

# *Measuring Progress Towards Sustainable Development Goals*

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*Working Paper*

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## *Table of Contents*

|   |    |
|---|----|
| Key Messages.....   | 1  |
| The Need for Sustainable Development Goal Indicators .....                        | 3  |
| A Principles-Based Approach .....   | 5  |
| Considerations for Next Steps .....   | 7  |
| Annex 1: Sustainable Development Goals .....                                      | 9  |
| Annex 2: BellagioSTAMP-Sustainability Assessment and Measurement Principles ..... | 11 |

## Key Messages

- The Rio+20 outcome document (section 250, highlighted in Annex 1) calls for targets and indicators to accompany Sustainable Development Goals (SDGs), applicable to both developed and developing countries but taking into account national contexts.
- The identification of SDGs should not be data driven, but grounded in common values, relevant science, and a conceptual framework that represents key domains of sustainable development and interlinkages between the domains.
- Sustainable development goal indicators (SDGIs) should inform goal and target setting and serve as an important element of the SDGs' governance and accountability mechanism.
- In order to ensure scientific credibility, objectivity, and timely access to relevant facts and evidence in the political SDG process, a parallel but arms-length institutional arrangement and process should be set up from the beginning for the development of the SDGIs. The political SDG and technical SDGI processes should work iteratively and in close coordination.
- The development of the SDGIs should follow a principles-based approach, such as the Bellagio Sustainability Assessment and Measurement Principles (or BellagioSTAMP) developed in a multi-stakeholder process led by the Organisation for Economic Co-operation and Development (OECD) and IISD.
- The development of SDGIs represents a major opportunity for mainstreaming the results of the ongoing review of the system of national accounts (including the development of a new framework for environmental statistics and sustainability indicators) into policy.
- SDGIs should be developed with their intended uses in mind—guiding the implementation of SDGs through major policy and investment decisions, and strengthening accountability by supporting objective reporting on progress.

## Context

Building on an initiative led by Colombia and Guatemala,<sup>1</sup> governments represented at the Rio+20 Conference on Sustainable Development provided a mandate for launching an intergovernmental process to identify sustainable development goals (SDGs). The process to develop the SDGs will run over a period of three years and conclude by 2015, the end of the implementation period for the existing Millennium Development Goals (MDGs). With the end of the MDG implementation period approaching, the question of how much progress has or hasn't been achieved is bound to feature prominently in political and scientific discourse.

Immediately following the agreement on the SDG mandate, most of the discussion focused on the approach to developing the goals themselves and how the SDG process could be integrated with the ongoing process to define the broader post-2015 development agenda. This paper argues that SDG process planning should also pay specific attention to the development of the evidence base— particularly sustainable development goal indicators (SDGIs).

While indicators were developed and used in reporting progress towards the MDGs, the approach to developing SDGIs must be systematically strengthened. One way to achieve this would be by designing the SDGI process (and ultimately the indicator system itself) based on a coherent set of purpose-built principles. One example of such principles is the Bellagio Sustainability Assessment and Measurement Principles or BellagioSTAMP. The question is not simply what to accept as evidence and indicators, but how these are conceptualized and developed, by whom, and how evidence informs the envisioning of transition pathways, implementation mechanisms, monitoring and reporting.

Paragraph 250 of the Rio outcome document specifically points to the need for tracking progress towards the goals by identifying targets and indicators (Annex 1).<sup>2</sup> The political discourse on SDGs takes place in the context of an ongoing science policy discourse on the need for revising the framework and details of progress measurement. This also received significant attention at Rio+20, and resulted in a request in Paragraph 38 of the outcome document to the UN Statistical Commission to launch a new process in this regard. The two agendas—the agenda on goals and the agenda on measurement—are linked, and if properly coordinated can lead to strengthened synergy and stronger overall progress. This is also supported by a rapidly growing global community engaged in revising indicator systems based on the concepts of sustainability, genuine progress, and human well-being.

This working paper discusses the rationale for assessing progress towards SDGs and targets, and provides initial guidance for the development of SDG indicators (SDGIs) that can help achieve this. Based on the guidance, this paper discusses workplan options for integrating the development of measurement functions, tools and capabilities into the overall SDG process from the start.

The concept note was prepared as input to the evolving discourse on SDGs at the request of the Rio+20 Office of Executive Coordinators of the UN. IISD and the authors welcome feedback.

<sup>1</sup> <http://www.uncsd2012.org/content/documents/colombiasdgs.pdf>

<sup>2</sup> <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N12/381/64/PDF/N1238164.pdf?OpenElement>

## The Need for Sustainable Development Goal Indicators

In the Rio+20 process, SDGs were formally raised by Colombia's and Guatemala's proposal to avoid political commitments to sustainable development becoming reduced to generalities. This need is not new, but it arose with particular emphasis and urgency as progress towards already agreed-upon goals and targets has been, at best, uneven, with only three Millennium Development Goals (MDGs) related to slums, poverty and water having been met by 2012.<sup>3 4</sup>

Goals are important for translating the general concept of sustainable development into tangible detail, but they are not sufficient. While goals help provide direction, they require accompanying targets and indicators to measure progress. When viewed from the perspective of a management cycle, goals, targets and indicators are essential for envisioning the future, developing transition pathways and strategies, turning strategies into policies and plans, guiding implementation, monitoring progress, and learning from results.

Such indicators have been developed to accompany the MDGs at the global level, but also in many other global and sub-global contexts.<sup>5</sup> Developing indicators for the SDGs thus has a strong foundation from the substantive and procedural point of view, but yet will also face considerable challenges. Some of the challenges will be political, others conceptual, scientific and technical. The following are some of those can be expected to arise:

- The MDGs and their associated indicators applied only to developing countries, but the SDGs will apply to developed ones as well. This not only increases the diversity of perspectives, but also the complexity of the process. How and where decisions will be made, the composition of decision-making bodies, and whose perspectives will be accepted as relevant and legitimate are potential sources of conflict. As SDGs become more influential in the post-2015 development agenda, harder negotiations are to be expected.
- At the conceptual level, the main issue is the framework for SDGs. Although sustainable development as a concept and field of practice has been around for over two decades, its definition, interpretation and framework remained fluid.<sup>6</sup> As the political mandate for the SDGs did not clarify the framework, the task was left to the subsequent intergovernmental and/or science-policy process. The development of a common framework itself can be an important part of social learning; however, differences in value-systems, worldviews and strategic interests may make reaching consensus politically and procedurally complicated. The challenge is well known from over two decades of practice focused on developing sustainability or similar indicator systems that often had to tackle this question early in their process.
- From the scientific point of view, the core challenge is grounding SDGs not only in disciplinary science as it relates to individual SDGs. Collectively, SDGs will also have to represent the structure and interlinkages of complex socio-ecological systems (SES) and build on evolving branches of science that consider issues at a systemic level.<sup>7</sup> Selecting and interpreting indicators, defining critical thresholds and tipping points, and developing transition pathways that connect current conditions to SD goals and targets in the future will all require an interface with scientific and science policy discourses.

<sup>3</sup> [http://www.unep.org/geo/pdfs/geo5/GEO5\\_report\\_C16.pdf](http://www.unep.org/geo/pdfs/geo5/GEO5_report_C16.pdf)

<sup>4</sup> <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202012.pdf>

<sup>5</sup> <http://www.iisd.org/measure/compendium/> and [http://www.wikiprogress.org/index.php/Main\\_Page](http://www.wikiprogress.org/index.php/Main_Page)

<sup>6</sup> Kates, R.W., Parris, T.M., & Leiserowitz, A.A. (2005). What is sustainable development? Goals, indicators, values and practice. *Environment*, 47(3), 8–21.

<sup>7</sup> For example, see Reid et al. (2010, November). Earth system science for global sustainability: Grand challenges. *Science*, 330. 916–917.

- As far as technical challenges are concerned, they are related most importantly to availability and quality of data. While data for the MDGs was mostly statistical, SDGs must make full use of remote sensing data collected through Earth Observation programs. Due to serious and persistent capacity gaps (mostly, but not exclusively, in developing countries), data gaps continue to exist and mechanisms to systematically address them will be required. Statistical agencies and other data collection and monitoring bodies are engaged in a review of the system of national accounts and other ways to improve data availability, but the process will take time and require significant investment.

While the foundations for developing SDGs are strong and their development can benefit from the momentum generated by the overall interest in redefining the measurement of societal progress, this aspect will need specific attention. Indicators will build on goals, but they can also inform the goal-setting and (if it comes to that) target-setting processes. Current baselines must be of concern when the global community and individual countries consider where they should be heading. Therefore, the development of SDGs must proceed hand in hand with the development of the goals themselves. However, in order to ensure objectivity and to avoid data and indicators driving goal setting, the process of establishing the SDGs should be kept separate from the political SDG process. While ultimate decision on goals, targets and indicators would rest with the political process, these decisions need to have access to and take relevant and unbiased scientific evidence and observation data into account. This is what an arms-length, separately constituted SDGI process with sufficient capacity could provide to the entire SDG negotiating community.

Considering the potentially far-reaching consequences of the SDGs on the SDGs themselves in their development, implementation and reporting phases, the establishment of the SDGI process requires careful attention. In order to ensure all key strategic issues are considered, a principles-based approach is proposed.

## A Principles-Based Approach

A principles-based approach would build on general lessons learned from the theory and practice of sustainable development indicators. It would help provide a high-level checklist for SDGI development and “nudge” the system in the direction of harmonization with other measurement efforts. At the same time, however, it would not force a particular framework or indicator set, thus allowing the necessary flexibility that countries called for in the Rio+20 outcome document.

While general guidance for indicator development has been developed by many organizations and authors, they are often tied to specific methods, indicator sets or sectors. One exception to this is the BellagioSTAMP–Sustainability Assessment and Measurement Principles, recently developed by the OECD and IISD, in collaboration with a series of other international organizations to guide measurement at the global and sub-global levels.<sup>8</sup> BellagioSTAMP includes eight principles and covers issues related to content, process, scope and impact on decision making (Annex 2). They are about assessment *and* measurement, so they cover not only the measurement of specific indicators, but also setting up a system from conceptualization to data collection, analysis, interpretation and the communication and use of measurement results.



Given the SDGs’ specific context, some of the principles in BellagioSTAMP apply more directly than others. The following lists the eight principles along with some initial thoughts on their application to an SDGI process. A more complete analysis of their application could be undertaken in the context of the overall SDG and SDGI development process.

### 1. Guiding Vision

This principle applies to the need for measurement to be guided by the goal of achieving human well-being within the limits of the biosphere. As the SDGs would be developed based on the goals, the vision would be articulated by and be implicit in the goals. Efforts to identify global and sub-global critical thresholds in the environmental and societal domain would help provide an important starting point. This information can then inform the political process of goal (and possibly target) selection.

### 2. Essential Considerations

This principle also applies to both goal setting and indicator development in the sense that it calls for a whole system perspective. Building on the foundation of the MDGs, the SDGs have been proposed to have a broader thematic focus by providing more explicit coverage of natural resource and environment issues. In addition to the three pillars of sustainable development, the goals and indicators would also need to recognize the importance of governance and the issues that are associated with governance, such as capacity.

<sup>8</sup> <http://www.iisd.org/measure/principles/progress/bellagiostamp/>



### **3. Adequate Scope**

When developing the SDGs, agreement will need to be reached on their spatial and temporal coverage. From the spatial perspective countries may be an appropriate unit, though subnational detail and regional or higher-level aggregation of data may also be needed, to identify low resolution or higher-level trends. From the temporal point of view time series data will be important that show trends, but projections of the most likely trends may also be required to help establish a basis for preparing policy-relevant scenarios.

### **4. Framework and Indicators**

This principle recognizes the need for a conceptual framework within which SDGs would be developed. As goals precede the indicators, this applies to the framework used to develop the goals. The SDGs themselves would need to be drawn from recognized measurement systems in the interest of credibility and comparability. The Rio+20 outcome document's point that SDGs must be fully complementary to the MDGs also applies to their respective indicators: SDGs must be complementary and in sync with MDGs.

SDGs should also be cross-compared where relevant with variables used in widely recognized environment-development models and scenarios, both to draw on the results of such models and to make it more straightforward to develop forward looking policy scenarios. Such scenarios may be important in elaborating on alternative future development pathways that are likely to reach SDG targets.

### **5. Transparency**

This principle would require the SDG and SDGI selection process to be fully transparent in all of its details and making all uncertainties and assumptions explicit.

### **6. Effective Communication**

In order to minimize the risk of their misinterpretation and misuse, SDGs would need to be communicated widely and with clarity. The principle calls attention to the importance of making the indicators and the underlying data available in full detail in formats easily accessible and understandable for audiences around the world.

### **7. Broad Participation**

The question of who is involved is always critical in the development of goals, targets and indicators. In order to ensure legitimacy, the SDGI process would need to ensure there are opportunities for the public to provide input, in addition to experts and policy-makers. Early engagement before key decisions have been made and directions set is key.

### **8. Continuity and Capacity**

Through this principle it would be recognized that SDGs require ongoing monitoring, analysis and reporting, and that such activities require significant capacity and resources. However, continuing measurement does not necessarily mean that the indicators are static. As new knowledge becomes available and as new issues arise, they may need to be reviewed, as if in a continuous process of learning and careful adaptation.

## Considerations for Next Steps

Based on the experience of the MDGs, the development of the SDGs will need to go hand in hand with the development of the SDGs. This has implications for the planning of the overall SDG process, the actors involved, the resources required and the capacities that need to be brought to bear.

The brief review of the principles illustrated the range of issues that need consideration when planning the approach. As planning for the SDG process has already started, it is important to integrate SDGs as a distinct element of the workplan, with attention to the required expertise, capacity, financing and outputs. SDGs will also need a home and some level of ongoing attention once the system has been set up. The MDGs provide a precedent, but the SDGs will have significantly increased complexity, if only for the broader range of issues, new science, and need to integrate statistical and Earth Observation data.

Figure 1 illustrates the position of the SDGI process with regard to other elements of the SDG initiative and relevant external processes. It shows that the SDG/SDGI process will have a relationship with the MDGs and MDGIs. It shows that the work on SDGs needs to start together with the SDGs. The scientific/technical SDGI process would work iteratively with the political SDG process, channelling data and information to the high-level working group(s) involved in negotiating specific goals and related targets. The SDGI process would be supported by the statistical community and more broadly and indirectly by Beyond GDP and progress measurement efforts at various scales. The objective of the parallel process would be to ultimately have not only agreement on goals and targets, but also agreement on process and technical elements of an indicator, monitoring and reporting system that will keep progress towards the new goals under review.

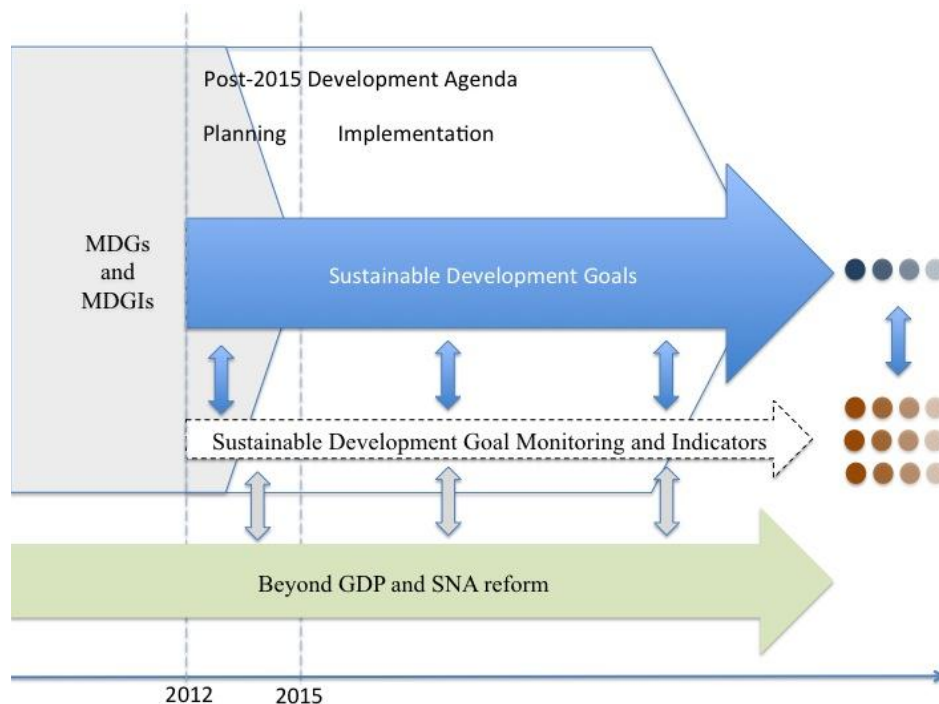


FIGURE 1: ILLUSTRATION OF THE POSITION OF THE SDGI PROCESS.

The task is complex, but the good news is that the work on indicators over the last 20 years provides a solid foundation for their development. If brought together, the experience of organizations such as the OECD, UNSD, UNEP, the World Bank and others would help avoid “reinventing the wheel” and ensure the development of SDGIs would contribute not only to the SDG agenda, but also to the agenda on rethinking the system of progress measurement.

Principles such as BellagioSTAMP, developed with consciousness of the broader sustainability agenda could serve as a starting point. Given its almost two decades of experience in the field of indicators, IISD is well positioned to play a constructive role in this process.

## *Annex 1: Sustainable Development Goals*

Source:

United Nations (2012). The Future We Want. Rio+20 United Nations Conference on Sustainable Development. Resolution adopted by the General Assembly, September 11, 2012. Available at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement>

245. We underscore that the Millennium Development Goals are a useful tool in focusing achievement of specific development gains as part of a broad development vision and framework for the development activities of the United Nations, for national priority-setting and for mobilization of stakeholders and resources towards common goals. We therefore remain firmly committed to their full and timely achievement.

246. We recognize that the development of goals could also be useful for pursuing focused and coherent action on sustainable development. We further recognize the importance and utility of a set of sustainable development goals, based on Agenda 21 and the Johannesburg Plan of Implementation, which fully respect all the Rio Principles, taking into account different national circumstances, capacities and priorities, are consistent with international law, build upon commitments already made, and contribute to the full implementation of the outcomes of all major summits in the economic, social and environmental fields, including the present outcome document. The goals should address and incorporate in a balanced way all three dimensions of sustainable development and their interlinkages. They should be coherent with and integrated into the United Nations development agenda beyond 2015, thus contributing to the achievement of sustainable development and serving as a driver for implementation and mainstreaming of sustainable development in the United Nations system as a whole. The development of these goals should not divert focus or effort from the achievement of the Millennium Development Goals.

247. We also underscore that sustainable development goals should be action oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national policies and priorities. We also recognize that the goals should address and be focused on priority areas for the achievement of sustainable development, being guided by the present outcome document. Governments should drive implementation with the active involvement of all relevant stakeholders, as appropriate.

248. We resolve to establish an inclusive and transparent intergovernmental process on sustainable development goals that is open to all stakeholders, with a view to developing global sustainable development goals to be agreed by the General Assembly. An open working group shall be constituted no later than at the opening of the sixty-seventh session of the Assembly and shall comprise 30 representatives, nominated by Member States from the five United Nations regional groups, with the aim of achieving fair, equitable and balanced geographic representation. At the outset, this open working group will decide on its methods of work, including developing modalities to ensure the full involvement of relevant stakeholders and expertise from civil society, the scientific community and the United Nations system in its work, in order to provide a diversity of perspectives and experience. It will submit a report, to the sixty-eighth session of the Assembly, containing a proposal for sustainable development goals for consideration and appropriate action.

249. The process needs to be coordinated and coherent with the processes to consider the post-2015 development agenda. The initial input to the work of the working group will be provided by the Secretary-General, in consultation with national Governments. In order to provide technical support to the process and to the work of the working group, we request the Secretary-General to ensure all necessary input and support to this work from the United Nations system, including through establishing an inter-agency technical support team and expert panels, as needed, drawing on all relevant expert advice. Reports on the progress of work will be made regularly to the General Assembly.

250. We recognize that progress towards the achievement of the goals needs to be assessed and accompanied by targets and indicators, while taking into account different national circumstances, capacities and levels of development.

251. We recognize that there is a need for global, integrated and scientifically based information on sustainable development. In this regard, we request the relevant bodies of the United Nations system, within their respective mandates, to support the regional economic commissions in collecting and compiling national inputs in order to inform this global effort. We further commit to mobilizing financial resources and capacity-building, particularly for developing countries, to achieve this endeavour.

## *Annex 2: BellagioSTAMP–Sustainability Assessment and Measurement Principles*

Source: <http://www.iisd.org/measure/principles/progress/bellagiostamp/>

### Principle 1: Guiding vision

Assessment of progress toward sustainable development will be guided by the goal of delivering well being within the capacity of the biosphere to sustain it for future generations.

### Principle 2: Essential considerations

Assessment of progress toward sustainable development will consider:

- the underlying social, economic and environmental system as a whole and the interactions among its components, including issues related to governance
- dynamics and interactions between current trends and drivers of change
- risks, uncertainties, and activities that can have an impact across boundaries
- implications for decision making, including trade-offs and synergies

### Principle 3: Adequate scope

Assessment of progress toward sustainable development will adopt:

- an appropriate time horizon to capture both short- and long-term effects of current policy decisions and human activities
- an appropriate geographical scope

### Principle 4: Frameworks and indicators

Assessment of progress toward sustainable development will be based on:

- a conceptual framework that identifies the domains within which core indicators to assess progress are to be identified
- standardized measurement methods wherever possible, in the interest of comparability
- comparison of indicator values with targets, as possible

### Principle 5: Transparency

Assessment of progress toward sustainable development will:

- ensure the data, indicators and results of the assessment are accessible to the public
- explain the choices, assumptions and uncertainties determining the results of the assessment
- disclose data sources and methods
- disclose all sources of funding and potential conflicts of interest

## Principle 6: Effective communications

In the interest of effective communication, to attract the broadest possible audience and minimize the risk of misuse, assessment of progress toward sustainable development will:

- use clear and plain language
- present information in a fair and objective way that helps to build trust
- use innovative visual tools and graphics to aid interpretation and tell a story
- make data available in as much detail as is reliable and practicable

## Principle 7: Broad participation

To strengthen its legitimacy and relevance, assessment of progress toward sustainable development should:

- find appropriate ways to reflect the views of the public, while providing active leadership
- engage early on with users of the assessment so that it best fits their needs

## Principle 8: Continuity and capacity

Assessment of progress toward sustainable development will require:

- repeated measurement
- responsiveness to change
- investment to develop and maintain adequate capacity
- continuous learning and improvement

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