



D3.6: Engagement workshop format(s) and content. Version 4: Evaluation and Dissemination Workshops



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857806.

Project acronym: MUSIC
Project title: Market Uptake Support for Intermediate Bioenergy Carriers
Project no. 857806
Project duration: September 2019 – February 2023 (42 month)
Work Package: WP3: Stakeholder engagement and mobilisation
Work Package leader: Deutsches Biomasseforschungszentrum gGmbH (DBFZ)
Task: T3.7: Regional engagement workshops
Task leader: Deutsches Biomasseforschungszentrum gGmbH (DBFZ)
Deliverable title: D3.6: Engagement workshop format(s) and content
Due date of deliverable: Submission of Version 1 (M7): 31.03.2020
 Submission of Version 2 (M23): 31.07.2021
 Submission of Version 3 (M32): 30.04.2022
 Submission of Version 4 (M38): 31.10.2022
Actual submission date: Version 4: 31 October 2022

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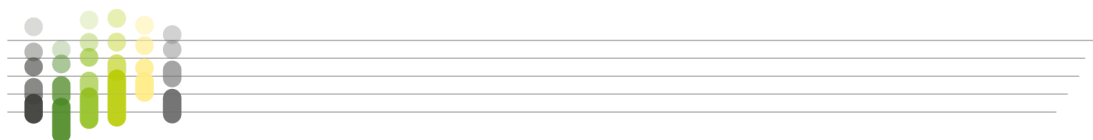


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Executive Summary

Stakeholder engagement activities are key for successful implementation and market introduction of novel technologies. Workshops are a proven way to engage with stakeholders; hence, several workshops are planned in the different case study regions. This fourth version serves as an update of the other versions of D3.6, which were submitted in M7, M23 and M32 of the project. It briefly explains the use of workshops in general, reflects experiences made in the workshops of year 1, year 2 and year 3 and presents the format and content as well as a preliminary agenda of the fourth series of workshops. In consultation with the case study leads, it was decided to organise the workshops regarding CS Sweden/Finland and CS Greece in September/October 2022, while the workshops regarding CS International and CS Italy have already been held in May/July 2022 (see D3.6c). The present final deliverable 3.6d describes the format and content of all workshops held during the project period, which took place as webinars in 2020, as online and physical workshops 2021-2022 in all of the MUSIC case study locations.

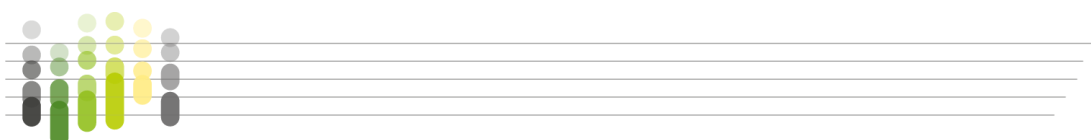


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Abbreviations

BFR	BioFuel Region
BTG	Biomass Technology Group
CERTH	Centre for Research and Technology Hellas
CRES	Centre for Research on Environmental Systems
CS	Case Study
DBFZ	Deutsches Biomasseforschungszentrum gemeinnützige GmbH
Dx.x	Deliverable
EBTC	European Business and Technology Center
IBC	Intermediate Bioenergy Carrier
IBTC	International Biomass Torrefaction Council
MUSIC	Market Uptake Support for Intermediate Bioenergy Carriers
PESTEL	Political, Economic, Social, Technological, Environmental and Legal
RE-CORD	Renewable Energy Consortium for Research and Demonstration
Tx.x	Task
WPx	Work Package



1 Introduction

“Intermediate bioenergy carriers (IBCs) are biomass that is processed to energetically denser materials, analogous to oil, coal and gaseous fossil energy carriers. This means they are easier to transport, store and use. The MUSIC project will support market uptake of three types of IBCs by developing feedstock mobilisation strategies, improved cost-effective logistics and trade centres. IBCs covered in MUSIC include fast pyrolysis bio oil, torrefied biomass and microbial oil. [...] They can be used directly for heat or power generation or further refined to final bioenergy or bio-based products. IBCs contribute to energy security, reduce greenhouse gas emissions and provide a sustainable alternative to fossil fuels in Europe.” (WIP Munich, 2021)

Within the MUSIC project, WP3 (Stakeholder engagement and mobilisation) focuses on engaging different groups of stakeholders, and assessing their views on IBC, with the aim of developing specific and strategic recommendations on supply chain development. Data collection and dissemination in the respective CS regions is crucial for stakeholder engagement and mobilisation. In order to engage with stakeholders in the most efficient way, workshops are planned as part of the MUSIC project. Initially, it was planned that all workshops will take place in the different CS regions. In the early stages of the project (year 1 and 2), these workshops will be considered as “input workshops” to gain a better understanding of the needs of the different CSs, to guide data collection later on as well as to support networking between stakeholders. Towards the end of the project (year 3 and year 4), the workshops will be used as a way to present preliminary results of the strategy development for each case study and to give stakeholders the opportunity to contribute and to have an influence on the way of result presentation and strategy development. To ensure to organise at least two physical events in each case study region, it was decided to have an additional series of workshops in year 4, in which the final project results for IBCs’ market uptake support shall be disseminated. Moreover, they shall provide room for further networking of stakeholders in order to support cooperation activities and the initiation of further innovative projects building on work and results of the MUSIC project in the respective regions.

This fourth version of D3.6 includes information about how to organise the fourth series of workshops in year 4, while considering experiences made during the previous series of workshops, which took place in year 1, 2 and 3. In general, it is preferred to have similar workshop formats and contents across the CS regions and different project years. With similar workshop structures, the comparability of the workshops’ results can be ensured; both regarding the different regional contexts and the different series of workshops (in year 1 and 2). In comparison to the input workshops in year 1 and 2, the evaluation and dissemination workshops in year 3 and 4 are rather foreseen as an opportunity to reflect and verify the strategies developed in WP3, while data was collected together with stakeholders through several discussion sessions in the input workshops. Therefore, the format and content of the evaluation and dissemination workshops needs to be adapted accordingly as described in the following paragraphs. The outcomes and experiences made during the first, second and third series of workshops guided the design of the final workshops in year 4.



2 Evaluation and Dissemination Workshops Format and Content

Workshops can be a useful tool to either collect or disseminate data on a specific topic. They are flexible in their design and can be tailored to a specific purpose. Often used as part of participatory research (Merriam, 2014), workshops help to engage stakeholders, find solutions to specific problems/questions or create a mutual understanding of a topic (dscout, 2021).

2.1 Content and Aims

For a workshop to be successful, a clear aim needs to be defined (dscout, 2021). The overall aim of the fourth series of workshops is to network crucial stakeholders along the supply chain in order to support IBCs market uptake. As it is important to generate added value not only for WP3 (stakeholder engagement and mobilisation) and WP5 (case studies on supply chain logistics) but also for the participating stakeholders, the following sub-aims are defined.

Aims from a project internal perspective (WP3/WP5):

Supplementary to the purposes of workshops described in the previous paragraph, workshops can provide room for stakeholder-based assessment. Originally, peer assessment is a process in academic learning which allows students to assess their co-student instead of getting a grade by a teacher; i.e. a student is not assessed by only one person with subjective opinion but by a whole group of people having a cumulative opinion (UBC, n.d.). Regarding the third and fourth series of workshops, the WP3 team decided to follow a similar approach in order to verify project results in stakeholder-based assessment and evaluation workshops. Preliminary results will be presented by the project team and experts (stakeholders), which are forming the audience and which are invited to give feedback on the status quo of the results. This procedure can be called “participatory or stakeholder-based assessment” (Butterfoss et al., 2001; Leith et al., 2012).

With the development of meaningful strategies and recommendations as well as through bringing together relevant stakeholders from different categories along the whole supply chain, MUSICs general target, namely the market uptake support of IBCs, is promoted well.¹

Aims from an external stakeholder perspective:

- Getting an overview of the role of regional biogenic resources used in innovative technologies regarding the manufacturing of sustainable products, showing innovative business cases
- Getting an overview of innovative supply chains for a sustainable bio-economy and bioenergy sector to reach emission saving targets, to replace unsustainable technology and resources, to get knowledge of profitable sustainable business models, to replace expensive and unsustainable technology and fuel, to get knowledge about lower cost energy carrier technology

Continuation on next page.

¹ Information on different stakeholder categories along the whole supply chain of IBCs within the four CS contexts can be found in MUSIC Deliverable 3.3 “Set of Stakeholder Factsheets” on www.music-h2020.eu.



- Networking/getting in contact with regional actors along the whole supply chain of IBCs:
 - o from feedstock suppliers, through IBC producers to end consumers;
 - o also including service providers, like technology producers and logistics companies;
 - o as well as stakeholders from policy and research
- Learning from experiences made by other stakeholders from different fields
- Learning from experiences made within the EU H2020 project “MUSIC”

The feedback collected in the evaluation workshops will directly feed Task 3.6 (strategy development and recommendations). The outcome of all workshops will be presented in D3.7 (reports on regional engagement workshops, due in M41/January 2023) and be further used for D3.8 (short report on national strategies and recommendations, due in M42/February 2023).

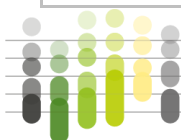
2.2 Lessons Learned in Previous Series of Workshops

Reflecting the experiences made in previous workshops helps to improve the successful implementation of further workshops in the future. In this context, not only the opinion of the organisers but above all the feedback of participants is of high importance. In this deliverable, only the most important experiences made in previous series and which have to be considered in the upcoming series of workshops will be integrated. More content-related information and further observations made in all series of workshops will be given in the final report on regional engagement workshops (D3.7), which is due in M41 of MUSIC (January 2023).

Initially, it was planned to have physical meetings in the four CS regions in each of the workshop series. However, due to COVID-19 restrictions, there was the need to switch over to online formats in almost all workshops of year 1 and 2. Only the workshop regarding CS International in year 2 could be held as physical workshop at the ArcelorMittal location in Ghent (Belgium). In year 3, the third workshop regarding CS International was held physically within the frame of a networking event at DBFZ in Leipzig (Germany). Moreover, the third workshop regarding CS Italy was implemented as a physical stakeholder meeting in Valli del Pasubio in the Veneto region (Italy). After holding those physical workshops, some clear advantages and disadvantages of virtual and physical meetings could be concluded by WP3 team as given in Table 1 below.

Table 1: Comparison of online and physical workshops

Online workshop	Physical workshop
- Connection issues	- Invest time/money for travels, cause emissions
- „Digital fatigue“	+ Change from daily business
- No/less one-on-one conversations	+ Using breaks for networking
- Loosing participants during breaks	+ Higher level of active participation
- Less engagement due to distractions	+ Continuous feedback and flow of debates
+ No further expenditures for traveling (time, money) and venue, less emissions	+ Possibility of directly distributing little welcome gifts, project information between participants
+ Less effort for organising and preparing the event location incl. food and beverages	+ Immediate bilateral talks and initiation of further collaboration and meetings more likely
+ Accessible from anywhere as long as there is connection	+ Offers a better environment for creative group activities i.e. brainstorming, creative thinking



+ Wide capacity of guests (esp. in times of COVID)	+ Face-to-face interactions (trust, partnerships)
- Less or no impression on personal feelings	+ Feeling of “sympathy” or “dislike” for persons is very important for collaboration work

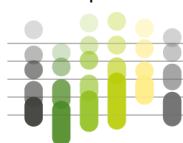
Main experiences made in series 1 in May 2020 (comprehensive explanation in D3.6b, submitted in M23, July 2021):

- Expected synergies did not occur when workshops of different CSs (CS International and CS Italy) have been combined
- Missing summary of CS design at the beginning of the meeting caused a delay in starting the discussion
- No aspect of the respective supply chains must be neglected
- To some of the participants sticking on the PESTEL method as discussion framework appeared to be at first “too theoretical grounded”

Main experiences made in series 2 in September/October 2021:

- Clear assigning of responsibilities to individual persons (moderation, technical support, guest service, catering, ...) was beneficial
- Make sure that enough breaks are foreseen
- Professional translation needs to be organised at an early stage
- Key-note presentations of experts (e.g. on land use change or political issues) at the beginning were really interesting and helpful; contact the speakers at an early stage; little presents as thank-you should have been organised for speakers and moderators
- Little welcome gifts have been well received by participants
- Sense of time in online events differs from that in physical meetings (online meetings “too long”, physical meetings “almost too short”)
- Mixing of participants in sub-groups during the discussion sessions will bring new perspectives and thereby raise new aspects
- Participation rate needs to be checked: How many stakeholders have to be invited in order to reach the targeted number of attendees and reach a higher diversity of stakeholder expertise and participation from all stakeholder groups (including policy related stakeholders)?
- Response rate of survey was very low; therefore, the survey needs to be more attractive and directly distributed during the workshop (e.g. by using a tool such as [www.menti-meter.com](https://www.mentimeter.com)); moreover, the survey could be distributed through an existing B2B network of stakeholders, then participants are rather engaged to respond

In conclusion of the second series of stakeholder workshops, the participants were invited to take part in an online questionnaire. The surveys were conducted with the aim of evaluating the workshops and obtaining comparable quantifiable data. The questionnaires for the workshops consist of the same questions, which have been minimally adapted for the different case



studies (see Annex 1-2). Regarding the CS Greece, Sweden/Finland and Italy, the invitations to the survey were sent together with the CS leads too late after the workshop sessions. Therefore, the response rate was not as expected and only 3 stakeholders from CS Italy responded to the survey (≈ 20 WS participants). Better results were achieved in the physical workshop of CS International with 8 responses, as the survey was provided to the participants in printed form. Another reason for those few replies may also be the so called "digital fatigue" appearing to many persons during the COVID-19 pandemic. An overview of responses is given in table 2. Due to this low response, the goal in future is to improve the response rate and thus to increase the informative value of the surveys. Therefore, it is planned to include the surveys directly into the workshops in the future.

Table 2: Survey response rate in the second series of workshops

Workshop/ Case Study	CS International	CS Sweden/ Finland	CS Italy	CS Greece
Format	Physically	Online	Online	Online
Participants	20	23	19	30
Responds	8	0	3	0

Main experiences made in series 3 in May/July 2022:

- The workshop in Valli del Pasubio (CS Italy), the participants were invited to fill in a paper questionnaire, useful to collect data on the use of biogenic residues. This was helpful in as the online version of the questionnaire had a low response rate.
- The workshop in Valli del Pasubio (CS Italy), found place within the closing event of another research project². This allowed for stakeholders networking and knowledge transfer between MUSIC and EU projects related to bioeconomy. However, one main risk is the fact that the MUSIC workshop has a marginal role with respect to the other project.
- One lesson learned relates to the type of stakeholders which participated in the workshop. A low number of political stakeholders attended the workshop. Including more political and governmental actors in future workshops may allow for a deeper understanding of policy-related issues regarding the market entry of biomass supply-chains.

2.3 Format and Participants

2.3.1 General Workshop Organisation

According to the description of MUSIC Task 3.7 (regional engagement workshops) the organisation of the workshops will be carried out by the CS partners of the respective region. While

² CAREGA Project <https://www.progettocarega.it/en/> on the optimization of the local wood supply chain



the respective CS partners and related topic specific, skilled experts will primarily act as moderators for the workshops, DBFZ will if necessary provide support in moderation, organisation and implementation of potential sub-groups. Only the workshop regarding the CS International will be completely planned and organised by DBFZ. Main responsible persons for workshop organisation were defined together in bilateral meetings of WP3 and WP5 lead as well as each CS lead:

- CS International: Konrad Siegfried (DBFZ) and Linda König (DBFZ)
- CS Italy: Giacomo Talluri (RE-CORD)
- CS Sweden/Finland: Magnus Matisons (BFR) and John Vos (BTG)
- CS Greece: Kyriakos Panopoulos (CERTH) and Myrsini Christou (CRES)

Of course, the other MUSIC partner organisations that are related with the case studies (BTG, BTG-Bioliquids, GoodFuels and TorrCoal from the Netherlands, Green Fuel Nordic from Finland, ENI from Italy, CLuBE from Greece, and Renewi from Belgium) are also invited to participate in the workshops or to hold a presentation, but they are only partially involved in the workshops' organisation.

For the second series of workshops in September/October 2021, it was decided in which language each workshop will be held. As the workshops on the CS Sweden/Finland and CS International will bring together stakeholders from different countries also in the workshop series three, these workshops are to be held in English as well. During the last series of workshops regarding CS Italy and CS Greece, it turned out to be beneficial to hold the workshops in the native language of the participants. Especially for upstream stakeholders (e.g. small agricultural companies) English workshops could be challenging, because in this case the stakeholders may not express themselves well. If they cannot share their thoughts well in English, it would perhaps result in losing important information or they even will not participate in the workshops at all.

In coordination with the CS teams, the following dates for the third and four series of stakeholder engagement workshops were agreed:

- CS International: 31st May 2022
- CS Italy: 14th July 2022
- CS Sweden/Finland: 7th - 8th September 2022
- CS Greece: 20th October 2022

The teams of CS International and CS Italy decided to bring stakeholders together physically before the 2022 summer break. The workshops associated to CS Sweden/Finland and CS Greece were organised after the 2022 summer break. On the next pages (section 2.3.2 Case Study Tailored Workshop Concepts), the planning is presented for all the workshops which have taken place.

As it became apparent to be beneficial for the discussion session(s) in the previous workshops, the respective CS will be presented at the beginning of each workshop. In this way, a common understanding of the CS' status quo will be generated. Afterwards, some key note speakers



may be a good way of attracting the interest of stakeholders and giving a good introduction into the topic and incentives for discussions.

The further format of the discussion session(s) is dependent on the target group: sometimes, new and varied formats are needed, such as **Pecha-Kucha, Fishbowl or Black Market**. Sometimes, conventional methods are more sufficient, e.g. **World Café or a Panel Discussion**. Next to the target group, the choice of the discussion session is also strongly **dependent on the format of workshops, i.e. do participants meet online or physically**. Some of the mentioned methods work better in virtual meetings than the others.

Focus of the discussion session(s) shall be laid on preliminary results of DBFZ work, i.e. strategy suggestions and PESTEL+I results (Blümel et al. 2022, Siegfried et al. 2022) for the CS concept extracted from stakeholder engagement activities and market related research (previous input workshops, interviews, literature and media research). Therefore, some strategy examples regarding the successful market uptake of IBCs in the specific CS context will be provided and represents the basis for discussion. Selection of important and most relevant strategies and PESTEL+I factors to be discussed will be done as soon as the final list of participants is fixed.

In order to meet the requirement set in MUSIC Deliverable 9.1 H – Requirement No. 1 in WP9 – Ethics requirements, the main contact(s)/responsible person(s) for workshop organisation of each CS need to send the consent form to each stakeholder that has confirmed interest in participating in the workshop. This consent form is to be signed and returned by each participant ahead of the workshop. After the workshop contact person received the signed consent form, (s)he shall forward it to DBFZ, as DBFZ will further analyse the data gathered during the workshops. The consent form prepared for the second series of workshops can be used again.



2.3.2 Case Study Tailored Workshop Concepts

a) CS Sweden/Finland; CS Italy; CS Greece; CS International

Title: Webinars on the Macro-Environment (4 webinars)

Dates: 26th May; 28th May and 29th May 2022

Format: Online webinars

Location/Online Platform: Jitsi <https://vc.dbfz.de/stakeholder>

Workshop language: English

Invitation and registration: Prepared by DBFZ (Alexandra Pfeiffer, Linda König, Romy Kupfer)

Table 3: Webinars Agenda (all CS)

Time	Topic	Moderator	Expected Outcome
15 min	Welcome and introduction	Alexandra Pfeiffer (DBFZ)	Overview of the webinar, the agenda and the aims
15 min	Getting to know each other	DBFZ, all	Understanding of each other's back-grounds and expectations in the context of the MUSIC project
15 min	Introduction to studying the macro environment through a PESTEL+I analysis	Alexandra Pfeiffer & Linda König (DBFZ)	
10 min	Coffee Break		
20 min	Brainstorming Session 1 (unstructured)	two groups, one led by Alexandra, one by Linda & Romy (DBFZ)	Brainstorming of macro-environmental factors
40 min	Brainstorming Session 2 (structured)	two groups, one led by Alexandra, one by Linda & Romy (DBFZ)	Aligning the macro-environmental factors with the PESTEL+I categories
20 min	Coffee Break		
30 min	Discussion of results	all	Which factors are the most important; which factors influence each other (and how)
15 min	Feedback and Farewell	Alexandra Pfeiffer (DBFZ), all	



b) CS Sweden/Finland

Title: Adding value to by-products from forestry and forest industry: Pyrolysis way

Date: 14th September 2021, 13:00-16:00 (CEST)

Format: Online workshop

Location/Online Platform: Microsoft Teams

Participants: In total 22 participants.

Workshop Language: English

Organisation: Magnus Matisons (BFR), Alexey Kononov (GFN) and Patrick Reumerman (BTG)

Table 4: Workshop Agenda (CS Sweden/Finland)

Time (CEST)	Topic	Moderator	Expected Outcome
12:45 – 13:00 15 min	Arrival of attendees		Socialising and addressing any problems with sound/video, should these occur
13:00 – 13:15 15 min	1 Welcome	DBFZ	Overview of the workshop and its aims as well as the EU H2020 project MUSIC
13:15 – 13:30 15 min	2 Role of RED II for fast pyrolysis bio-oil	DBFZ	Overview of European legislative frame
13:30 – 14:15 45 min	3 The advanced case study (15 min per country)	BTG, BFR, GFN	Understanding of its aims and the status quo of the Nordic case study: Netherlands (BTG), Sweden (BFR) and Finland (GFN)
14:15 – 14:30 15 min	Coffee Break		
14:30 – 16:00 90 min	4 Discussion session(s)	DBFZ	Word clouds with framework conditions, opportunities and hindrances related to the supply chain in the advanced case study
16:00 – 16:15 15 min	5 Conclusion, feedback and farewell	DBFZ, all	Summary of discussion session(s), feedback from the participants whether their expectations were met, information on next steps



c) CS Italy

Title: Valorisation of agricultural residues through microbial oil production: A bio-economy route toward a fossil fuels-free transport sector

Date: 21st September 2021, 9:00-12:00 (CEST)

Format: Online workshop

Location/Online Platform: Zoom

Participants: In total 11 participants.

Workshop Language: Italian

Organisation: Giacomo Talluri (RE-CORD)

Table 5: Workshop Agenda (CS Italy)

Time (CEST)	Topic	Moderator	Expected Outcome
8:45 – 9:00 15 min	Arrival of attendees		Socialising and addressing any problems with sound/video, should these occur
9:00 – 9:15 15 min	1 Welcome	RE-CORD	Overview of the workshop and its aims as well as the EU 2020 project MUSIC
9:15 – 9:40 25 min	2 The strategic case study	RE-CORD, ENI	Understanding of its aims and the status quo of the Italian case study
9:40 – 10:00 20 min	3 Learning from other case studies	DBFZ	Understanding of factors that might influence regional supply chains
10:00 – 10:15 15 min	Coffee break		
10:15 – 10:45 30 min	4 Discussion session on biomass feedstock	University of Florence, RE-CORD	Word clouds with framework conditions, opportunities and hindrances related to biomass feedstock in the strategic case study
10:45 -11:15 30 min	5 Discussion session on logistics	University of Florence, RE-CORD	Word clouds with framework conditions, opportunities and hindrances related to logistics in the strategic case study
11:15 – 11:45 30 min	6 Conclusion, feedback and farewell	RE-CORD, all	Summary of discussion sessions, feedback from the participants whether their expectations were met, information on next steps



d) CS Greece

Title: Economic opportunities for agricultural residues to replace fossil fuels in heavy industries

Date and time: 28th September 2021, 16:00-19:00 (CEST)

Format: Online workshop

Location/Online Platform: Microsoft Teams <https://teams.live.com/join/94285781624074>

Participants: In total 29 participants.

Workshop Language: Greek

Organisation: Kyriakos Panopoulos (CERTH) and Myrsini Christou (CRES)

Table 6: Workshop Agenda (CS Greece)

Time (CEST)	Topic	Moderator
14:45-16:00 15 min	Arrival of attendees	
16:00-16:10 10 min	1 Welcome	Kyriakos Panopoulos (CERTH)
16:10-16:25 15 min	2 Biomass utilization: Current situation and prospects from the integration of new technologies	Kyriakos Panopoulos (CERTH)
16:25-16:40 15 min	3 National Energy and Climate plan: the role of bioenergy - The Greek Case Study in the context of MUSIC H2020 project	Myrsini Christou (CRES)
16:40-16:55 15 min	4 Bioenergy, regional economy and development	Yannis Fallas (CluBE)
16:55-17:25 30 min	5 Understanding torrefaction technology: market status for IBCs – The role of bioenergy in Germany	Cristina Calderon (IBTC) – Konrad Siegfried (DBFZ)
17:25-17:40 15 min	Coffee break	
17:40- 18:40 60 min	6 Discussion session. Utilization of biomass: from the biomass producer to the end-user: Opportunities and barriers	Kyriakos Panopoulos (CERTH), Myrsini Christou (CRES), Yannis Fallas (CluBE)
18:40-19:00 20 min	7 Conclusions, feedback and farewell	



e) CS International

Title: Carbon-neutral steel production by using renewable carbon sources

Date: 5th October 2021, 9:30-12:30 (CEST)

Format: Physical workshop

Location: ArcelorMittal Ghent (John F. Kennedylaan 51, 9042 Ghent, Belgium)

Participants: In total 19 participants.

Workshop Language: English

Organisation: Wim van der Stricht (Arcelor Mittal)

Table 7: Workshop Agenda (CS International)

Time (CEST)	Topic	Moderator	Expected Outcome
8:45 – 9:00 15 min	Arrival of attendees		Socialising
9:00 – 9:05 5 min	1 Welcome	DBFZ	Overview of the workshop and its aims as well as the EU H2020 project MUSIC
9:05 – 9:15 10 min	2 Activities of DBFZ	DBFZ	Insights into activities in the field of biomass research and resource mobilisation
9:15 – 9:45 30 min	3 Presentation of the International case study	AM	Understanding of its aims and the status quo of the International case study
9:45 – 11:15 90 min	4 Discussion sessions (on feedstock, technology, market implications)		Word clouds with opportunities and hindrances related to the supply chain in the International case study
11:15 – 11:30 15 min	5 Conclusion and feedback	DBFZ all	Summary of discussion, feedback from the participants whether their expectations were met
11:30 – 12:30 60 min	Lunch break		
12:30 – 15:00 150 min	6 Plant visit	AM	Getting to know one of ArcelorMittal's plants, networking



f) CS International

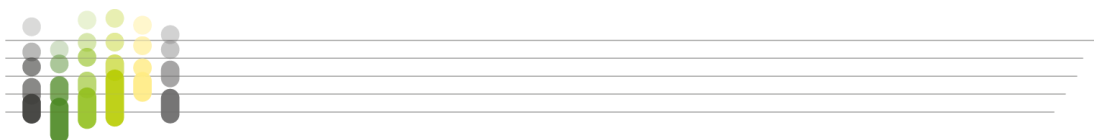
Title:	Bio-economy in a net-zero European industry
Date and time:	31 st May 2022, 9:00 – 13:00 (CEST)
Location:	Leipzig, Germany (DBFZ)
Participants:	In total 25 participants. See Annex 3.6
Workshop language:	English
Organisation:	Linda König and Konrad Siegfried (DBFZ)

Table 8: Workshop Agenda (CS International)

Time (CEST)	Topic	Moderator
8:45-9:00 15 min	Arrival of attendees at DBFZ, registration, socialising	Dr Konrad Siegfried, Linda König (DBFZ)
Part 1 Workshop “Bio-economy in a net-zero European industry”		
9:00-9:10 10 min	1 Welcome , overview of the day, the workshop and its aims	Dr Konrad Siegfried, Linda König (DBFZ)
9:10-9:30 20 min	2 Biomass in energy intensive industries	Prof Dr Daniela Thrän (DBFZ)
9:30-9:50 20 min	3 Role of biorefineries in a circular economy	Dr Franziska Müller-Langer (DBFZ)
9:50-10:10 20 min	4 Overview of the EU H2020 project “MUSIC” and its four case studies	Patrick Reumerman (BTG)
10:10-10:30 20 min	Coffee break	
10:30-10:50 20 min	5 Developments in European policy and role for Intermediate Bioenergy Carriers’ market uptake	Manolis Karampinis (CERTH)
10:50-11:00 10 min	6 Instructions for focus groups	Dr Konrad Siegfried (DBFZ)
11:00-12:30 90 min	7 Discussion and strategy development for IBCs’ market uptake in focus groups (FG) with short breaks in between	Prof Dr Daniela Thrän (DBFZ) Manolis Karampinis (CERTH)
12:30-13:00 30 min	8 Summary of each session by moderators, feedback, information on afternoon activity	Dr Konrad Siegfried (DBFZ), moderators
13:00-13:45 45 min	Lunch break	
Part 2 Tour at DBFZ		
13:45-15:00 75 min	Visit of DBFZ facilities <ul style="list-style-type: none"> E.g. fuel conditioning lab, combustion technical centre, biorefineries technical centre) 	DBFZ
Part 3 City tour		



16:50-17:00 10 min	Arrival of attendees at the “Neues Bach-Denkmal” (Thomaskirchhof, 04105 Leipzig)	
17:00-18:30 90 min	Start of tour through Leipzig’s old city	Guide of “Treffpunkt Leipzig”
Part 4 Social evening		
18:30	Dinner and networking at “Thüringer Hof zu Leipzig” (Burgstraße 19, 04109 Leipzig)	
End of Day 2		



g) CS Italy

Title: Valorisation of ligno-cellulosic residues through Intermediate Bioenergy Carriers production: MUSIC and CAREGA experience on local value-chains set-up

Date and time: 14th July 2022, 9:00 – 12.30 (CEST)

Location: Dal Molin Graziano, Valli Del Pasubio (Vicenza, Italy)

Participants: In total 11 participants.

Workshop language: Italian

Organisation: Giacomo Talluri (RE-CORD)

Table 9: Workshop Agenda (CS Italy)

Time (CEST)	Topic	Presenter/Moderator
8:45-9:00 15 min	Arrival of attendees, registration, socialising	
9:00-9:10 10 min	1 Welcome , speakers introduction, overview of the day, the workshops and its aims	Giacomo Talluri, RE-CORD
9:10-9:30 20 min	2 Optimization of a local wood-forestry value chain for charcoal production from cascading, unused biomass	Renato Nistri, RE-CORD
9:30-9:50 20 min	3 Setting up a value chain for Microbial Oil production from ligno-cellulosic agricultural residues: the Italian Case Study from MUSIC H2020 project	Giacomo Talluri, RE-CORD
9:50-10:00 10 min	3 Presentation of the pilot small-scale	Renato Nistri, RE-CORD
10:00-10:20 20 min	Coffee break	
10:20-11:20 60 min	4 Discussion session with the local stakeholders	Giacomo Talluri and Renato Nistri (RE-CORD), Niccolò Bartoloni and Giacomo Trombi (UNIFI)
11:20-11:30 10 min	5 Summary, conclusions, feedback and farewell	Giacomo Talluri, RE-CORD
11:30-12:30 60 min	Tour of the facility and of the small-scale gasifier unit	



h) CS Sweden/Finland

Title:	Local Stakeholder Workshop
Date and time:	7 th September 2022, 15:30 – 18:00 (CEST)
Location:	Umeå, Sweden (Elite Hotel Mimer Umeå)
Participants:	In total 23 participants.
Workshop language:	English
Organisation:	Bio Fuel Region and BTG

Table 10: Workshop Agenda (CS Sweden/Finland)

Time (CEST)	Topic	Moderator
15:30-15:35 5 min	Welcome	Patrick Reurman, BTG
Biomass Torrefaction		
15:35-15:55 20 min	1 MUSIC project White Paper on biomass torrefaction	Michael Wild, EBTC (online)
15:55-16:15 20 min	2 MUSIC project - international case study	Reginald Deolet, Arcelor Mittal
16:15-16:35 20 min	3 High-quality, fossil-free carbon and gas products for the metallurgical industry	Tobias Brink, Envigas
Biomass Pyrolysis		
16:35-16:55 20 min	4 MUSIC case studies: main findings	Patrick Reurman, BTG
16:55-17:15 20 min	5 MUSIC project - The Nordic case study	Magnus Matisons, BFR
17:15-17:35 20 min	6 State of affairs of the Biomass Pyrolysis market (incl. info on Lieksa/Pyrocell pyrolysis plants)	Mark Richters, BTG-Bi-oliquids
Roundtable		
17:35-17:55 20 min	7 Roundtable discussion	Magnus Matisons, BFR
17:55-18:00 5 min	Concluding remarks and wrap-up	Patrick Reurman, BTG (online)



i) Greece

Title:	MUSIC Stakeholder Workshop - Novel techniques for the utilization of agricultural residues and wastes
Date and time:	20 th October 2022 12:00 - 14:00 (CEST)
Location:	Thessaloniki, Greece (Agrotica, International Exhibition and Conference Centre)
Participants:	In total 40 participants.
Workshop language:	Greek
Organisation:	CERTH and CRES

Table 11: Workshop Agenda (CS Greece)

Time (CEST)	Topic	Moderator
Part 1 Prospects from the implementation of novel agricultural residues and waste utilization techniques		
12:00-12:5 5 min	1 Welcome	Prof. Kyriakos Panopoulos, CERTH
12:05-12:15 10 min	2 Supply chains of agricultural residues for bioenergy exploitation	Giorgos Kardaras, CERTH
12:15-12:25 10 min	3 Organisation and development of biomass supply chains for use in large-scale district heating plants and small, decentralised, heating applications	Giorgos Kardaras, CERTH
12:25-12:35 10 min	4 The Greek CS in the context of MUSIC H2020 project	Dr. Myrcini Christou, CERTH
12:35-12:45 10 min	5 Energy storage solutions	Prof. Kyriakos Panopoulos
12:45-12:55 10 min	6 Innovative mobile solution for the production of high-performance bio-fertiliser products from anaerobically digested organic waste	Prof. Kyriakos Panopoulos
12:55-13:05 10 min	7 Development of the first complete collection network of Used Cooking Oil (UCO) from households for the production of sustainable biodiesel	Kokkalis Thanos, Grinco
13:05-13:15 10 min	8 Clusters at the service of Rural Development: examples from Western Macedonia	CLUBE
Part 2 Discussion Session		
13:15-13:30 15 min	4 Analysing supply chains for use of agricultural residues for bioenergy applications: Stakeholder engagement and mobilization	Dr. Agr. Konrad Siegfried, DBFZ



13:30-13:55 25 min	5 Roundtable Discussion and questions from the audience	Prof. Dr. Kyriakos Panopoulos, CERTH
Part 3 Summary & Conclusion		
13:55-14:00	Conclusion and wrap-up	Prof. Dr. Kyriakos Panopoulos, CERTH

For the last workshop in Greece workshop participants were invited to fulfil an online survey to add on the discussion on the use of agricultural residues for bioenergy applications. The survey was prepared by DBFZ on Limes Survey³. The software allows for the generation of a link and a QR Code which was shared among the participants. Results will be presented in the upcoming deliverable 3.7 on workshop results.

³ Online Survey Greek, Limes Survey <https://survey.dbfz.de/limesurvey/index.php/274736?lang=el>



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Citation, Acknowledgement and Disclaimer

Linda König, Konrad Siegfried, Fabian Riedel, Sara Mengato, Daniela Thrän 2022
Market Uptake Support for Intermediate Bioenergy Carriers. MUSIC, Horizon 2020 project
no. 857806, WP3, D3.6 Engagement workshop format(s) and content version 4, Deutsches
Biomasseforschungszentrum gemeinnützige GmbH.
www.music-h2020.eu

This project has received funding from the European Union's Horizon 2020 research and
innovation programme under grant agreement n° 857806.

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