



Circulus

Opportunities and challenges of transition to a sustainable circular bio-economy
Newsletter n°2, August 2018



Greetings from Circulus!

This year, the **EU adopted a new set of measures for the Circular Economy, including** new rules to [ban some single-use plastic products](#) and a [Memorandum of Understanding \(MoU\) on Circular Economy Cooperation between the EU and China](#). These efforts underline that circular economy is not only a research topic, but a broad societal discussion. On this basis, the **Circulus project** received considerable attention at scientific conferences as it **is situated in the middle of several current hot topics**. We ask questions such as: How is the circular economy understood in different countries? How can we monitor a transformation towards a circular economy with decreased pressure on the earth's ecosystems? And can the circular economy actually solve the ecological problems that we are facing, or is it only another **“less radical solution to radical problems”**?

This newsletter provides insights into our first results on stakeholder debates, cities, indicators and international discourses. In addition, we report on our current activities.



Freiburg 2017, Photo: Sina Leipold

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Circular economy: the latest findings

Circular Economy in the Bio-based Sector

In the eyes of many EU policy makers, we will reach a circular economy through business innovation or the promotion of existing sustainable business models based on circular economy principles. Sina Leipold and Anna Petit-Boix critically scrutinized this assumption, analyzing the bio-based business community's view on the circular economy. They show that the circular economy is mostly related to established practices and technological business models. This leaves considerable room for innovation. Yet, the directions and effects of current activities remain uncertain. We suggest connecting the debates about the circular economy and the bioeconomy to help define which cycles contribute most to a sustainable future economy.

Leipold S and Petit-Boix A (2018) The Circular Economy and the Bio-based Sector - Perspectives of European and German Stakeholders. *Journal of Cleaner Production* (in press, online first). [OPEN ACCESS!](#)

Circular Economy in Cities

Does environmental research align with the circular economy initiatives promoted in cities? Anna Petit Boix and Sina Leipold answered this question in the first Circulus paper on urban circular economy. The authors collected circular economy initiatives from 83 cities worldwide to identify how this concept is being promoted at the urban scale. These initiatives were compared with existing industrial ecology research that assesses the environmental effects of the circular economy. Whereas waste management is a hot topic in both spheres, initiatives related to urban planning and social consumption are not entirely covered in the existing quantitative literature. With this study, we aim to encourage research to work collaboratively with cities in order to help them prioritize the most environmentally friendly initiatives.

Petit-Boix A and Leipold S (2018) Circular economy in cities: Reviewing how environmental research aligns with local practices. *Journal of Cleaner Production* 195, 1270-1281. [OPEN ACCESS!](#)

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Preconditions for a circular product

How should we assess circular economy strategies to ensure a more sustainable development? To answer this, Hanna Helander and colleagues took a system perspective on the metabolism of our economy. The environmental pressure from the economy comes from resource extraction and waste disposal. Therefore, indicators should cover these flows. However, our review shows that many indicators focus on a single part of a product life cycle and not on net environmental benefits. In this study, we suggest to use footprint accounting to assess circular economy initiatives. Thereby, we aim to support the ongoing development of adequate monitoring tools for the societal transformation towards a circular economy.

Chinese Perspectives on Circular Economy

Circular economy has been developing in the Chinese governance sphere for almost two decades, says Anran Luo in her recent analysis of Chinese circular economy governance. It began as a concept to combat solid waste pollution and achieve eco-industrial restructuring. More recently, it became linked to GHG emissions reduction and climate change mitigation targets. Most efforts have focused on production-side waste management and little attention has been dedicated to resource extraction reduction. Similar to EU goals, China seeks to use circular economy to remove environmental and resource barriers to growth. Future research will explore how policy stakeholders deliberate the development of this goal at the international, national and regional scales.

Panel at the IPSA World Congress

Sina Leipold convened and co-chaired a panel on 'Governance for a Sustainable Economy' at the [25th World Congress of Political Science](#), July 21-25, 2018 in Brisbane, Australia, which was attended by over 2150 participants from 83 countries. Anran Luo shared an overview of her study on circular economy governance, and Julia Schwanholz (University of Göttingen) presented a collaborative study on circular economy and sharing economy together with Sina Leipold. Both presentations sparked lively discussions and the Circulus project received large interest, especially among Australian colleagues.

France banned Food Waste– what's next?

Marius Hohl explored French perspectives on Circular Economy during a field trip to Paris. He met with decision makers from business, civil society and regional government to investigate the „Loi Garot“. This law is seen as a driver for Circular Economy in the French food sector because it established tax incentives for food donations from big supermarkets. Yet, interviewees highlight that more action is needed and more scrutiny of the (sustainable) nature of future Circular Economy initiatives. With the adoption of the first national ‚Circular Economy Road Map‘ in 2018 and a new legislative project emerging from the „États Généraux de l'Alimentation“, things are moving quick. Therefore, Circulus will keep a close eye on France.

Kick-off Workshop

On March 2, 2018, the Kick-off Workshop of the company case studies of the Circulus project took place in Freiburg. Our partners from companies, associations, NGOs and science gathered to discuss problems and future scenarios for a circular economy in the food and packaging sectors. The workshop concluded that the challenges in the food sector include consumer awareness, laws and regulations, costs of implementation and food prices that do not account for environmental degradation. A circular food sector must allow for a circulation of nutrients to maintain soil quality and ensure an efficient use of the produced food. Packaging is covered by diverse regulations which has resulted in mixed and contaminated materials. Yet, national regulations are not sufficient on a global market. The Circulus team sincerely thanks all participants for their insights and inspiring comments! They constantly guide our research.



Foto: Martina Attinger

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Big interest in Circulus research

Participation in the Exeter Symposium

In June, Sina Leipold and Anna Petit Boix attended the first academic symposium focusing on the circular economy, the **Exeter Symposium: Circular Economy Disruptions, Past, Present, Future**. About 100 participants attended the symposium and many showed great interest in our ongoing research on the circular economy in the bio-based sector and cities. Through an interdisciplinary exchange, our team got new insights into business engagement in a circular economy transformation and into international institutions' regional and national case studies.

Conferences in Rome, Les Diablerets and Utrecht

In May, Anna Petit Boix and Hanna Helander represented Circulus at **SETAC Europe 28th annual meeting** in Rome, Italy, presenting both results as well as conceptual ideas for the project. In a crowded poster hall, we got in touch with other researchers working on similar topics, who showed great interest in our contributions. The week after, Hanna Helander presented her project to the industrial ecology research community, which met for five days of inspiring talks and exchange at the **Gordon Research Conference** in Les Diablerets, Switzerland. In March, Robert Gundlach joined the PhD conference in Utrecht, Netherlands addressing **New Frontiers In Sustainability Transitions** where he got to exchange with other young scholars studying societal transformation.

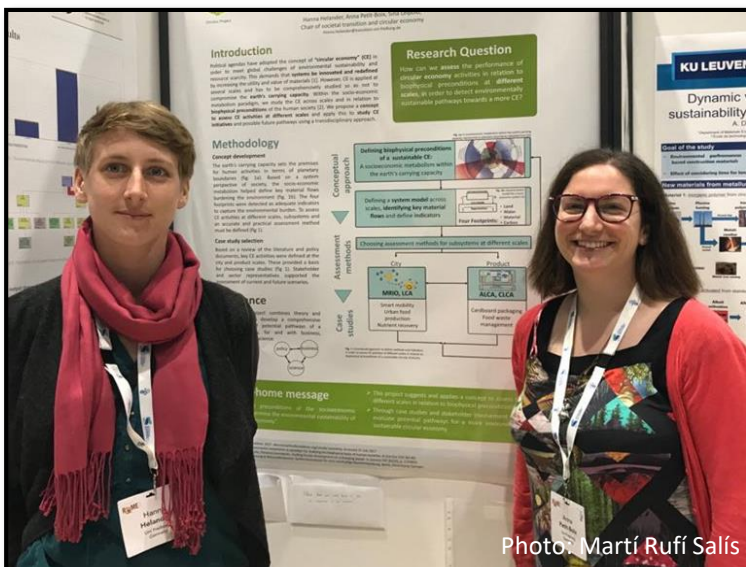


Photo: Martí Ruffi Salís

Swedish members of parliament found good examples in Freiburg

In February, Circulus had the pleasure to host Annika Lillemets and Valter Mutt, Members of the Swedish Parliament, during their visit to Freiburg. They are working for an 'economy for the common good' and seek to improve legislation to facilitate business initiatives striving for social and ecological objectives. Besides an exchange with Circulus, they visited local initiatives that foster resource sharing and support local and circular food systems. This became the starting point for an exchange of ideas between initiatives in Freiburg and in Sweden, which Circulus is delighted to be a part of.

Upcoming Events

- **Life Cycle Innovation Conference**
From the 29th-31st of August, Anna Petit Boix and Hanna Helander will present the Circulus project in Berlin.
- **Earth System Governance Conference**
In November, Anran Luo will present preliminary results from her research on Chinese circular economy actor discourses to the 'Future Earth' research community in Utrecht.

News in short..

Interview with Sina Leipold: *"Debatten durchleuchten"*
<https://biooekonomie.de/forscherprofil/debatten-durchleuchten> (only in German)

June 7, 2018
The Circulus advisory board is growing. We welcome Prof. Thomas Wiedmann, PD Dr. Rolf Meyer and Prof. Defne Apul and thank them for their support.

June 6, 2018
The Circulus team presented its research progress to peers and funders at the 2nd meeting of the funding scheme *"Bioökonomie als gesellschaftlicher Wandel"* in Berlin. Follow all the funded groups at: <http://www.bioecon-societal-change.de/>

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