

## **LCA for supporting policy and decision making**

Serenella Sala, Marco Cinelli, Paolo Masoni

May 10, 11:05 - 12:45, Hall 100

Sustainability is a multi-dimensional concept, which involves different areas (economic, environmental and social), normative positions, and empirical knowledge. Environmental, economic and social aspects of the society interact in a complex pattern. The cultural, social, political and regulatory contexts affect the assessment of these interactions. Life cycle thinking (LCT) and LCA have a high potential to be used more extensively in supporting policy making, from problem definition up to policy impact assessment and policy implementation. However, when the object of the assessment is moving from products and service to systems and macro-scale, several improvements are needed in order to benefit the most from the LCA application. This requires to reflect upon current and future challenges for LCA within the policy domain. The session on LCA and policy builds on this reasoning and aims at providing an overview of the current challenges for a wider adoption of Life Cycle Thinking and LCA in the policy context. Suitable frameworks, methods, and tools for system analysis are needed to properly develop sustainable policies on, e.g., bioeconomy, circular economy and resource efficiency, sustainable production and consumption, ecoinnovation etc., policy makers require integrated assessments of current and potential future policies. This session aims at presenting and discussing the role of LCA, LCSA and other methodologies for support of policy development at different scales, from local to country and European level. Which developments are needed to address such complexities? Which indicators? Which targets should be considered? How can scenario modeling further structure the analysis? How results could be presented in order to be comprehensible? We invite contributions that show how LCA could be used for policy support at different scales, what approaches are available for deepening of the analysis, what important aspects cannot be accounted for and, thus, what is needed to better address mechanisms in the analysis, especially in light of inclusion of economic and social aspects. Methodological developments and case studies related to sustainability assessment of policies and systems using life cycle approaches are the main focus. However, we also welcome comparative analyses on how different assessment tools may relate to each other and could be combined with LCA.