

## Special issue “Ecosystem services in a bio- and circular economy”

Deadline for manuscript submissions: 1<sup>st</sup> of December 2018

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### Special Issue Information

Dear Colleagues,

This special issue endeavors to put together a comprehensive set of articles of key relevance for the sectoral working group (SWG) on “[ecosystem services in a bio- and circular economy](#)” of the Ecosystem Service Partnership. Can bioeconomy and circular economy be partners in sustainability, as detailed in a recent report of the European Environment Agency [1]? What are the roles of ecosystem services in ensuring the development of sustainable bio- and circular economies and how to reflect these services in holistic assessments such as Life Cycle Assessments (LCAs)? It is well acknowledged that a successful bioeconomy implies tapping into the potential of renewable (yet not unlimited in supply) biological resources; can this be achieved without negatively affecting Ecosystem Services? How to develop the future bio- and circular economies in a way that these ecosystem services are not just preserved, but even enhanced? And what are the interactions between ecosystem services and a successful and sustainable bioeconomy?

In order to answer these questions, we invite submissions of original research papers from multiple disciplines addressing how to create ecosystem services preserving circular resource management systems as an inherent feature of future bio-based sustainable production and consumption systems. Review articles providing new insights on these fundamental questions are also welcomed. Sustainable development connects environmental, social and economic research and requires a multi-disciplinary approach in order to assess, explore and engage multiple actors with an important challenge of the first half of the 21<sup>st</sup> century: supplying food, water, energy and materials to a growing and changing population while avoiding irreversible global temperature increases, environmental degradation and loss of ecosystem services.

Topics of interest include, but are not limited to, the following:

- Biomimicry design
- Addressing potential externalities (e.g. the risk cycle of micropollutants) in a circular bioeconomy
- Transition towards low carbon economies and how it affects ecosystem services
- The impacts and interactions of the bio- and/or circular economy on ecosystem services
- Integrating ecosystem services in holistic assessments such as Life Cycle Assessment
- How to (and should we) develop local bio- and circular economy systems within a globalized economy?
- Potential trade-offs in the urgent climate change mitigation for ecosystem services preservation
- Nature-based solutions and/or engineered ecosystem services in bio- and circular economies

The special issue will be made available from the Ecosystem Service Partnership webpage to target the international community of scientists, policymakers, practitioners, stakeholders, and end-users engaged with enhancing ecosystem services at local, national, regional and global scale. The 1st SWP10 meeting will advertise this special issue and facilitate debates on theoretical and practical investigations on the subjects covered by this special issue. The papers selected for this special issue will be subject to a rigorous peer review procedure with the aim of rapid and wide dissemination of research results, developments and applications.

### **Keywords**

Ecosystem services preservation, circular resource flows, sustainable development, fossil-free economies, biomimicry, nature-based solutions, carbon capture and reuse; bioeconomy.

[1] The circular economy and the bioeconomy. Partners in sustainability. EEA Report No 8/2018. doi: 10.2800/02937