



Circulus

Opportunities and challenges of transition to a sustainable circular bio-economy
Newsletter n°6, February 2021



Greetings from Circulus!

Welcome to 2021, the year that will transition us into a post-pandemic era! Though Covid-19 has wreaked havoc on existing systems, slowed down society and economy in unpredictable ways, it has also explicitly and urgently exposed the dire need for new social pathways.

Within Circulus, we continue to work on cutting-edge research to support looming societal transitions. On top of working on research publications, the last months have been very busy with hosting our very own Interdisciplinary Circular Economy Conference, presenting our work at online events, science-public communications, and preparing for this year's diverse array of conference panels. Read about our activities in detail below!



ICEC 2020 closing session: A big thank you to all for being such an engaged and inspiring crowd!



Welcome, Carolina!

In our daily lives, we remain in home office but are very excited to welcome a new team member Carolina Moreno Hernández in Freiburg very soon. She will be joining us all the way from Mexico to start her doctoral research. We look forward to having her onboard and her wealth of knowledge gained from many years as an environmental governance and circular economy practitioner.

Interdisciplinary Circular Economy Conference (ICEC 2020)

The Circulus team organized an international conference for circular economy researchers critically exploring prospects, potentials, and limitations of circular economy initiatives for social justice and environmental sustainability. From November 30 to December 3, 2020, we welcomed almost 200 participants (181 registered) from a variety of social, environmental and engineering science disciplines.

The highlight of the conference was a vital exchange of views on how to be a successful and responsible circular economy researcher. The **main lessons** shared by the participants can be summarized in two messages:

1. Collaborate interdisciplinary, especially across social and environmental sciences.
2. Be reflexive about the paradigms/goals/motivations driving your research, e.g. using systems thinking or transdisciplinary approaches.

To do so:

- Integrate representatives from producers, retailers, designers, recyclers, consumers, and decision makers right from the beginning.
- Be aware of the transformation of mental models necessary for a circular economy, identify the main questions to ask based on the overall objective of circular economy – sustainability.
- Think about how circular economy fits with, and learns from, other concepts and areas of knowledge in science and practice, e.g. de-growth, bioeconomy.
- Use all available data (from an interdisciplinary perspective).

Find us on:



Medium



Research for a sustainable circular economy

The role of policy narratives for circular economy

Text: Sina Leipold

The current EU circular economy narrative is not disruptive but perpetuates old ideas, undermining our potential for sustainability transformation. What to do? [Our latest open-access article](#) gives suggestions on how to design new narratives that help us move beyond the status quo.

The analysis highlights:

1. Developing a new narrative from a position of perceiving yourself in a legitimacy crisis is not a good idea. Rethink your own position before you start.
2. Targeting dominant discourses 'from within' (e.g. staying within the growth paradigm) can be problematic and create the opposite effect (i.e. perpetuating the established discourse). Look for ways to target the status quo from the 'outside'.
3. Be careful with certain discursive strategies. In the analyzed case, particularly 'win-win' concealed social conflict, provided agency to incumbents, and excluded alternative voices by placing economic considerations about a circular economy right next to environmental considerations.
4. Overcome the pitfalls of 'win-win' by (1) addressing (future) conflicts, (2) offering new agency to change agents, and (3) providing transition strategies to incumbents.

Have you ever wondered about the environmental impacts of fruit packaging?

Text: Anna Petit-Boix

Small fruits like berries can hardly be sold without packaging, as they are especially delicate and thus require a protection layer that contributes to the environmental impacts of food consumption. In Germany, the Packaging Act is promoting the transition from traditional plastic packaging to bio-based alternatives, such as cardboard. In cooperation with our industry partners, we compared the carbon footprint of cardboard and plastic fruit baskets and analyzed their use in the German market. We found that cardboard baskets generate less carbon emissions than plastic packaging. However, the increasing popularity of bio-based alternatives can generate rebound effects. While the market share of cardboard alternatives is growing, so is the total amount of fruit packaging used in Germany, resulting in a steady increase in the CO2 emissions in the fruit-packaging sector.



The fruit baskets (<https://www.klinge.com> and own picture)

Thesis defense - A Circular Economy Approach to Urban Agriculture: an Environmental Assessment

Coming all the way from ICTA-UAB (Barcelona), [Martí Rufí-Salís](#) conducted a study on circularity and environmental indicators applied to urban agriculture during his research stay at the Uni Freiburg. His doctoral thesis is entirely dedicated to the environmental assessment of circular strategies applied to food production in cities, including the recovery of nutrients and the redesign of crop cycles to maximize resource efficiency. Martí defended his excellent thesis on December 17, 2020.

He was supervised by Dr. Xavier Gabarrell (ICTA-UAB), Dr. Gara Villalba (ICTA-UAB) and Dr. Anna Petit-Boix (Uni Freiburg). Congratulations!

You can find more information in our [Circular Economy Series #2](#) (In German; English version coming soon)





Awards

Anran Luo won 2nd Prize and Public Choice Award at the 3-Minute Thesis 2021 Competition

February 3rd 2021 | Graduate School for Environment, Society and Global Change – University of Freiburg

Resources, Conservation & Recycling 2020 Excellence in Review Awards

Anna Petit-Boix was one of [this year's awardees](#). The journal "Resources, Conservation & Recycling" recognizes the task of exceptional reviewers every year.

Science Communication & Advisory

Circulus portrait for the public – #sciencecommunication

Everyone is talking about sustainability. But how it can best be implemented in concrete terms is a matter of debate. The Circulus team develops options for thought and action for a bio-based circular economy. The new "[biopioneers](#)" portrait shows how (in German):

[Video](#)
[Portrait](#)
[Podcast](#)



Circulus research presented at EPOSS

January 14, 2021

Machteld Simoens was invited to give a talk on "Understanding Resistance to Transition and Change: Explanations of Discursive Lock-in" as part of the Environmental Politics Online Seminar Series (EPOSS) organized by the ECPR Environmental Politics Standing Group. [Find more information here](#)

Check our blog on medium
[Circular economy stories](#)



Circulus in "Sustainable megacities: health, risks, resources"

December 9, 2020

Anna Petit-Boix was invited to be a speaker at a Web-Talk series organized by the German Center for Research and Innovation (DWIH) New York in cooperation with the University of Freiburg's New York Liaison. Her talk about "How can cities prioritize circular strategies towards sustainable resource use?" was a teaser event leading to an upcoming panel discussion with researchers from the Universities of Cologne and Heidelberg around the topic of sustainable megacities. **The final event will take place online on May 6, 2021.** [Visit this link for more information.](#)

Recent Publications - Selection

- [Combining LCA and circularity assessments in complex production systems: the case of urban agriculture](#)
- [Transforming ecological modernization 'from within' or perpetuating it? The circular economy as EU environmental policy narrative](#)
- [Can wastewater feed cities? Determining the feasibility and environmental burdens of struvite recovery and reuse for urban regions](#)
- [Exploring nutrient recovery from hydroponics in urban agriculture: An environmental assessment](#)

3

Announcements

1) INTERPRETATIVE POLICY ANALYSIS CONFERENCE (IPA)

28.6-2.7 2021 – online format

"Environmental (Policy) Discourse Analysis: Novel Approaches, Methods, Topics"

2) 5th INTERNATIONAL CONFERENCE ON PUBLIC POLICY (ICPP)

July 6-8 2021 – hybrid or online format

"A Socially Just and Ecologically Sustainable Circular Economy: Principles, Politics and Practice"

3) 26th WORLD CONGRESS OF POLITICAL SCIENCE

July 10-15 2021 - online format (postponed from 2020)

"Circular Economy Policies from a Business Perspective" and "The Circular Economy as a Political Program"