



D3.4: Open Access Review Article. Version 1: Abstract

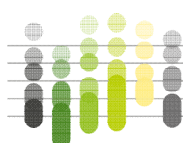


Project acronym:	MUSIC
Project title:	Market Uptake Support for Intermediate Bioenergy Carriers
Project no.	857806
Project duration:	September 2019 – August 2022 (36 months)
Work Package No. & Title:	WP3: Stakeholder engagement and mobilisation
Task No. & Title:	Task 3.2: Breaking the Vicious Cycle of Innovative Technologies and Learning from Trans-disciplinary Supply Chain Methods
Lead beneficiary:	Deutsche Biomasseforschungszentrum gGmbH (DBFZ)
Deliverable title:	D3.4 Publication of results as an open access review article
Due date of deliverable:	Submission of abstract (M06): 29 February 2020 Submission of article (M24): 31 August 2021
Actual submission date:	Abstract: 06 December 2019

Authors	Organization	Email
Alexandra Pfeiffer	Deutsches Bio-masseforschungszentrum gGmbH (DBFZ)	alexandra.pfeiffer@dbfz.de ; anja.mertens@dbfz.de
Anja Mertens		
Daniela Thrän	Helmholtz Centre for Environmental Research - UFZ and DBFZ	daniela.thraen@ufz.de

Dissemination level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
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Deliverable version	Date
V1	06 December 2019

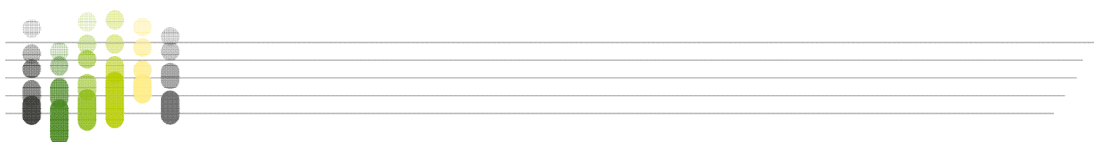


ACKNOWLEDGMENT & DISCLAIMER

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

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EXECUTIVE SUMMARY

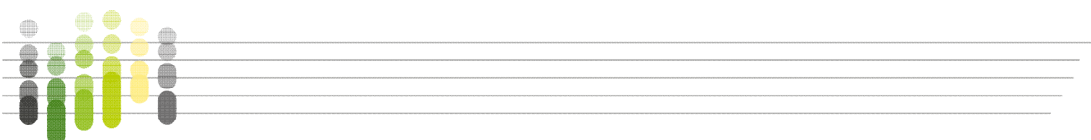
For various reason it was proposed, and agreed with the INEA project officer, to adjust the scope and postpone the deadline for the current Deliverable 3.4 “Open Access Review Article”, as follows:

- Submission of an abstract to a conference by M6 (Feb 2020)
- Submission of a journal paper by M24 (Aug 2021) to a renewable energy or supply chain management journal (open access). By M24, the review article will have been submitted to a journal.

The current version of the Deliverable covers the first part of the revised scope.

The abstract "Supply Chain Management for Intermediate Bioenergy Carriers – Analysis of Four European Case Studies" was submitted to the 28th European Biomass Conference and Exhibition (EUBCE 2020) which will be held in Marseille, from 27 to 30 April 2020.

The abstract and the confirmation of submission are attached.



Topic 5: Bioenergy Integration

5.4 Market implementation, investments & financing

Justification for Topic Selection: The abstract considers the development of market uptake initiatives and strategies for intermediate bioenergy carriers. Hence, sub-topic 5.4 is most suitable, as this research directly addresses the bullet points “market uptake initiatives and policies” and “challenges of scale-up and market implementation of new technologies”.

Supply Chain Management for Intermediate Bioenergy Carriers – Analysis of Four European Case Studies

Alexandra Pfeiffer	Deutsches Biomasse Forschungszentrum gGmbH, Torgauer Str. 116, 04347 Leipzig, Germany, alexandra.pfeiffer@dbfz.de , +49 341 2434 593
Anja Mertens	Deutsches Biomasse Forschungszentrum gGmbH, anja.mertens@dbfz.de , +49 341 2434 555
Daniela Thrän	Helmholtz Centre for Environmental Research - UFZ and Deutsches Biomasse Forschungszentrum gGmbH, daniela.thraen@ufz.de , +49 341 2434 435

With the increasing share of bioenergy in the European energy mix, intermediate bioenergy carriers (IBC, here torrefied pellets, pyrolysis oil and microbial oil) become of growing importance, as they can ensure utilisation of certain feedstock which cannot be directly used in bioenergy conversion technologies. Additionally, IBC provide flexibility to the energy system by improving storage characteristics and energy density of the feedstock. However, the technologies to produce these IBCs are not yet established in the bioenergy market. Hence, it is crucial to develop adequate strategies to support their market implementation. Within this research, the stakeholders along the IBCs' supply chains are considered in order to break this vicious cycle of innovative technologies (Knight *et al.*, 2015). Innovative technologies often face the situation that the accompanying supply chain is not yet optimised or established even though the technology itself is ready for market introduction. Depending on the respective IBC and level of market readiness as well regional circumstances, the stakeholders associated with the value chain differ and interact differently. Hence, stakeholders associated with the IBC value chain are identified and analysed as part of different case studies across Europe. The cases considered within this research are regions in Scandinavia (pyrolysis oil), Italy (microbial oil), Greece (torrefied pellets) and Belgium (pyrolysis oil). Based on the evaluation of these different European case studies, the importance, influence and needs of the individual stakeholders as well as their role within the supply chain can be determined (Mitchell *et al.*, 1997). Based on that, conclusions can be drawn on ideal supply chain set-ups which can support market implementation of IBCs. Furthermore, strategies (for organisations as well as governing bodies) can be developed, how market development can be reached.

A literature review is carried out in order to assess the previously described vicious cycle of innovative technologies (Tebaldi *et al.*, 2018). Furthermore, supply chain methods and strategies which are utilised in other markets and industries are considered. In parallel, key stakeholders in the respective case study regions are identified and categorised mainly in immediate and broader stakeholders (ref). Immediate stakeholders can be – from the perspective of the IBC production plant – (a) upstream and hence biomass producers and biomass production industries such as (associations of) farmers, agro-industries, foresters, forest industries, or (b) downstream and hence IBC buyers or users. Included are also (c) IBC producers themselves as well as (d) IBC technology suppliers. The broader stakeholders consist of local, regional or national actors in the case study regions including GOs and NGOs, e.g. local authorities, policy actors, activist groups and other economic actors or networks as well as relevant associations.

These activities are the foundation for a detailed stakeholder analysis which will assess possible set-ups for IBC supply chains through engagement processes like interviews, workshops and other dissemination activities. At EUBCE 2020, the preliminary results of the literature review and from the stakeholder identification process will be presented. In addition, an overview of strategies and supply chain mechanisms from other industries will be given which may be used for market introduction of IBCs.

Funding

The here presented research is part of the MUSIC (Market Uptake Support for Intermediate Bioenergy Carriers) project. “This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 857806”.

References

- Knight, L., Pfeiffer, A. and Scott, J. (2015), “Supply market uncertainty. Exploring consequences and responses within sustainability transitions”, *Journal of Purchasing and Supply Management*, Vol. 21 No. 3, pp. 167–177.
- Mitchell, R.K., Agle, B.R. and Wood, D.J. (1997), “Toward a Theory of Stakeholder Identification and Salience. Defining the Principle of Who and What Really Counts”, *The Academy of Management Review*, Vol. 22 No. 4, pp. 853–886.
- Tebaldi, L., Bigliardi, B. and Bottani, E. (2018), “Sustainable Supply Chain and Innovation. A Review of the Recent Literature”, *Sustainability*, Vol. 10 No. 11, p. 3946.

Pfeiffer, Alexandra

Von: EUBCE <papers@conference-biomass.com>
Gesendet: Montag, 4. November 2019 18:18
An: Pfeiffer, Alexandra
Betreff: Abstract submission confirmation

Thank you, Alexandra PFEIFFER, for your on-line abstract submission for the EUBCE Conference

We confirm that your abstract "Supply Chain Management for Intermediate Bioenergy Carriers – Analysis of Four European Case Studies" has been registered with the following number to be used for future reference:

Abstract Number:

W17400

Peer Review: YES

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