

Policy assessment in an integrated systems perspective: indicators and targets to ensure operating within safe planetary boundaries



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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. To develop sustainable policies on, e.g., resource efficiency, bioeconomy and ecoinnovation, policy makers require integrated assessments of current and potential future policies. This requires the development of suitable frameworks, methods, and tools for system analysis. Life cycle sustainability assessment and life cycle sustainability analysis (both abbreviated LCSA) have been developed to meet this task. Other assessment tools with a broad systems perspective have been developed to respond to different policy-related questions: LCA, environmental impact assessment, material or substance flow analysis, input/output analysis, cost-benefit analysis, partial and general equilibrium models, etc. Each methodology has both strengths and limitations in the assessment. A good understanding of the applicability, strength and limitation of the different approaches is important for choosing the correct assessment tool in a given situation and to correctly interpret the results. This session aims at presenting and discussing the role of LCA, LCSA and other methodologies for support of policy development at different scale, from local to country and European level. How can rebound effects and interactions between different sustainability aspects be accounted for? Can the cultural, social, political and regulatory context be incorporated in the assessment? Which developments are needed to address such complexities? Which indicators? Which targets should be considered? How can scenario modeling further structure the analysis? We invite contributions that show how LCA and LCSA 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 or integrated into LCSA.

SESSION TYPE: Platform, Poster and Poster Corner

ADVISORY GROUP: Life-Cycle Assessment Advisory Group (Europe)