

Uncertainty as an influencing factor on communications about innovative materials

*Identification and handling of a possible restraint of a sustainability
transition*

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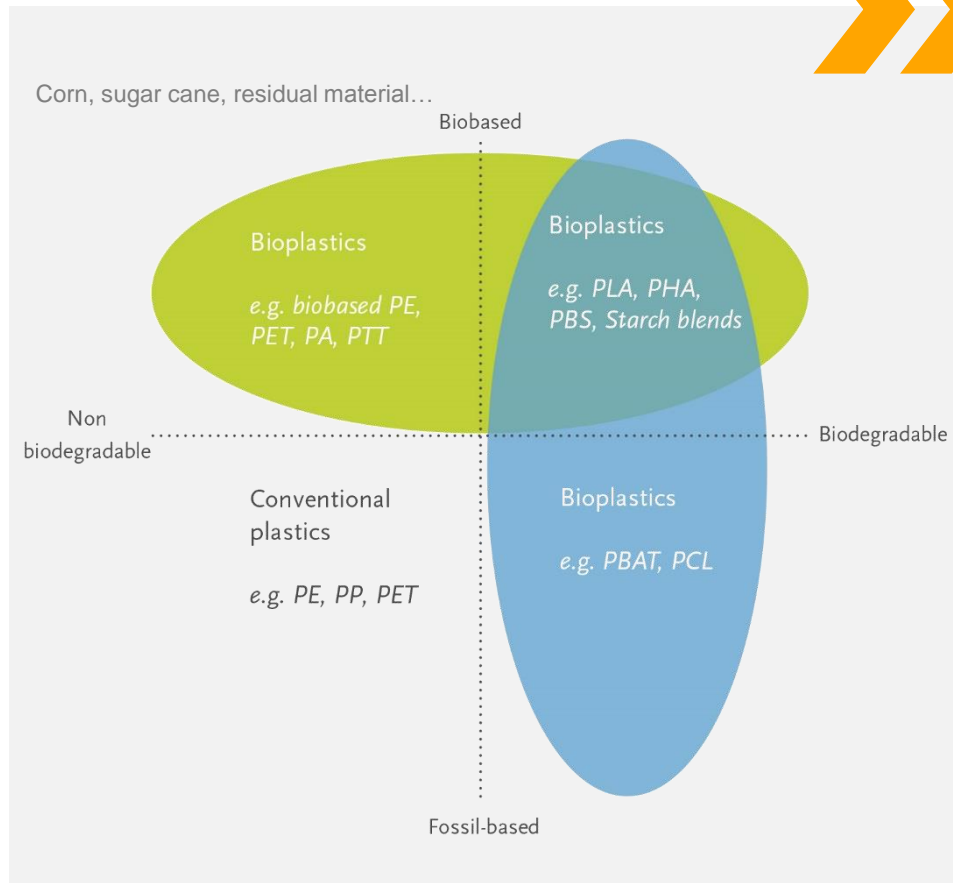
Uncertainty in sustainability transitions

- Innovative materials as industrial applications and products of technological innovations are driving factors in sustainability transitions *Fischer & Newig, 2016:8*
- But: technological innovations often are accompanied by „uncertain“ knowledge regarding their implications and the impact on the environment, society and economics *Ruddat, 2012:7*
- Open questions with regard to consequences and benefits of new materials cause uncertainty *Bauer, 2005; Günther & Ruhrmann, 2013; Maier, Milde, Post, Günther, Ruhrmann & Bakela, 2016; Peters & Dunwoody, 2016; Broomell & Kane, 2017*

How is (un)certainty expressed in organizational (corporate and product) communications and how is uncertainty influencing communication and organizational strategies?



Bioplastics – a potential building block of sustainable economics?



European Bioplastics, 2017

Bioplastics – perception and communication through bioplastics stakeholders

Website analysis (n=31)
communication output & evidence for certainty and uncertainty as a communication issue

Semi-structured expert interviews (n=39)
subjective meanings and interpretations from the different identified groups of stakeholders



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RQ1: Which role does uncertainty of scientific findings play within corporate and product communications of industrial actors regarding bioplastics?

“This is a complex process, which is still not fully understood.”

B2B company

- Life-cycle-assessments (LCA) for the application of bioplastics are still perceived as a subject of research and interpretation
- statements about ecological benefits of the application of bioplastics were mostly proofed by external sources
- up-to-date facts and eco-friendly materials are preferred to communicate with a “clear conscience”
- industrial representatives appear to be terrified of the possible accusation of greenwashing



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RQ2: How powerful is (un)certainty as an influencing factor for communication activities and strategies of industrial actors?

Uncertainty in terms of sustainability advantages and potentials silences industry actors.



website analysis

vague optimism but no clear positioning or support for bioplastics

expert interviews

passive, restraint corporate and product communication – especially regarding environmental benefits and disadvantages and food competition

***“We only communicate about things that are real now and that we feel we can stick to.”
B2B company***



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RQ3: How important is the communicational behavior and the chosen communication strategies for the establishment of bioplastics?

Critical voices appear to be „louder“ & negatively connoted frames are leading public (media) discourse, e.g. greenwashing, food competition...



- lack of flagship projects
- necessary networking within the industry is blocked
- no consumer demand
- less political support



Additional
structural challenge:
price of petroleum < raw materials



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Round-up:

Uncertainty – a restraint in sustainability transitions



When it comes to innovations (e.g. materials), uncertainty is an important issue that leads to restraint, external communication.

- This especially counts for innovations holding ecological, social or economical trade-offs and even more for those promising to market sustainability potentials.
- Strategic communications are key to (further) market development...
 - by being part of the public communication discourse (agenda setting)
 - by putting the innovation into context of different perspectives (framing)
- Surveying the public perception of uncertainties regarding specific innovations is crucial for strategic communication



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Thank you!

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