



# Sustainable Development Goals: A need for relevant indicators



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## ABSTRACT

At the UN in New York the Open Working Group created by the UN General Assembly proposed a set of global Sustainable Development Goals (SDGs) which comprises 17 goals and 169 targets. Further to that, a preliminary set of 330 indicators was introduced in March 2015. Some SDGs build on preceding Millennium Development Goals while others incorporate new ideas. A critical review has revealed that indicators of varied quality (in terms of the fulfilment certain criteria) have been proposed to assess sustainable development. Despite the fact that there is plenty of theoretical work on quality standards for indicators, in practice users cannot often be sure how adequately the indicators measure the monitored phenomena. Therefore we stress the need to operationalise the Sustainable Development Goals' targets and evaluate the indicators' relevance, the characteristic of utmost importance among the indicators' quality traits. The current format of the proposed SDGs and their targets has laid a policy framework; however, without thorough expert and scientific follow up on their operationalisation the indicators may be ambiguous. Therefore we argue for the foundation of a conceptual framework for selecting appropriate indicators for targets from existing sets or formulating new ones. Experts should focus on the "indicator-indicated fact" relation to ensure the indicators' relevance in order for clear, unambiguous messages to be conveyed to users (decision- and policy-makers and also the lay public). Finally we offer some recommendations for indicators providers in order to contribute to the tremendous amount of conceptual work needed to lay a strong foundation for the development of the final indicators framework.

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## 1. Introduction

Historically, the concept of sustainable development (SD) emerged in the context of environmental concerns as witnessed by the first appearance of the term in the World Charter for Nature (UN, 1982). These concerns were addressed in Our Common Future (WCED, 1987) and further elaborated in 40 Chapters of Agenda 21 of the Earth Summit in 1992 (UN, 1992). That may be seen as a successful attempt to reconcile the two seemingly contrasting paradigms: lasting economic growth and an efficient protection of environment and natural resources what was forcefully exposed in The Limits to Growth (Meadows, 1972). Following this, the World Summit on Social Development in Copenhagen in 1995 (UN, 1995) stressed SD's key role in securing global social development and effectively added the "third pillar" to the current definition of SD endorsed by the World Summit on Sustainable Development in Johannesburg in 2002 (UN, 2002) and many subsequent statements and documents. It was recently fully embraced by the Rio + 20 outcome document

"The Future We Want" (UN, 2012). In this document the social pillar received prominent attention, as witnessed by the title of the main topic of the Summit: Green economy in the context of sustainable development and eradication of poverty.

From an early stage of the SD concept it has been clear that information and namely quantitative indicators will play an important role. Already Agenda 21 (Chapter 40) called for "indicators that show us if we are creating a more sustainable world"; since then, many indicators, indicator sets and dashboards, compound (composite and aggregated) indicators and indices have been introduced. However, despite all the efforts of many national and international organisations and governments – including long-term programmes such as the European Commission's 'Beyond GDP'<sup>1</sup> and the OECD's 'Measuring the Progress of Societies'<sup>2</sup> – there has not been theoretical consensus on how to measure current well-being nor sustainability (e.g. UNECE, OECD, Eurostat, 2008; Stiglitz et al., 2009). An indicator-based approach underpinned the major global assessment of countries' progress towards

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<sup>1</sup> See its webpage at [http://ec.europa.eu/environment/beyond\\_gdp/index\\_en.html](http://ec.europa.eu/environment/beyond_gdp/index_en.html).

<sup>2</sup> See its webpage at <http://www.oecd.org/statistics/measuringwell-beingandprogress.htm>.

Millennium Development Goals and more recently towards Sustainable Development Goals (SDGs) (Sachs, 2012).

The idea of global goals accompanied by concrete indicators was originally proposed by the governments of Colombia and Guatemala and officially introduced at the Rio+20 Conference. SDGs in their recent form are a universal set of goals, targets and indicators that UN member states will use to frame their agendas and policies over the next 15 years. SDGs follow, and expand on, the Millennium development goals (MDGs), which were agreed by governments in 2000, and will expire at the end of this year (Evans and Steven, 2012). The mandate to develop the proposal on the SDGs was included in Conference Outcome Document, 'The Future We Want' (UN, 2012), which incorporated the request to create an Open Working Group (OWG) with the task of developing the set of SDGs. SDGs were drafted by the OWG established by the UN General Assembly in the "Zero Draft" of July 2014 (UN OWG, 2014), and were endorsed at the 68th session of the UNGA in the autumn of 2014. The ongoing negotiations will finalise the SDGs – i.e. to revise the set of targets and accompany them with related concrete indicators – for adoption in the autumn of 2015. Currently, the background materials comprise 17 goals,<sup>3</sup> 169 targets and 303 indicators. Proposed goals 1–6 build on the core agenda of the MDGs, while goals 7–17 break new ground (UNSD, 2014). The goals are made tangible by targets – there are 169 targets (including 62 targets on the means of implementation) ranging from 5 to 12 targets per goal. The early draft list of indicators built on the proposals of the OWG and the conclusion of the UN Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development, among other inputs. It built on three indicator sets: MDGs indicators (60 indicators), SD indicators of the Conference of European Statisticians (CES SDI, 90 indicators), and indicators by the SD Solutions Network (SDSN, 100 indicators). Their rapid assessment showed that 105 indicators from at least one of the three indicator sets could potentially be used for measurement (UNSD, 2014).

It is generally expected that a summit of heads of state will adopt the SDGs in September 2015. As recommended by the UN Statistical Commission a set of indicative indicators should be developed by September 2015, so that a definitive set can be adopted by the 47th session of the Commission in 2016 (UNSC, 2015). We may thus assume – regardless the exact date – that the SDGs will be approved and will serve as a basis for the global post-2015 development agenda. In order not to waste resources and effort invested so far, the SDGs framework – and the indicators in particular – need to be conceptually and methodologically well-designed and tested prior to adoption.

This article does not seek to redefine the SD concept or consequently propose new SD goals and/or targets. Neither can it explore data availability, financial demands or institutional capacities for successful fulfilment of the whole SDGs commitment. The goal of this article is to contribute to the development of highly relevant SDGs indicators. We briefly examine progress to date in developing SD indicators focusing on efforts to define a concise measurement framework. Based on the experience with SD indicators since UNCED in 1992 we show that indicators of uneven quality have been in use for assessing SD. We take for granted that the current format of SDGs has laid a solid policy framework (despite some countries feeling that 17 goals are too unwieldy to implement or to communicate to a broad public); however, without thorough expert and scientific follow up on their operationalisation the pertinent indicators may be very ambiguous. Therefore we argue that selecting appropriate indicators from existing sets or formulating

new ones should be done within a conceptual framework. Experts should primarily focus on the "indicator-indicated fact" relation to ensure the SDGs indicators relevance. This will ensure that right and unambiguous messages are sent to policy makers. Finally we offer some recommendations for indicator providers in order to contribute to the tremendous amount of conceptual work needed to lay a strong foundation for development of the final indicators framework.

## 2. The need for a framework

There are many SD indicators and indices already developed and new metrics will certainly yet appear (e.g. Eurostat, 2007; Bandura, 2008; Tasaki et al., 2010). Some commentators speak about an obsession with numbers and an indicator explosion, others call for new and better indicators (e.g. Riley, 2001; Morse, 2013). Neither the scientific community nor the users know whether this remarkable worldwide effort should be more coordinated and regulated or if the "survival of the fittest (indicator)" strategy is still the most efficient one (Dahl, 2012). In the late 1990s – after the indicator programme was endorsed by the UN Commission on Sustainable Development and subsequently followed by many intergovernmental organisations and governments – the challenge was mainly to define a measurement framework and then select relevant SD indicators (Moldan, 1997). The aim was to structure the indicators into a system (e.g. based on interactions or policy goals) and enhance standardisation. Many such general frameworks have been developed and tested at regional, national and international level. They comprise variously structured human and ecological systems and relationships between them; there are thematic frameworks specifically elaborating some subjects (e.g. health or transport), some frameworks use an accounting approach or economic theory on various types of capital, others base frameworks on causality as Driving force-Pressure-State-Impact-Response (DPSIR), etc. (e.g. Prescott-Allen, 2001; Stanners et al., 2007; Ruta and Hamilton, 2009; OECD, 2010).

UNSD (2015) sees an explicit need to structure the SDGs indicators into a coherent framework. It will secure the completeness of the indicator set and emphasise linkages among the indicators thereby avoiding arbitrariness in the selection process. Griggs et al. (2013) add that a unified environmental and social framework for SDGs manages trade-offs and maximises synergies between targets. The approaches and methods potentially applied to developing indicator frameworks can be classified into two categories: policy-based approaches and conceptual approaches (Eurostat, 2014). While the former use SD strategies and other policy documents as a frame of reference and are typically organised according to strategic issues, the latter include a frame of reference independent from political priorities (based on a model of sustainable development processes and/or their interactions). Since the concept of SD does not lend itself to assessment by measurement, the indicator framework should not only define what to measure but also how to measure it. Several such methods for sustainability assessment have been already developed, tested and used (Singh et al., 2009).

Both approaches apparently function differently having their own processes and objectives. However, they both have their place in supporting the different stages of a policy cycle: Policy formulation (identifying issues, setting goals and objectives reflecting ideas and visions and formulating issues in such a way as to facilitate succeeding operationalisation), policy legitimisation, policy implementation, policy evaluation, and policy change. Purely from the perspective of indicators, crucial are the fourth and – to a lesser extent – second stage, i.e. policy evaluation and policy legitimisation with an instrumental role for experts (Fig. 1). They contribute

<sup>3</sup> Sustainable Development Goals are abbreviated interchangeably further in the text as goals or SDGs.

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