



# 7<sup>th</sup> INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION FOR ACHIEVING SUSTAINABLE DEVELOPMENT GOALS”

## **Circular Economy, a Way to Sustainability?**

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In 2015, 7 billion ton of raw materials were consumed in the EU-28. High dependency on imported resources (ca. 90%) exposes Europe to price volatility and geopolitical uncertainties and creates a competitive problem for the manufacturing of goods as materials and imported components are an important part of the total cost. Moreover, the production of raw materials generates a lot of environmental problems in the countries of origin. Current production levels of some “critical materials” such as Li and Co, are not sufficient to meet the material demand for the production of sustainable energy in Europe. It is consequently important for Europe to optimise its raw material consumption and to keep these raw materials as long as possible in circulation.

Although in Europe ca. 40 % of our waste is recycled, resource consumption can further be reduced by implementing the principles of Circular economy (CE). Circular Economy aims at decoupling economic growth from resource constraints by maintaining material and resources as long as possible in the economy. It goes farther than the conventional “reduce, reuse and recycle” as it also comprises “material repurposing and rethinking”, “product repair, refurbish and maintenance”. To reach the goals of Circular Economy new collaborations between designers, producers, waste managers, services and consumers are needed. They will result in innovative production systems based on eco-design, in efficient dismantling methods for end-of-life products, in thorough selective collection systems for waste, in elaborated procedures for material recycling and reuse of product parts...but also in a change in mentality, new consumption patterns and new business models.

All these aspects of circular economy will be illustrated by examples from different sectors. Finally, cleaner production and circular economy, 2 concepts to reach sustainability, will be compared.