Policy: Map the interactions between Sustainable Development Goals
Authors: David Griggs, Mans Nilsson and Martin Visbeck
Publication: Nature (2016)

The article argues that the interdependence of the SDGs is implicit into their logic, however, how this interdependence works in detail remains largely unknown. Nevertheless, countries may not ignore the overlaps and simply start trying to tick off targets one by one, or else they risk ending up with undesirable outcomes. In an attempt to address this issue, the article provides a conceptual framework as a starting point for building an evidence base to characterize the interactions of the SDGs in specific local, national or regional contexts. In a first step, a 7-point scale to clarify the nature of SDGs interactions is proposed, ranging from most positive to most negative. The article also states that policymakers need to start thinking systematically about SDGs interactions. The main hindrance in this regard seems to be the silo-approach adopted by many governments and the lack of tools to easily identify the most important interactions to tackle, and to leverage mutually reinforcing actions while avoiding trade-offs. When applying the proposed 7-point scale to score SDGs interactions, four additional considerations play an important role, these include: reversibility of interaction, direction of interaction, strength of interaction, and certainty of interaction. It is vital to note that the scoring of interactions is not a one-size fits all model but needs to be put in the context of each country regarding amongst other things geography, governance and technology and can thus vary.

A Guide to SDG Interaction – From Science to Implementation

The report examines the interactions between the various goals and targets, determining to what extent they reinforce or conflict with each other. It provides a blueprint to help countries implement and achieve the Sustainable Development Goals (SDGs). Countries around the world are faced with a significant challenge: How can they reach the 17 SDGs – and 169 targets that sit underneath these goals – by 2030? The report proposes a seven-point scale to quantify these synergies and conflicts. The scale ranges from +3, which applies when one goal or target is very reinforcing of others, to -3, which applies when goals and targets conflict with each other. A score of 0 indicates neutral interaction. The report includes detailed analysis of four SDGs and their interactions with other goals, these include: SDG 2 on Hunger, SDG 3 on Good Health and Well-being, SDG 7 on Affordable and Clean Energy and SDG 14 on Life below Water.

SDG Index and Dashboards Report 2017 - Global Responsibilities International Spillovers in Achieving the Goals

This report is a first attempt to a comprehensive analysis of the international spillover effects that impact the achievement of the Sustainable Development Goals globally, and therefore shines a spotlight on global responsibilities. Findings include that richer countries—those who are well on track to achieve the SDGs—lose points if indicators related to international spillover effects are being considered. These effects capture amongst others the impact of the global environmental degradation caused by production and
consumption practices, and the unfair trade practices and tax evasion by international businesses on poorer and developing countries. It also considers the increase in violence and conflict as a direct link to the manufacture and sale of weapons. The report goes beyond an analysis of the differentiated responsibility to address the inequality among countries but attempts to quantify the negative impact of practices in developed countries while making visible, within the measurable world of the SDGs, their role in hindering progress on the 2030 Agenda in the rest of the world. More in-depth examples are provided through 157 country progress reports, including all Arab countries, with the exception of Somalia, Palestine and Libya.

**Towards systemic and contextual priority setting for implementing the 2030 Agenda**
Authors: N. Weitz, N. Carlsen, H. Nilsson and K. Skanberg

How the sustainable development goals (SDGs) interact with each other has emerged as a key question in the implementation of the 2030 Agenda, as it has potentially strong implications for prioritization of actions and their effectiveness. So far, analysis of interactions has been very basic, typically starting from one SDG, counting the number of interactions, and discussing synergies and trade-offs from the perspective of that issue area. This paper pushes the frontier of how interactions amongst SDG targets can be understood and taken into account in policy and planning. It presents an approach to assessing systemic and contextual interactions of SDG targets, using a typology for scoring interactions in a cross-impact matrix and using network analysis techniques to explore the data. By considering how a target interacts with another target and how that target in turn interacts with other targets, results provide a more robust basis for priority setting of SDG efforts. The analysis identifies which targets have the most and least positive influence on the network and thus guides, where efforts may be directed (and not); where strong positive and negative links sit, raising warning flags to areas requiring extra attention; and how targets that reinforce each others progress cluster, suggesting where important cross-sectoral collaboration between actors is merited. How interactions play out is context specific and the approach is tested on the case of Sweden to illustrate how priority setting, with the objective to enhance progress across all 17 SDGs, might change if systemic impacts are taken into consideration.

**Sustainable Development Goals Interlinkages and Network Analysis: A practical tool for SDG integration and policy coherence**
Authors: Xin Ahou, Mustafa Moinuddin and Ming Xu
Publication: Institute for Global Environmental Strategies (IGES) (2017)

The purpose of the research report is to present an interlinkages framework and some analytical options for the SDGs. Interlinkages between SDG targets have been identified through extensive review of scientific literature and policy documents provided by relevant international processes focusing on SDG indicators. The interlinkages identified in the report are quantified using historical time-series data for a set of selected indicators from nine countries from East-, Southeast and South Asia, presented in a network of interlinkages and analysed using Social Network Analysis techniques. The results of the project are made publicly available through an interactive visualisation tool on SDG Interlinkages and Data Visualisation. The focus of the SDG interlinkages analysis is placed on the interlinkages between SDG targets and the binary linkages between each pair of the 169 SDG targets. Using Social Network Analysis (SNA) techniques, the general structure of the SDG interlinkages network and the distinguished features of country-specific quantified SDG networks are analyzed based on an array of centrality measures, including degree centrality, eigenvector centrality, betweenness centrality and closeness centrality. The paper includes a comprehensive summary of the existing, yet limited, literature on SDG interlinkages and provides an
overview of the knowledge gaps, including the lack of practical application of the proposed approaches, of a holistic approach incorporating all 17 Goals and of quantitative assessments of interlinkages.

Towards integration at last? The sustainable development goals as a network of targets
Author: David Le Blanc
Publication: DESA (2015)

In 2014, UN Member States proposed a set of Sustainable Development Goals (SDGs), which will succeed the Millennium Development Goals (MDGs) as reference goals for the international development community for the period 2015-2030. The proposed goals and targets can be seen as a network, in which links among goals exist through targets that refer to multiple goals. Using network analysis techniques, we show that some thematic areas covered by the SDGs are well connected among one another. Other parts of the network have weaker connections with the rest of the system. The SDGs as a whole are a more integrated system than the MDGs were, which may facilitate policy integration across sectors. However, many of the links among goals that have been documented in biophysical, economic and social dimensions are not explicitly reflected in the SDGs. Beyond the added visibility that the SDGs provide to links among thematic areas, attempts at policy integration across various areas will have to be based on studies of the biophysical, social and economic systems

Sustainable Development Goals and Integration: Achieving a better balance between the economic, social and environmental dimensions

Authors: Amy Cutter. Contributing Authors: Derek Osborn, John Romano and Farooq Ullah – Stakeholder Forum
Publication: Stakeholder Forum

The Sustainable Development Goals (SDGs) currently under negotiation at the United Nations are intended to guide priorities both for the development needed in the developing countries and for the sustainability transition needed throughout the world over the next 15 years. The draft set of SDGs presented in the final report of the United Nation’s Open Working Group (OWG) include most of the highest priority objectives of the world’s economic, social and environmental agendas and in that sense achieves a degree of balance. This paper is composed of three sections: 1. Using some initial assessments of the OWG report, we will first highlight some key observations about the balance of the social, environmental and economic dimensions in the goals that have been proposed by the OWG. 2. In the second section we then put forward some stakeholder proposals for amendments or additions to the framework, which we have identified could be used to improve the balance of the dimensions in the current proposal. 3. Finally, we highlight the interlinkages that we have identified exist between the current proposed goals and targets. These interlinkages provide an indication of the integration of the three dimensions in the framework and can be a tool for users of the SDGs to identify key areas of reinforcement and alignment within the framework