

## Report: Lab on Measuring Global Impacts of Production and Consumption

### Introduction

On January 25th 2017, around 30 participants from academia, policy and different institutions in the field of sustainable development gathered at the Impact Hub Berlin in order to discuss about Global Impacts of Production and Consumption.

The lab was conducted by *SDSN Germany* and the *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)*. The event is meant as a starting point to facilitate further exchange between stakeholders from academia, civil society and the private sector on the global impact of production and consumption.



One of the aims of the first lab was to identify quantitative and qualitative contributions to the *SDG Index and Dashboards* published by *SDSN* and the *Bertelsmann Foundation*. The 2017 edition will specifically focus on international spillover effects. Moreover, lab participants collected ideas for potential *(Solutions) Initiatives* on how to measure and eventually decrease spillover effects that lead to negative impacts on a global scale.

In their welcome remarks, facilitator Dr. Holger Kuhle (GIZ and global SDSN) as well as Adolf

Kloke-Lesch (SDSN Germany) pointed out the need for new data sources in order to fill existing gaps. In addition, substantive indicators are still missing for the measurement of global impacts of production and consumption. Globalization, trade intensification and more complex supply chains have led to the externalization of environmental as well as social and economic pressures and increasing use of natural resources.

### Perspectives on the SDG Index and Dashboard

Guido Schmidt-Traub and David Durant-Delacre (both global SDSN) and Dr. Christian Kroll, (Bertelsmann Foundation) introduced the rationale of the *SDG Index and Dashboards* to the participants. For both SDSN as well as Bertelsmann Foundation, the *SDG Index and Dashboards* is a starting point and tool to raise awareness about international spillover effects while at the same time advocating for greater investment in statistics. In order to deliver comparability, it is necessary to have international data for at least 80% of countries.

Dr. Ingolf Dietrich from the Federal Ministry for Economic Cooperation and Development (BMZ) welcomed the SDG Index as a great opportunity for communicating the SDGs in general and international spillover effects



specifically: The index could serve to support the identification of data gaps and prioritization of action where needed.

The country ranking included in the index received critical attention, as it poses the risk of sending the wrong signal. In last year's edition, countries that externalize negative impacts - such as CO<sub>2</sub> emissions - are flagged as being on track to sustainability, while others countries are marked 'red' due to high emissions, although these often result from global shifts in production to regions with lower social and environmental standards. Even though these aspects are difficult to measure, it is a global responsibility to measure national consumption and impact.

In addition, the index could also go beyond reporting. Through including solutions for the reduction of greenhouse gas emissions, climate change or financial instability, a positive outlook could be added to the index.

### Scientific Input

Dr. Holger Hoff (*Stockholm Environment Institute*) presented the *PRINCE project (Policy Relevant Indicators for National Consumption and Environment)* which deals with the international and global dimensions of sustainable production and consumption in Sweden. According to Hoff, it is challenging to trace back supply chains, to make environmental boundaries explicit and to attribute environmental pressures to specific users and polluters. Greenhouse gas emissions linked to the consumption of industrialized countries reflect this: Even though the emissions have fallen domestically, they have increased markedly in total. Acknowledging this fact, Sweden has formulated its generational and environmental goals including the global effects. *PRINCE* therefore uses several methods to measure these impacts, such as the monitoring of total internal and external impacts (footprints) of Swedish consumption, as well as supply chain analysis and the integration of national economic accounts (Stats) with international/multi-regional input/output models/tables and environmental extensions. For greater use of the measurement of spillover effects, the methods for supply chain analysis and consumption-based accounting have to be advanced. In addition, greater resolution (sector, product and geographic) and data harmonization will be crucial for continuous monitoring, follow-up and review – which require long term funding as well. More information can be found under <http://www.prince-project.se/about/>



In a Pecha Kucha session, two initiatives were presented: Norbert Jungmichel (*Systain Consulting*) presented a project of the *Federal Environmental Agency (UBA)*, *Destatis*, *wegewerk*, *INEC*, *IFEU* and *Systain*, which analyses the global use of environmental resources resulting from Germany's production and consumption. A methodological handbook will be published with the outcomes for environmental reporting. In order to develop indicators, the project analyses statistical data of consumption, such as greenhouse

gas emissions, air pollutants, water, land and resource use, waste and transports. Two highlights are the case studies for data evaluation on the resource use along the global value chain in the textile sector and on machinery construction as a major German industrial sector. Paul Suski (*Wuppertal Institute*) then presented the *Wuppertal Institute's* approach of a micro-analysis on the household/individual level. The overall aim is to find out the level of sustainability for households by combining the consumption data with the resource extraction.

In the afternoon Professor Richard Wood (*Norwegian University of Science and Technology*) gave a presentation of the *Exiobase* project on the global resource footprint in view of the consumption of water, material, land and social accounts. Their research has found that the EU has a footprint that is twice or three times of global average and international spillovers have doubled over the last two decades, which has huge impacts on developing countries. Mobility, construction and food will have the greatest impact in terms of global spillover effects of consumption and production. In order to tackle the increasing international spillover effects the project has proposed to formulate consumption based targets and a consumption based policy. Moreover, the domestic material consumption has to change in order to decrease international impacts and low-carbon development will play a significant role. Lower intensity of imports, exports and supply chains would help in decreasing spillover effects. More information and data can be found under [www.exiobase.eu](http://www.exiobase.eu)

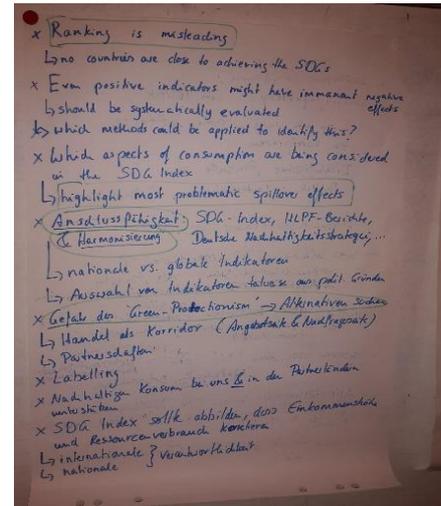


### Working Groups

Participants split up into two working groups in the afternoon. While the first group targeted on preliminary input for the SDG Index in view of indicators to be included and reflected on methodological challenges, a second group aimed at collecting potential topics and case studies as starting points for qualitative parts of the SDG report and beyond.

Group 1 delved into questions of measurement, data availability and quality, as well as the conceptual challenges in measuring specific spillover effects. The objective was to establish which quantitative, internationally-comparable and conceptually-sound measures of spillovers are currently available, or could be developed in the short to medium-term. Various technical issues were discussed, including on virtual water measurements, the pros and cons of technology-adjusted consumption-based emissions, potential proxies for trade in endangered species, as well as of the different measures of material consumption. The group brainstormed new potential sources of data. It was also emphasized that a mapping of cross-national spillover effects needs to be undertaken, identifying issues of relevance under each SDG.

In group 2, participants dived deep into some essential questions at the intersections of sustainable development, trade, multilateral cooperation as well as harmonization of different reports and monitoring mechanisms of the Agenda 2030. Participants agreed that sustainability is an international responsibility, which might require a binding international frame as well as incentive mechanisms for national states to commit to fulfilling the SDGs. The INDCs (Intended National Contributions) in line with the Paris Climate Agreement could be a model. Additionally, participants developed ideas for two case studies: As a first case, ethanol production in Brazil for German biofuels could be a potentially interesting case, as it bundles a series of effects ranging from the local to the global scale (including changes in land use and prices, damaging environmental effects, social conflicts as well as governance and trade issues). In addition, the group discussed about a comparison of Congolese and German households, which might serve as an eye opener to show different patterns of consumption and the resulting global effects.



## Next steps

The results from group 1 will be considered for the next SDG index. The SDG Index team will reach out to individual participants regarding specific data issues. Participants are encouraged to share any datasets and key literature on cross-national spillover effects. The draft SDG Index will be circulated via SDSN Germany later on in the year for review and comment.

The ideas generated in working group two will be evaluated regarding feasibility. GIZ and SDSN Germany will subsequently contact suitable stakeholders to plan next steps.