of participants.

The training agenda was identical and previous part described. The only difference was that the participants of the training had different professional backgrounds. They included business managers, environmental inspector, designer of environmental facilities, and the manager of a water utility association).

However, in the second part of the training more time was dedicated to discuss the general application of the tools and REEF technologies to obtain more a wider opinion from different positions in society.



First training course REEF 2W- Participant List- Prague 19.11.2018

Number	Name	Surname	Company	Country	e mail address	Signature
1	MIROSLAV	KOS	SMP CZ	CZ	kos@smp.cz	
2	EVA	KALINOVÁ	CIŽP	CZ	eva.kalinova@cizp.cz	
3	FILIP	WANNER	SOVAK CZ	CZ	WANNER@SOVAK.CZ	
4	ZDENĚK	VARGA		CZ	VARGA2@VSCHT.CZ	
5	ONDŘEJ	BONEŠ	VEOLIA	CZ		
6	TOMÁŠ	ROSENBERG	BIOPROFIT S.r.o.	CZ	ROSENBERG@BIOPROFIT.CZ	
7	DANA	POKORNÁ	VŠCHT Praha	CZ	pokornad@vscht.cz	
8	MICHAL	DOHÁNYOS	VŠCHT Pra.	CZ	dohanyom@vscht.cz	
9						
10						
11						
12						
13						
14						
15						
16						
17						

Page: 1

Fig. 5: Participant list from training for stakeholders (19.11)

Fig. 6: Presentation of the TOOL for stakeholders (19.11)

Fig. 7: Collective picture of participants of stakeholder training (19.11)

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

GERMANY

17/12/2018

1. Executive Summary

The main goal of this deliverable is to capture the most relevant information about the first set of trainings (D.T2.2.1) carried out in all five of the pilot countries in 2018. 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

Zeit	Beschreibung
10:00	Vortrag über das REEF 2W-Projekt
10:20	Kurze Präsentation über die Struktur des REEF 2W-Tools
10:50	Kaffee-Pause
11:00	REEF 2W Tool Vorstellung und Anwendung
11:30	Feedback, Diskussion
12:00	Gemeinsames Mittagessen

The training was comprised of four key parts. André Müller from adelphi moderated the training while the colleagues from Kompetenzzentrum Wasser Berlin gGmbH guided the participants through the tool. The first part of the training introduced the different participants and gave a short overview on the REEF2W project. Here, the different pilot sites and the specific technological upgrades and their differences

among one another were presented. Subsequently, the training directly proceeded to introduce the tool.

Figure 1: Christian Loderer from KWB introducing the project REEF2W

This was done through presenting snapshots of its key components, allowing the participants step by step to understand the methodology. Before the coffee break, general questions (e.g. first impressions on the REEF2W approach and the selected solutions) were asked. In the last and most important part values (obtained from a Berlin WWTP) were entered into the first version of the REEF2W decision support tool. It was decided spontaneously to have questions and remarks on the go, which proofed useful to receive concrete feedback.

3. Participant and speakers list

Figure 2: Participant list with signatures

First training course REEF 2W- Participant List- Berlin 22.10.2018

Number	Name	Surname	Company	Country	e mail address	Signature
1	André	Müller	adelphi	Germany		
2	Malke	März	adelphi	Germany		
3	Christian	Loderer	KWB	Germany		
4	Anne	Kleyböcker	KWB	Germany		
5	René	Griese	KWB	Germany		
6	Mehdi	Habibi	KWB	Germany		
7	Albert	Dietrich	Berliner Stadtwerke	Germany		
8	Christopher	Dreke	BWB (FE)	Germany		
9	Bernd	Heinzmann	BWB (FE)	Germany		
10	Martin	Garz	BWB (AE)	Germany		
11	Susi	Burczyk	BWB (AE)	Germany		
12	Andreas	Lengemann	BWB (AE)	Germany		
13	Magdalena	Gierke	BWB (AE)			
14	Nathan	Obermaier	UBA	Germany		
15	Jan	Wasdinewski	BWB (FE)	Germany		
16						

Mehdi Habibi, René Griese, Christian Loderer (Kompetenzzentrum Wasser Berlin gGmbH) and André Müller (adelphi) were facilitating the training. Participants in the training were seven in total while three participants are being introduced to tool and asked for feedback in separate meeting at the Waßmannsdorf WWTP.

Figure 3: Speakers list

First training course REEF 2W- Speaker List- Berlin 22.10.2018

Number	Name	Surname	Company	Country	e mail address	Signature
1	Christian	Loderer	KWB	Germany		
2	Mehdi	Habibi	KWB	Germany		
3	René	Griese	KWB	Germany		
4	André	Müller	Adelphi	Germany		
5						

4. Training Materials

Table 1: Materials used at the Berlin training.

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.
Prototype of ISA-tool (Excel)	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.
Long version of guideline for the ISA-tool (DT.5.1)	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.
Abstract of guideline for the ISA-tool (DT.5.1)	Produced by adelphi and Kompetenzzentrum Wasser Berlin specifically for the training (in English and German). It summarizes the long version, yet including more graphical elements.
Training Curricula (DT1.5.5) in German	Summarises the general approach taken in REEF 2W to conduct the trainings and provides information on potential participants, trainers, and the methodology.

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

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.

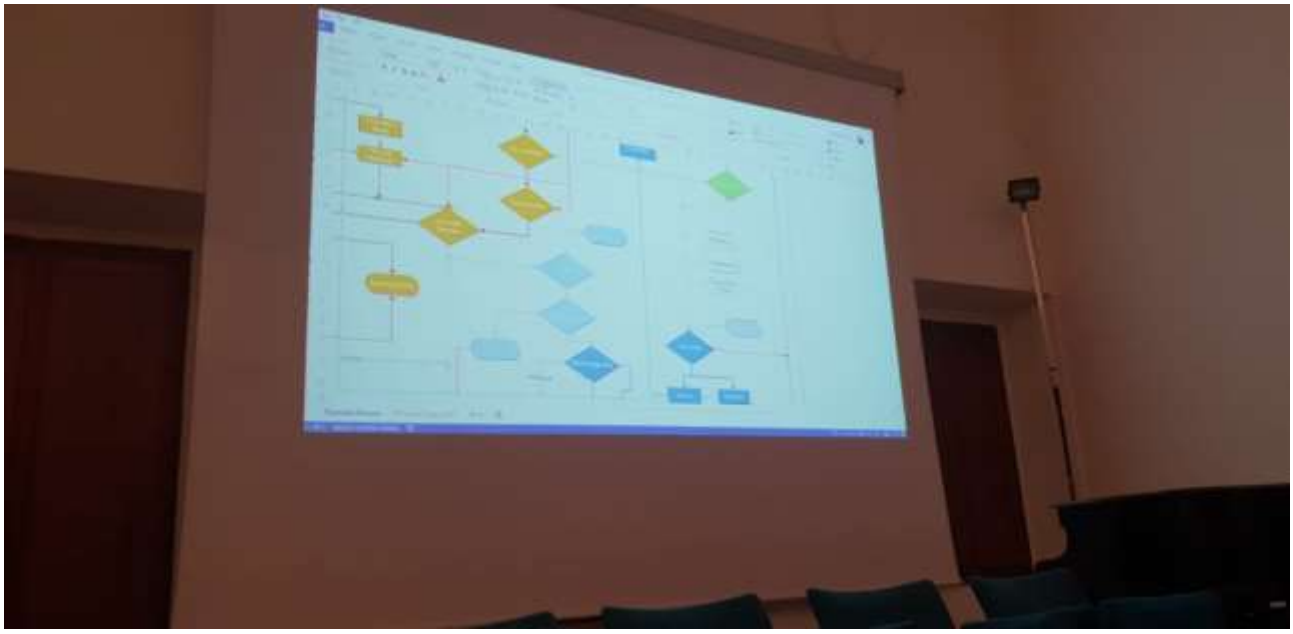


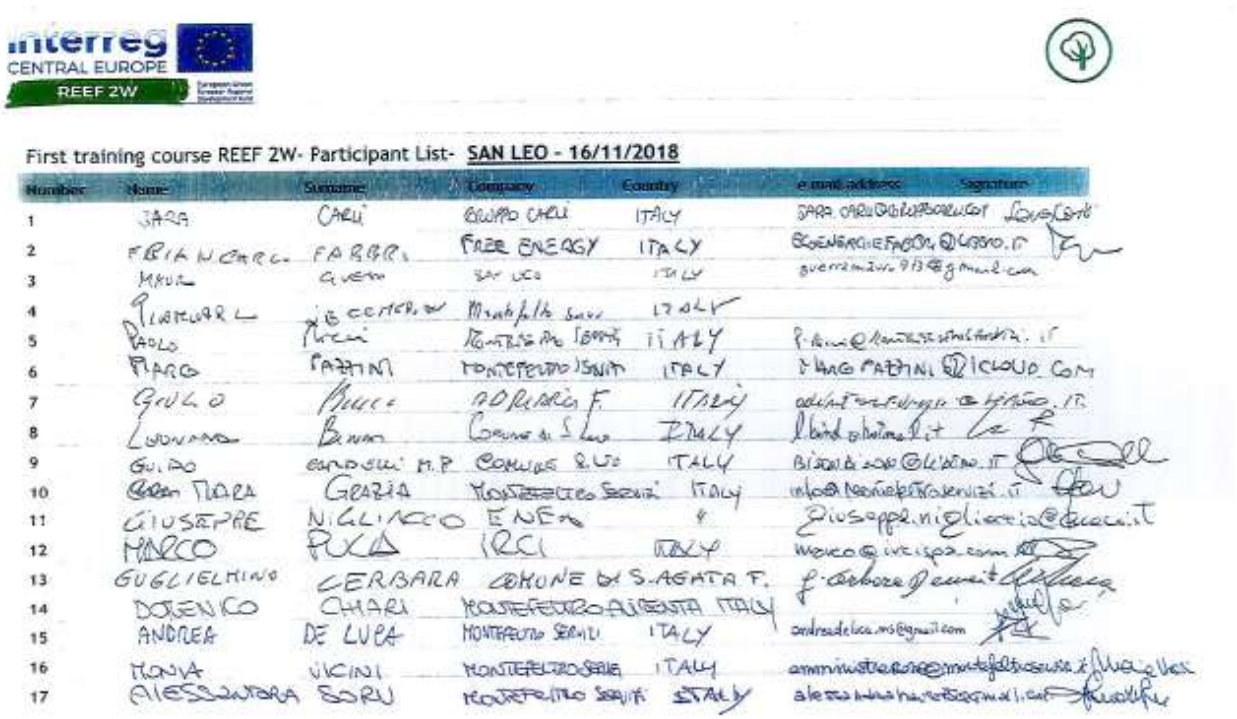
Figure 2: presentation of the general logic scheme of the Tool

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

Figure 3: Discussion during the course

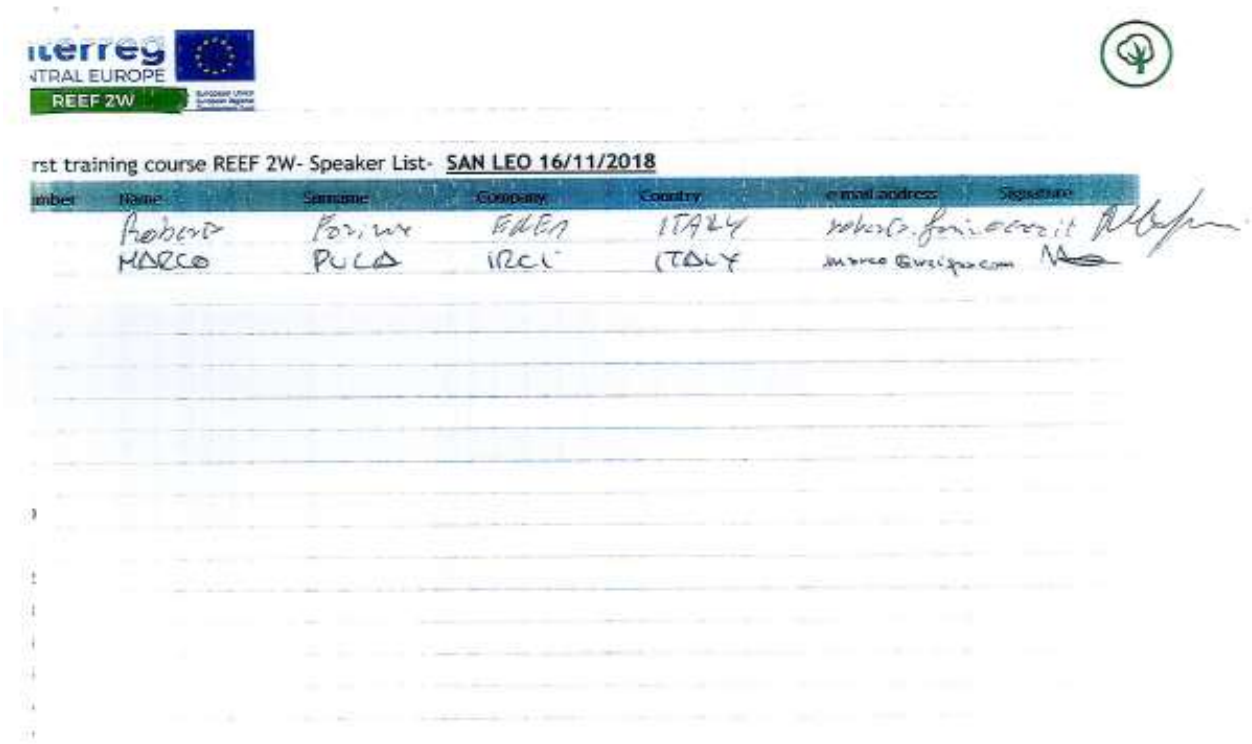
3. Participant and speaker list

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	SARA	CARLI	GRUPPO CARLI	ITALY	SARA.CARLI@GRUPPOCARLI.COM	
2	FABIANO	FABBRI	FREE ENERGY	ITALY	SGENERGIEFABBRI@LIBERO.IT	
3	MARIA	[illegible]	[illegible]	ITALY	[illegible]	
4	[illegible]	[illegible]	[illegible]	ITALY		
5	PAOLO	[illegible]	[illegible]	ITALY	[illegible]	
6	MARIO	FABBRI	MONTEFELTRO SVILUPPO	ITALY	MARIO.FABBRI@ICLOUD.COM	
7	GIULIO	[illegible]	ADRIATICA F.	ITALY	[illegible]	
8	LUCIANA	[illegible]	COMUNE DI S. LEO	ITALY	[illegible]	
9	GUIDO	[illegible]	COMUNE S. LEO	ITALY	[illegible]	
10	[illegible]	GRAZIA	MONTEFELTRO SVILUPPO	ITALY	[illegible]	
11	GIUSEPPE	NIGLIACCIO	ENEA		GIUSEPPE.NIGLIACCIO@ENEA.IT	
12	MARCO	PUCA	IRCI	ITALY	MARCO@IRCISPA.COM	
13	GUGLIELMINO	CERBARA	COMUNE DI S. AGATA F.		[illegible]	
14	DOMENICO	CHIARI	MONTEFELTRO AZIENDA	ITALY		
15	ANDREA	DE LUCA	MONTEFELTRO SVILUPPO	ITALY	ANDREADELUCA.MS@GMAIL.COM	
16	NADIA	VICINI	MONTEFELTRO SVILUPPO	ITALY	AMMINISTRAZIONE@MONTEFELTROSVILUPPO.IT	
17	ALESSANDRA	SORU	MONTEFELTRO SVILUPPO	ITALY	[illegible]	



rst training course REEF 2W- Speaker List- SAN LEO 16/11/2018

mber	Name	Surname	Company	Country	e-mail address	Signature
	Roberto	Fazio	ENEA	ITALY	roberto.fazio@enea.it	
	MARCO	PULA	IRCI	ITALY	marco@ircl.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

production and use	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.
Prototype of ISA-tool (Excel)	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.
Summary of the guideline for the ISA-tool (DT.5.1)	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.
Training Curricula (DT1.5.5) in Italy	Summarises the general approach taken in REEF 2W to conduct the trainings and provides information on potential participants, trainers, and the methodology.
Technical satisfaction questionnaire	Some specific questions on the different parts of the Tool have been presented to better understand the evaluation
Methodological satisfaction questionnaire	