## **Circulus**

# Opportunities and challenges of transition to a sustainable circular bio-economy Newsletter n°1, January 2018



### **Greetings from Circulus!**

The research group Circulus: Opportunities and challenges of transition to a sustainable circular bio-economy aims to provide a sound scientific understanding of current transformations towards a circular economy across different countries and industry sectors. It connects political visions of a circular economy to current transformations in specific value chains across different countries. We analyse societal discourses and governance pathways as well as a number of industrial cases from bio-based sectors, collaborating with relevant industry partners. Based on this understanding, the project will outline potential transformation pathways based on environmental consequences as well as their socio-economic and political potentials. After a six month preparatory phase, the Circulus Project started on April 1, 2017, bringing together a team of six core researchers, supported by 2-3 student assistants.



This newsletter will be sent out every 6 months to give an overview of current activities and announce upcoming events & activities.

### **Meet our Team Members and Projects**

Part A: Discourses & Governance on the Circular Economy	JunProf. Dr. Sina Leipold	The politics of the circular economy in the European Union
	Robert Gundlach	Transition to which future? - Opportunities and challenges for a sustainable circular economy in Western Europe
	Anran Luo	Structure and agency of circular bioeconomy discourses in the People's Republic of China: an analysis of policy, industry and civil society institutions and actors
Part B: Life Cycles & Transition Pathways towards a Circular Economy	Hanna Helander	Conceptualizing and measuring material flows, environmental and social impacts in a bio-based circular economy
	Dr. Anna Petit Boix	Going circular and resilient – Approaching circular economy at the city scale through integrated industrial ecology tools
Support and short-term subprojects	Martina Attinger Matteo Jarre Anne-Kathrin Brand Marius Hohl	Project coordination Cascade use of wood Transcription and support Field study of circular economy discourses in France











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#### **Preparatory Selection Workshop**

In January 2017, during the preparatory phase of the project, experts from different bio-based sectors gathered in Freiburg to discuss possible examples of circular-economy implementation to be analyzed in the Circulus project. The workshop brought together scientific partners of the Circulus project (Claudia Bieling, University of Hohenheim and Stefan Bringezu, University of Kassel) with partners from business practice (Tobias Schwarzmüller, BayernInnovativ; Alfons Bieling, Forest -Based Sector Technology Platform; Anatoly Davydov, Papiertechnische Stiftung; Sophie Griefahn, Cradle to Cradle e.V.; Marcus Kirschner, Hauptverband der Deutschen Holzindustrie und Kunststoffe verarbeitenden Industrie und verwandter Industrie- und Wirtschaftszweige e.V.; Dominik Melzig, Forum Ökologisch Verpacken e.V.)



After an intense one-day workshop, the participants decided on possible directions for selecting business cases for the analysis within Circulus. These results helped the Circulus group members who joined Sina Leipold in April and June 2017, to build up their specific project parts and get in contact with firms for the analysis of business cases.

#### **Selecting Circular Business Cases**

Based on the discussions of the preparatory Selection Workshop, the Circulus team contacted interested companies to collaborate with them in finding pathways to a sustainable circular bio-economy. Klingele Papierwerke and GreenCycle now support the Circulus team in investigating circular-economy implementation strategies and their environmental benefits in the packaging and in the food sector.

Through the four foot-prints, addressing Land, Water, Carbon and Material use, together with sectorial interviews, we will detect trade-offs and synergies for different implementation strategies. These different strategies will then serve to elaborate recommendations for key decision makers and business practitioners in Germany, and beyond.



Photo: Moyan Brenn, CC-By-2.0

#### **Expertise from over 40 Specialists**

Over the last six months, Anran Luo, Robert Gundlach and Sina Leipold carried out the first interview phase with decision makers from government, business, civil society and science who provided first hand insights into the way the Circular Economy is negotiated as a political project. Anran Luo's exploratory interview phase led her to Hong Kong, Shanghai and Beijing. Read about her findings under "Circulus in China". In the meantime, Robert Gundlach consulted experts from Germany, France and the Netherlands from the areas of municipal solid waste management, the chemical industry and product design. First impressions from the field suggest that while technological innovation and incorporating sustainability values are important, market incentives and regulations are perceived as a key driver for transforming actual resource flows. Furthermore, in Germany the circular economy debate seem to be strongly connected to waste management and resource efficiency, while the French debate appears to relate more to a wider socio-economic transformation and the social economy. The Dutch circular economy seems more practice oriented and strongly values cooperation between civil, public and corporate partners.

Sina Leipold's field work brought her to Brussels, the World Resources Forum in Geneva and the World Circular Economy Forum in Helsinki, where she interviewed about thirty high level European and international stakeholders from policy, businesses, civil society, and science. She discovered a European debate driven by joint hopes and fears connected to the Circular Economy, despite an extremely diverse stakeholder community.









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#### **Circulus in China**

During her first field trip, Anran Luo brought the Circulus project to scholars, practitioners and business exhibitions in China. In Shanghai and Beijing she explored the views and understandings of the Circular Economy. Surprisingly, the term Circular Economy was considered rather politically passé with other terms currently gaining increasing traction. Anran Luo attended the 2017 China International Circular Economy Exhibition in Beijing from November 20th -22nd, which included a broad selection of discussion forums. The discussion forums included themes Remanufacturing, Urban Mining, Investment Financing, Agricultural Recycling and Natural Resource Conservation, featuring speakers from the political, business and academic spheres.

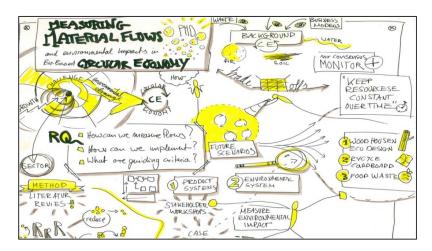
#### Talk on Circular Economy by W. Stahel

On January 23<sup>rd</sup>, we were pleased to host Prof. Walter Stahel as a special guest of the Circulus team here in Freiburg. After a public lecture on Circular Economy -Back to the Future, we discussed his vision of a Circular Economy as well as current research needs and obstacles. Prof. Walter R. Stahel is founder & director of the Product-Life Institute (Switzerland), the oldest established consultancy in Europe devoted to developing sustainable strategies and policies for a circular economy, since 1983. Since 2013, he is a full member of the Club of Rome. His most well-known publications include 'Jobs for Tomorrow, the Potential for substituting manpower for energy' (1981) and 'The Performance Economy' (2010).

## **Upcoming Events**

#### **Kick-off Workshop**

In March, Circulus is arranging the kick-off workshop for the case studies of circular-economy implementation. At the workshop, we will discuss our specific research questions and steps with all business partners. Hanna Helander will present her concepts for a circular economy and the methods for how she and her colleagues aim to measure the environmental consequences and socioeconomic and political potentials of the different circulareconomy strategies analysed. We look forward to discussing these with the our business partners and the project's advisory board. The discussion will be a first crucial step for the research team to identify challenges, barriers and opportunities in the different case studies and their industries.



#### Related news...

Interview with Hanna Helander from Parter Assosiation: Wellpappe als Beitrag zur Kreislaufwirtschaft (in German)

We are collaborating with the Journal of Industrial Ecology. Dr. Anna Petit Boix is engaged with the Journal since 2015 by translating abstracts. Keep track of the newest publications at http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1530-9290









