

# ERSCP 2012: Workshop Design Sheet

## Workshop Design and Content

### **Title of Workshop \***

The dual challenge for global material supply chains

### **Short Description of Workshop Outline (max. 2000 characters) \***

including Relevance and Background

Industrial societies have increasingly come to depend on global material supply chains to service the requirements of domestic production and consumption. Particularly due to the growing demand in emerging economies, the material throughput of these global metabolic networks is still rapidly increasing.

The environmental impacts along the entire chains of production and consumption (resource extraction, transformation into goods and services, transport, wastes and emissions) are the main drivers of global environmental change.

The first question explored in this workshop concerns understanding the structure and evolution of the global metabolic networks and the resulting challenges for the decarbonization and dematerialization of the global economy required for environmental protection and climate change mitigation.

At the same time, increasing throughput, environmental degradation, and shifting material demand (e.g. resources required for low carbon technologies) may put stress on existing supply networks and lead to physical or structural resource scarcities. The second topic discussed in the workshop will therefore address the less explored question of potential vulnerabilities of global metabolic networks against external disruptions caused by global change and other drivers.

Overall this session aims to bring together new empirical insights with innovative concepts and methods to address these research questions but also seeks to identify leverage points for sustainable production and consumption policies.

### **Expected Outcomes and Results**

Presenting and discussing

- (1) new insights in the industrial metabolism,
- (2) new approaches and methods to analyse industrial metabolism
- (3) Identify options and obstacles for a sustainable production and consumption.

### **Presenters**

Daniel Müller, NTNU, Norway

Laura Schneider, TU Berlin

Anke Schaffartzik, Institute of Social Ecology, Vienna

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