
# Indicators and a Monitoring Framework for Sustainable Development Goals

## *Launching a data revolution for the SDGs*

A report by the Leadership Council of the
Sustainable Development Solutions Network

*Revised working draft for consultation*
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## About this draft report

A first draft of *Indicators and a Monitoring Framework for the SDGs* was released by the Sustainable Development Solutions Network (SDSN) in February 2014. It underwent a 1.5 month-long public consultation, during which hundreds of organizations submitted detailed comments. These comments were incorporated into a revised working draft which was made available on the SDSN website in May 2014. A summary of the comments received is available here.

The subsequent draft of the report in July 2014 served to align the indicator framework proposed by the SDSN with the draft Sustainable Development Goals (SDGs) announced by the Open Working Group. This version also reflected key outcomes from events held on SDG indicators and the Data Revolution, including a June 23-24 technical workshop of national statistical offices, international statistical agencies, and experts from academia, civil society, and business organized by the SDSN. We are also grateful for the April 2014 preliminary assessment of data availability undertaken by the UN Statistical Commission Friends of the Chair Group on Broader Measures of Progress. Currently, the UN Statistics Division is surveying national statistical offices to ascertain the availability of data for possible SDG indicators. Results from this survey will be incorporated into later versions of this report.

For this January 2015 version, the draft report has been comprehensively revised to reflect the recommendations of the Secretary-General, as set out in his synthesis report, *The Road to Dignity by 2030*; the recommendations of the Friends of the Chair on Broader Measures of Progress, in their report to the Secretary General; and the conclusions of the Independent Expert Advisory Group on the Data Revolution in *A World That Counts*. It also includes more details on annual reporting, levels of reporting, and incorporates comments received on specific indicators. The report will be revised in February 2015, taking into account the results of the public consultation, after which it will be provided as input to the Expert Group Meeting on SDG Indicators, which will be held in conjunction with the UN Statistical Commission, the body tasked with adopting the final indicator framework.

We welcome comments on the ideas outlined in this working draft. All comments should be submitted via the comment form on our website. To stay abreast of changes to the report and other activities of the SDSN, please sign up for our newsletter.

## Acknowledgements

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This report has benefited from the expert inputs of the SDSN Thematic Groups, consultations with many UN agencies and other specialist institutions, as well as the comments received by hundreds of organizations during the public consultation. Please see Annex 6 for a complete list of organizations that have contributed to this report.

This report has been reviewed and broadly endorsed by members of the SDSN Leadership Council, though some may not be in full agreement with every detail.

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# Acronyms and Abbreviations

AFOLU - Agriculture, Forest and other Land Use
BIS - Bank for International Settlements
CEB - UN Chief Executive Board for Coordination
$CO_2$ - Carbon dioxide
ECOSOC - UN Economic and Social Council
EITI - Extractive Industries Transparency Initiative
EPR - Employment to population ratio
FAO - Food and Agriculture Organization
GAVI – Global Alliance for Vaccines and Immunizations
GDP - Gross domestic product
GHG - Greenhouse gas
GNI - Gross national income
GNP - Gross national product
GRI – Global Reporting Initiative
HLP - High-level Panel of Eminent Persons on the Post-2015 Development Agenda
HLPF - High-level Political Forum on Sustainable Development
IAEG-MDG - Inter-agency and Expert Group on MDG Indicators
IASB - International Accounting Standards Board
ICT - Information and communications technology
IEA - International Energy Agency
IEAG - Independent Expert Advisory Group on the Data Revolution
IFA - International Fertilizer Industry Association
IFRS - International Financial Reporting Standards
IGN - Intergovernmental Negotiation on Post-2015
IIRC - International Integrated Reporting Council
ILO - International Labour Organization
IMF - International Monetary Fund
IPT - Intermittent preventive treatment
IPU - Inter-Parliamentary Union
ITU - International Telecommunication Union
IUCN - International Union for Conservation of Nature
LDCs - Least Developed Countries
MDGs - Millennium Development Goals
MNCs - Multi-national corporations
NEET - Not in education, employment or training
NSOs - National statistical offices
NTDs - Neglected Tropical Disease
ODA - Official Development Assistance
OECD - Organisation for Economic Co-operation and Development
OWG - Open Working Group on Sustainable Development Goals
PGA - President of the UN General Assembly
PM - Particulate matter
PMTCT - Preventing mother to child transmission
PPP - Purchasing power parity
SDGs - Sustainable Development Goals
SEEA - System of Environmental-Economic Accounting
SDSN - Sustainable Development Solutions Network
SG - UN Secretary-General
TB - Tuberculosis
TBD - To be determined
UN DESA - UN Department of Economic and Social Affairs
UNAIDS - Joint UN Programme on HIV and AIDS
UNDG - UN Development Group
UNDP - UN Development Programme
UNEP - UN Environment Programme
UNESCO - UN Educational, Scientific and Cultural Organization
UNFCCC - UN Framework Convention on Climate Change
UNFPA - UN Population Fund
UNHCR - UN High Commissioner for Refugees
UNICEF - UN Children's Fund
UNIDO - UN Industrial Development Organization
UNISDR - UN International Strategy for Disaster Reduction
UNOCHA - UN Office for the Coordination of Humanitarian Affairs
UNODC - UN Office on Drugs and Crime
UNSC - UN Statistical Commission
UNSD - UN Statistics Division
WBCSD - World Business Council for Sustainable Development
WHO - World Health Organization
WIPO - World Intellectual Property Organization
WTO - World Trade Organization

# Designing Indicators and a Monitoring Framework for the Sustainable Development Goals

The report is organized as follows: it starts by outlining the rationale and criteria for indicators, including suggestions for the different levels of review. It then lays out a roadmap for action to develop a robust indicator framework for the SDGs. Table 1 summarizes the proposed Global Reporting Indicators and the suggested Complementary National Indicators. Annex 1 describes each Global Reporting Indicator in detail and defines suggested Complementary National Indicators. Annex 2 discusses the feasibility of national and global annual reporting. Annex 3 explains how indicators might be disaggregated. In Annex 4 we describe how cross-cutting issues can be addressed across the entire indicator framework in a consistent and coherent way. Annex 5 answers frequently asked questions, and Annex 6 lists the institutions that have contributed to the report's development through public and other targeted consultations.

## I. Towards a Data Revolution for the SDGs: the Role of Indicators

In September 2015, a summit of heads of state will adopt Sustainable Development Goals (SDGs). The goals will chart out a universal, holistic framework to help set the world on a path towards sustainable development, by addressing all three dimensions of economic development, social inclusion, and environmental sustainability.

Following more than a year of inclusive and intensive deliberations, a set of 17 Sustainable Development Goals and 169 accompanying targets was proposed by the Open Working Group on the SDGs (OWG), in mid-2014. The UN Secretary-General has endorsed the goals in the synthesis report *The Road to Dignity by 2030*.[1]

Member States have agreed that the agenda laid out by the OWG is the main basis for the Post-2015 intergovernmental process, which will commence on 19 January 2015.[2] Over the course of 7 months, Member States will further review the goals and targets. Member States will also consider the means of implementation, the nature of a new Global Partnership, and a framework for monitoring and review of implementation.

The High-Level Panel on the Post-2015 Development Agenda (HLP) and the Independent Experts Advisory Group on the Data Revolution (IEAG)[3] have highlighted the opportunities for a data revolution using the potential of big data, new forms of social and geophysical data, and innovative means of data sharing. We are firmly convinced that such a data revolution is possible and will generate substantial benefits for all countries. As our contribution to the data revolution, this report outlines how indicators might be established to support the SDGs proposed by the OWG.

Indicators will be the backbone of monitoring the SDGs at local, national, regional, and global levels. They will serve as a **management tool** to help countries develop implementation strategies and allocate resources accordingly, and as a **report card** to measure progress towards achieving a target

[1] UN Secretary-General, (2014), *The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet*, Synthesis Report of the Secretary-General on the Post-2015 Agenda.
[2] See conclusions of the sixty-eighth session of the General Assembly: http://www.un.org/en/ga/68/meetings/
[3] See the High Level Panel Report, (2013), *A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development;* and Independent Expert Advisory Group on the Data Revolution, (2014), *A World That Counts*.

and to ensure the accountability of governments and other stakeholders for achieving the SDGs. The monitoring framework and indicators for the SDGs should reflect the lessons from the MDGs (Box 1).

Time is of the essence in developing an indicator framework for the SDGs, if the world is to start implementing the Goals in 2016. Both existing and new data systems will require continuous strengthening over coming decades, and many aspects of a comprehensive SDG monitoring system can only be implemented over several years, but important decisions will need to be taken soon.

The 46th Session of the UN Statistical Commission starting in early 2015 will provide an important moment in the development of an SDG monitoring system, as it will put in place a multi-stakeholder process to devise the SDG indicators. Meanwhile, the July 2015 Financing for Development Conference will be a crucial opportunity to mobilize the means, so that the full indicator framework and a sound baseline can be adopted in time for the High Level Political Forum (HLPF) in July 2016.

**Box 1: The Importance of Metrics and Indicators – Lessons from the MDGs**

While there have been great improvements in data gathering, the MDG indicators failed to adequately serve as either a management tool or a report card because data comes with too great a time lag. Although a global MDG report publishes data annually, such data are often three or more years out of date. Too often, the data are incomplete and of poor quality.

MDG monitoring also gave too little attention to *what* should be measured, so to this day we lack some important metrics for key development priorities. Similarly, there was too little investment in strengthening statistical capacity to ensure effective real-time monitoring of the MDGs and to establish statistical standards and quality requirements.

For the SDGs to be successful, much greater investments in building national statistical capacities and strengthening quality and standards will be required. NSOs must be actively involved in the development of global and national indicator frameworks, through a multi-stakeholder process that could be convened by the UN Statistical Commission. The SDGs will be goals for the world – applicable to all countries, as well as multiple, diverse actors. As such the best input from business, science, academia, and civil society should be sought in their development, as well as in the development of the accompany monitoring architecture.

This report is offered as a contribution to the multi-stakeholder debate on SDG indicators. Drawing on a large number of public comments and expert inputs from UN and specialist agencies, academia, civil society, business, and national statistical offices (NSOs) the report proposes a framework of 100 Global Reporting Indicators, accompanied by Complementary National Indicators. We also outline principles for effective SDG monitoring, unpack the possible levels of review, and present a roadmap for action. Urgent technical priorities will include filling indicator gaps, moving towards annual reporting, and harnessing new innovative sources of data.

## II. A Monitoring Framework: Multi-level reporting and indicators

As underscored by the OWG, the focus of reporting on the SDGs must be at the national level. Each country will choose the indicators that are best suited to track its own progress towards sustainable development.

Yet, the Goals also describe a global agenda, including some global public goods that cannot be implemented by any country on its own. Success will require international coordination and collaboration, which in turn requires accountability and monitoring at global level. Unless an effective global monitoring framework complements national efforts, the SDGs cannot be achieved

in time. Global reporting requires a harmonized and universal set of indicators, which we tentatively refer to as Global Reporting Indicators. To ensure effective global monitoring, the Global Reporting Indicators for the SDGs would be tracked in every country and reported periodically at the global level and by each country.

In addition, regional monitoring and accountability will play a critical role in fostering the regional collaboration and coherence in strategies to pursue the SDGs. A fourth and critical level of monitoring occurs in each thematic or epistemic community. These four levels of monitoring – national, regional, global, and thematic – are laid out in the Secretary-General's synthesis report. The report calls for "a culture of shared responsibility, one based on agreed universal norms, global commitments, shared rules and evidence, collective action and benchmarking for progress."[4] This culture of accountability must be particularly strong at the national level, "building on existing national and local mechanisms and processes, with broad, multi-stakeholder participation."

We briefly review each level of reporting and implications for the choice of suitable indicators:

## 1. National reporting

National reporting should be the most significant level of reporting and will rely heavily on the work of NSOs. Given the breadth of the SDG agenda, it seems important not to limit national reporting to NSOs and to foster broad, multi-stakeholder participation in national reporting.[5]

National ownership at all levels of the SDG framework is critical, and national reporting must respond to national priorities and needs. For this reason, each country may pursue its own set of national indicators. Such a set of indicators may consist of the Global Reporting Indicators used to support the global monitoring framework and Complementary National Indicators that address each country's specific challenges, priorities, and preferences.

Some of the Complementary National Indicators are only applicable to a subset of countries, such as indicators for neglected tropical diseases (NTDs). Others give countries greater scope in applying complex concepts, such as inequality, to their specific needs, and/or allow for greater specificity on issues of national concern. The Complementary National Indicators presented in this report offer a menu of options for countries that want to expand their national level reporting. We underscore throughout this report that the list of Complementary National Indicators is far from exhaustive and meant only for inspiration and illustration. In practice many countries will track indicators that are not listed in this report.

The MDGs provide several powerful examples of how countries successfully adapted global indicators to suit their national priorities. For example, Mongolia developed a 9th MDG on Strengthening Human Rights and Fostering Democratic Governance, which were seen as necessary preconditions for the achievement of all the other MDGs.[6] This new goal was supported by additional targets and indicators to track progress towards democratic governance and human rights. The indicators included nationally specific measures, such as "Expert evaluation of conformity of Mongolian laws and regulations with international human rights treaties and conventions (percentage)," as well as perceptions-based indicators such as "People's perception on press and media freedom."[7]

[4] UNSG, (2014), para 146.
[5] Ibid, i.
[6] See UNDP Mongolia website: http://www.mn.undp.org/content/mongolia/en/home/mdgoverview/
[7] Government of Mongolia, (2009), *The Millennium Development Goals Implementation: Third National Report*.

Similarly, Bangladesh adapted the MDGs to meet local needs by setting new targets and indicators for promoting women in local government bodies, as well as separate targets on access to reproductive health services. Continuing in this vein, Bangladesh prepared a detailed national proposal for potential SDG indicators in their 2012 MDG report.[8]

Given the greater breadth and universality of the SDG agenda, we expect that national adaptation of the goals, targets, and supporting indicators will play a bigger role than under the MDGs. For this reason, a very large number of Complementary National Indicators may emerge over time that may surpass the indicators presented in this draft report.

## 2. Global monitoring

As described above, global monitoring is a vital complement to national monitoring and reporting. Global monitoring will ensure global coordination, support strategies to manage global public goods, and indicate which countries and thematic areas are in need of greatest assistance. A global dialogue on progress will also encourage knowledge-sharing and reciprocal learning. To this end, a set of Global Reporting Indicators for the SDGs is required.

The majority of Global Reporting Indicators will be derived from NSOs, drawing on official data sources such as censuses, civil registration and vital statistics, and household surveys, but some may be prepared by specialist agencies, for example where no suitable, comparable official data exists. To ensure comparability, Global Reporting Indicators must be harmonized across countries. We therefore recommend that each Global Reporting Indicator have at least one lead technical or specialist agency, responsible for coordinating data standards and collection, ensuring harmonization, and providing technical support where necessary.

Global Reporting Indicators should be limited in number to minimize the reporting burden on national statistical offices. In our consultations with NSOs, it has become clear that 100 Global Reporting Indicators represent the upper limit of what can be reported at a global level.[9] Even some of the best resourced NSOs in high-income countries have told us that they would not be in a position to report on more than 100 globally harmonized indicators. Similar constraints exist at the level of the global statistical community, including specialist agencies, which will compile and harmonize the global datasets that inform the global review process under the auspices of the HLPF.

Based on the MDG experience reviewed in Box 1, we underscore the critical need for annual reporting of Global Reporting Indicators to the HLPF.[10] The data should be collected from NSOs within the preceding year or based on robust estimations. Annex 2 provides more information on the feasibility of annual reporting.

[8] See Annex 3: Government of Bangladesh Planning Commission, (2013), *The Millennium Development Goals: Bangladesh Progress Report 2012.*

[9] For comparison, the MDGs have some 60 indicators. As emphasized above, there should be no limit to number of Complementary National Indicators that countries will use to adapt the SDGs and their monitoring to national priorities and needs.

[10] Meaningful annual reporting of the whole set of Global Reporting Indicators will take some time to achieve, but by 2018 at the latest, we hope that the international system, and notably the UN organizations and partner institutions (including the OECD, World Bank, World Trade Organization and others) will have in place an accurate and meaningful annual reporting system. We underscore that this will require enhanced support to National Statistical Offices (NSOs) and other relevant national systems so that high-quality data can be collected in a timely manner.

The timing of the annual review needs to be considered carefully by member states. Currently the HLPF is scheduled to meet at the margins of the UN Economic and Social Council (ECOSOC) in June/July, so the annual SDG data would need to be available towards the second quarter of each year. The advantage of annual reporting in the middle of a calendar year is that the outcomes of the review might still affect the annual budget cycle for the following year, so that resources can be mobilized in response to progress or shortfalls in SDG implementation. On the other hand, SDSN consultations with several NSOs and international organizations suggest that mid-year reporting would make it technically impossible to consider data from the previous calendar year, since most NSOs generate such data by the middle of the following calendar year. A 2-year gap between data collection and global review could undermine the SDGs' role as a real-time report card and management tool. On balance, it seems that a strong case exists to move the annual reporting on the SDGs towards the end of a calendar year. Clearly though, such a decision involves complex political and organizational issues that require careful consideration by member states.

Assuming an end-of-year reporting on the SDGs, an indicative schedule for preparing the annual reporting might look as follows:

(1) During the first half of each calendar year, the NSO and/or specialized agencies gather the national data to complete the national reports on that indicator, no later than [June 30] of the new year.

(2) The national tables are then forwarded to the international organization (or organizations) tasked with preparing the Annual SDG Report. This agency (or agencies) would have [six] weeks to compile and prepare the draft report of the preceding year's data.

(3) The draft report would be presented at the UN to the Secretary General (SG) and the President of the General Assembly (PGA) in [early September], for a final review, and a cover statement.

(4) The preliminary report would be prepared for publication and translation by [September] to be available to HLPF or ECOSOC meetings in [October-November].

(5) In [December] the report will be finalized with corrected and updated data, and the final report disseminated and posted online.

This approach is ambitious and will obviously push all countries and participating organizations hard, but the goal will be to turn the SDG indicators into useful tools for real-time national and sub-national management. This monitoring cycle will be unattainable without dedicated financing to improve the statistical infrastructure and capacity of each country. As highlighted by the UN Statistics Division, "the main challenge is that the required capacity to measure the full range of sustainable development indicators currently does not exist in most countries."[11] In the absence of adequate financing, we will have goals that cannot be used, and a process without adequate results. In our ICT-connected world, the aim for real-time data used for real-time management should be an essential and necessary component of the SDG era. High-quality annual reporting on the SDGs is an essential step towards the data revolution.

[11] UN Statistics Division, in collaboration with the Friends of the Chair group on broader measures of progress, (2014), *Compendium of statistical notes for the Open Working Group on Sustainable Development Goals*, para. 1.8.

## 3. Regional monitoring

Regional monitoring will have an important role in fostering knowledge-sharing, reciprocal learning, and peer review across countries in the same region. It will also promote shared accountability for regional challenges and opportunities, such as shared watersheds, regional conflicts, or regional infrastructure. Where possible, regional monitoring should build on existing regional mechanisms, such as the Regional Economic Commissions, the Africa Peer Review Mechanism, or the Asia-Pacific Forum on Sustainable Development.[12]

Regional monitoring processes can also broker a link between the national and global levels. The Regional Economic Commissions may play a particularly important role in preparing inputs to the HLPF, under the auspices of ECOSOC, since Regional Commissions are already subsidiary bodies of the Economic and Social Council.

## 4. Thematic reporting

To achieve the SDGs, complex challenges must be addressed across a broad range of sectors. Lessons learned in one country, for instance in health, education, agriculture, or infrastructure design, can inform progress in other countries. Similarly, implementation challenges and technology gaps are often common across countries, so it will be important that each major epistemic community is mobilized in support of the SDGs. This in turn will require thematic reporting on progress and implementation challenges.

Thematic communities – often under the leadership of specialized international organizations – can develop specialist indicators for monitoring and accountability that are tracked in countries across the globe. Often these indicators include input and process metrics that are helpful complements to official indicators, which tend to be more outcome-focused.

The implementation of the MDGs provides good examples for effective thematic reporting. For example, the UN Inter-Agency Group on Child Mortality Estimation has developed a specialist hub responsible for analyzing, checking, and improving mortality estimation. This group, and its associated database CME Info, is a leading source for child morality information for both governmental and non-governmental actors. Sustainable Energy For All, Roll-Back Malaria, and UN Water (through the Joint Monitoring Programme) also demonstrate the power of collective multi-stakeholder monitoring of specific thematic priorities.

In some cases, universities are playing a leading role in thematic monitoring, such as the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, which has become a leading and internationally trusted repository of key public health data, or the Université Catholique de Louvain, which maintains the EM-DAT database on disasters. We expect that universities can play an important role in closing some of the data gaps that currently exist in key SDG areas. Similarly, NGOs like Transparency International are playing an important role in collecting, vetting, and harmonizing critical data for sustainable development.

In other cases businesses may have access to data that can underpin thematic SDG monitoring. For example, the International Fertilizer Association (IFA) maintains one of the most extensive databases on fertilizer supply, production, and use around the world. Data from companies' supply chains can

[12] UNSG, (2014), para 149, ii.

help track food loss and waste, and ICT companies can share data on the use of modern communication technologies.

To coordinate thematic monitoring under the SDGs, each thematic reporting initiative may have one or more lead specialist agencies or "custodian" as per the IAEG-MDG reporting processes. Lead agencies would be responsible for convening a multi-stakeholder group, compiling detailed thematic reports, and encouraging an ongoing dialogue on innovation. In doing so, these thematic groups can become a testing ground for the data revolution, trialing new measurements and metrics, which in time can feed into the global reporting process. As suggested in the UN Secretary-General's synthesis report, thematic reports are needed on an annual basis and may benefit from in-depth technical examination of specific concerns each year.[13]

## III. Principles for setting SDG indicators

As recognized in the Secretary-General's synthesis report, a set of SDG indicators will need to be developed "to collect, compare and analyze reliable data and to do so at the adequate level of disaggregation, as of 2016."[14]

Building upon the standards proposed in the UN Development Group (UNDG) handbook and the CES Recommendations on Measuring Sustainable Development,[15] we propose ten criteria for robust SDG indicators. These have also been informed by lessons from the MDGs (Box 1); comments from NSOs collected through our public consultation and via the Friends of the Chair on Broader Measures of Progress; as well as the principles laid out in various reports including *The Future We Want*, *A New Global Partnership* and *A World That Counts*.[16]

Robust SDG indicators should be:

1. **Limited in number and differentiated by reporting level:** Since a very large number of indicators would be required to comprehensively track progress towards all aspects of the 169 targets proposed by the Open Working Group, we recommend that countries consider two sets of indicators. Up to 100 Global Reporting Indicators would be reported on in a harmonized way by every country on an annual basis and collated by the international community. Complementary National Indicators are presented as a menu of options for countries that want to expand their national level reporting, though the list we include is far from exhaustive. Some of these indicators are only applicable to a subset of countries, such as indicators for neglected tropical diseases (NTDs), others give countries greater scope in applying complex concepts, such as inequality, to their specific needs, and/or allow for greater specificity on issues of national concern.

2. **Clear, with straightforward policy implications:** Indicators need to be simple to compile and easy to interpret and communicate. They must also have clear policy implications. Composite indices should be avoided where possible since they require more complex data

[13] Ibid, para 149, iv.
[14] UNSG, (2014), para. 139.
[15] United Nations, (2003), *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts, and Sources*, New York, NY: United Nations. Also featured in the Report of the Friends of the Chair Group on Broader Measures of Progress, released on 16th December 2014 [E/CN.3/2015/2].
[16] United Nations. (2012). *The Future We Want, Our Common Vision*. Outcome document of the Rio+20 Conference. And see the HLP, (2013); and IEAG on the Data Revolution, (2014).

collection methods, often rely on imputation for missing variables, and arbitrary weighting. Moreover, composite indices do not lend themselves easily to policy recommendations, and they expand the number of (underlying) variables that need to be collected through official statistical systems, which might undermine the feasibility of a monitoring framework.[17] To offer clear policy implications, it must also be possible to set a quantitative target range for every indicator so that it becomes possible to ascertain whether a certain target has been achieved.

3. **Allow for high frequency reporting:** Timeliness is crucial for data to be a useful management and policy tool. To align with national planning and budgetary processes, SDG monitoring should operate on an annual cycle. The MDGs were also reported annually, but data featured in annual reports was often 2 to 3 years out of date if available at all. To overcome this, the SDG indicators should lend themselves to annual production, or bi- or tri-yearly production with interim annual figures produced using robust estimation methodologies (Annex 2). These figures would then be reported upon annually, within an internationally harmonized national reporting cycle.

4. **Consensus based, in line with international standards and system-based information:** Global Reporting Indicators should be underpinned by a broad international consensus on their measurement and be based on international standards, recommendations, and best practices to facilitate international comparison. Where possible, indicators should be broadly consistent with systems of national accounts, systems of environmental-economic accounting, and other systems-based information.

5. **Constructed from well-established data sources**: Indicators should draw on well-established sources of public and private data, and be consistent to enable measurement over time. For a small number of new indicators, well-established data sources may be unavailable. In such cases, the establishment of a baseline will need to be an urgent priority over the next two or more years.

6. **Disaggregated**: Preference should be given to indicators that lend themselves to disaggregation according to (i) characteristics of the individual or household (e.g. gender, age, income, disability, religion, race, or ethnicity); (ii) economic activity; and (iii) spatial dimensions (e.g. by metropolitan areas, urban and rural, or districts). As the HLP report recommends, targets can only be considered achieved if they are met for all relevant groups.[18] Disaggregation by spatial dimensions will be particularly important to encourage sub-national reporting (e.g. for cities and states/provinces), which tracks the international schedule for harmonized country reporting.

7. **Universal:** The set of SDG indicators as a whole needs to track a universal agenda. Most though not all Global Monitoring Indicators should therefore be applicable in developed as well as developing countries. Given the many layers of the SDG monitoring process, indicators should also be applicable at the global, regional, national, and local levels. The ability of indicators to be localized is particularly important to encourage active

[17] In a few cases, composite indices are an attractive option for Global Monitoring Indicators, and a few are included in this report. The motivation for each exception is explained in the text. The arguments against the use of composite indices are much less applicable for Complementary National Indicators where the number of underlying variables does not need to be restricted. Hence composite indices can play an important role in supporting national reporting processes. They may also be useful for unofficial thematic reporting.

[18] HLP, (2013), 17.

implementation of the agenda within subnational levels of government, such as cities, which are home to over half of the global population.

8. **Mainly outcome-focused:** As with the definition of targets, it is generally preferable for indicators to track outcomes or the ends as opposed to the means. Yet the choice between input and outcome measures must be handled pragmatically. In some cases, input metrics can play a critical role in driving and tracking the changes needed for sustainable development. For example, access to health services is a vital component of Universal Health Coverage. Similarly, Official Development Assistance (ODA) is difficult to mobilize but critical for achieving the SDGs. Dedicated indicators are needed to track both inputs. Similar considerations apply to several environmental metrics where outcomes might only materialize after long periods of time.

9. **Science-based and forward-looking:** The SDGs are expected to cover a 15-year period. Much will change in that time. For example, the world population is projected to increase by 1 billion people by 2030, and two thirds of those will be living in cities. Indicators must be designed in such a way to account for these changing global dynamics and to anticipate future changes. ICT indicators that speak to current technologies may be outmoded only a few years from now. Selected indicators should therefore seek to track human or environmental outcomes, and/or long-term systemic or technological change, and the framework must be flexible and allow for new indicators to replace outdated ones.

10. **A proxy for broader issues or conditions:** A single indicator cannot measure every aspect of a complex issue, but it can sometimes be very revealing and telling on a broader concept. For example, to measure rule of law and access to justice, several aspects must be measured, including the capacity to redress crimes, citizens trust in the police and court system, and the rates of redress. The proposed indicator on the investigation and sentencing of sexual and gender-based violent crimes serves as a proxy for the treatment of vulnerable groups and access to justice overall. As described further in Annex 4, the indicator framework needs to track a number of cross-cutting issues that may not be captured in the title of individual goals.

## IV. Setting Indicators to Monitor the SDGs

A first critical step in launching the data revolution must be to ensure that all countries and the international community are well equipped to monitor the SDGs so that the indicators can serve their dual purpose as management tool and report card. To the extent possible, implementation of the monitoring framework should start as early as 2016 when the SDGs will take effect. To this end, three priority challenges need to be addressed with urgency.

### 1. Filling gaps in available indicators

Many indicators, especially relating to poverty and economic development, are already collected (e.g. as part of the MDG process), but in some cases, new indicators will have to be developed, together with information gathering systems, to cover new priorities. Some new indicators are presented in this report. Preliminary suggestions and indicators still under development are in square brackets.

Developing new indicators will require major investments in national and international capacity to collect and analyze data. The purpose of this draft report and the public consultation is to obtain

feedback from interested international institutions and other organizations on the relevance, accuracy, appropriateness, and realism of the recommended indicators. In some cases, what we are suggesting may not be possible to implement in a timely and accurate manner. In other cases, additional indicators may need to be considered.

We encourage the competent specialized agencies of the UN System, NSOs, and other international statistical organizations, such as the OECD or Eurostat, to identify and review available indicator options for each major gap. Decisions on what can actually be measured should be guided by the relevant expert communities, with the advice and leadership of the global institutions charged with oversight, measurement, standards, and implementation of programs.

In many cases, sound indicators exist, but data is not systematically collected on a routine, harmonized, and comparable basis – particularly in low-income countries. As highlighted in three SDSN Briefing Papers on household survey and indicator coverage, important gaps exist, particularly for key social and environmental metrics.[19] The coming twelve months need to be used by NSOs and the international organizations to identify practical strategies for filling data gaps. In some cases, this will require increased investments in national statistical systems.

## 2. Moving towards annual reporting

Timeliness is crucial for data to be a useful management and policy tool. To align with national planning and budgetary processes, SDG monitoring needs to operate on an annual cycle. Ensuring annual and up-to-date data will be a major step towards achieving the data revolution for the SDGs. For a more detailed discussion of annual reporting, see Annex 2.

Annual reporting on progress does not necessarily mean that new data need to be produced every year. For a number of indicators this may be impossible or inadvisable.[20] In such cases producing data every two to three years and doing robust projections, extrapolations or modeled estimates may be sufficient. But even this level of frequency will require a step change in the way data is collected and disseminated.

Given how infrequently some indicators are collected today, it might seem impossible to shift towards such high frequency reporting for SDG indicators. Yet, a careful review of the issues suggests it is utterly feasible. In fact, many countries have shown what can be done with clear commitments, the creative use of modern technologies, institutional innovation, and modest resources. Some 60 countries already report annual figures on multiple social and economic indicators based on annual survey data.

International institutions also have made the effort to generate annual estimates. Such approaches could be applied to other SDG indicators to enable timely annual monitoring of progress.[21] Similarly, the World Bank committed in 2013 to report annually on poverty and boosting shared prosperity.[22]

[19] See Cassidy, M. (2014), *Assessing Gaps in Indicator Coverage and Availability*, SDSN Briefing Paper, Paris, France and New York, USA: SDSN; and Alkire, S. and Samman, E. (2014), *Mobilizing the household data required to progress toward the SDGs*. SDSN Briefing Paper; and Alkire, S. (2014), *Towards frequent and accurate poverty data.* SDSN Briefing Paper.

[20] Indicators unsuited to annual production are indicators that (i) exhibit year-on-year variation that is significantly smaller than the error margin, (ii) require a very large number of observations to be computed, (iii) may be affected or compromised by year on year monitoring, such as attitudinal and behavior change. A preliminary assessment suggests that this applies to at least four of the Global Reporting Indicators featured in this report: life expectancy, maternal mortality rate, fertility rate, and prevalence of non-communicable diseases.

[21] See the CME Info online database: www.childmortality.org

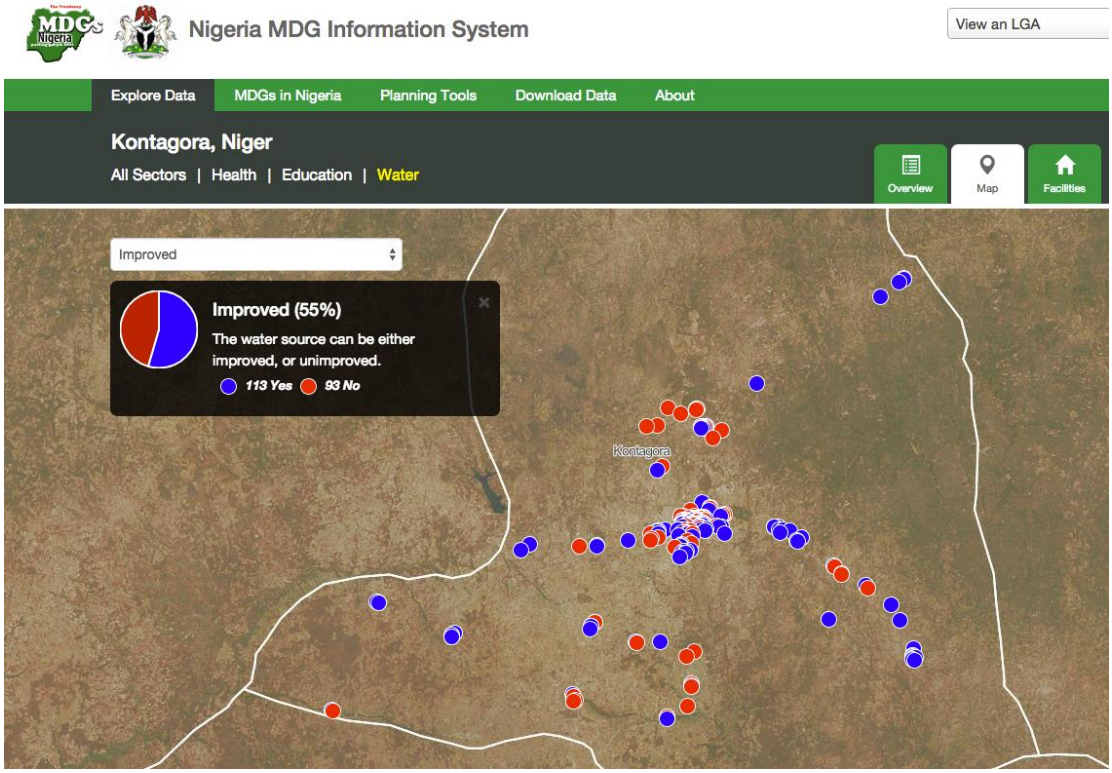
## 3. Adopting innovative approaches to data collection and establishing strategies to harmonize unofficial metrics

Monitoring the SDGs requires many different types of data, which together will form the data revolution. Official statistics derived from surveys, administrative data, and many other methods will play a critical role, but they will be complemented by unofficial data and other performance metrics, including business metrics, polling data, georeferenced information on government facilities, etc.

This draft report and the findings from earlier consultations suggest that official data, including international household survey data, will play a critical role for the foreseeable time in tracking the SDGs and shaping governments programs. But the revolution in information and communication technologies and the growing role of civil society organizations and businesses offer unprecedented opportunities for complementing metrics and data.

Of particular importance is georeferenced data that can now be collected easily using mobile phones to provide location-specific information on government facilities, water points, environmental challenges. As one impressive example, the Nigerian Special Advisor to the President on the MDGs, with support from the Earth Institute's Sustainable Engineering Laboratory, developed the Nigeria MDG Information System, an online interactive data platform. Using this system, all government health and education facilities as well as water access points were mapped across Nigeria within a mere two months (Figure 1).

**Figure 1: Screenshot of Nigeria MDG Information System showing the location and status of water sources in the Kontagora region of Niger State, Nigeria** (Source: http://nmis.mdgs.gov.ng/)




[22] See World Bank President Jim Yong Kim's Speech at Georgetown University (April 2013), online at: http://www.worldbank.org/en/news/speech/2013/04/02/world-bank-group-president-jim-yong-kims-speech-at-georgetown-university

The system now reports the latest status of more than 250,000 facilities using data generated with the help of smartphones. Any internet user can now ascertain the status of every facility across the entire country (Figure 2).

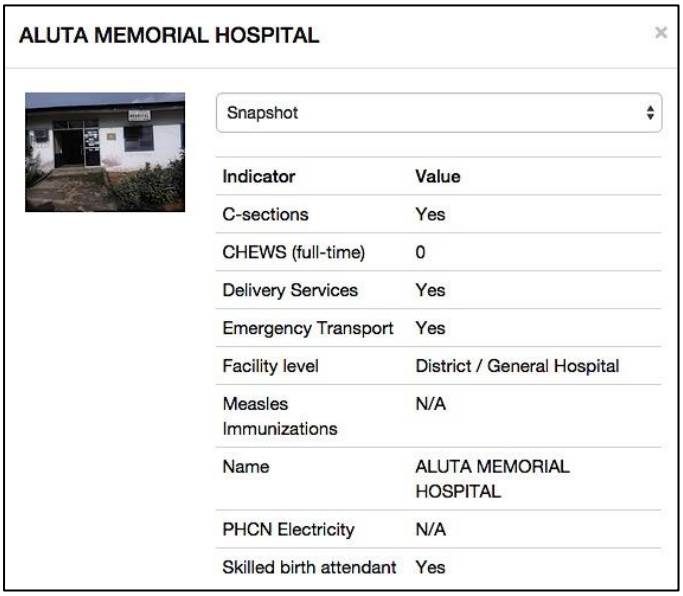



**Figure 2: Nigeria MDG Information System - information on general hospital in the Isoko South region of Delta State, Nigeria**

Source: http://nmis.mdgs.gov.ng/

The software tools used for the Nigeria MDG Information System are open-source. National and sub-national governments, civil society organizations, and businesses can use them to develop dedicated georeferenced surveys for a variety of purposes. For example, such tools make it possible to generate the management information that local authorities need in order to improve service delivery. They can also be used by civil society organizations for example to track which infrastructure facilities are fully operational or where illegal logging is occurring.

Specialized UN agencies and other international organizations should organize thematic discussions with NSOs, businesses, and civil society organizations to determine the most promising uses of georeferenced data and to identify complementary metrics to official SDG indicators. Such groups can then propose standards and systems for collecting and processing such data.

## V. Next Steps and Opportunities for Leadership

Well-crafted SDGs will mobilize governments, businesses, and civil society organizations around a shared set of goals to end extreme poverty in all its forms and to achieve sustainable development. The goals can be a management tool and a report card for all actors, but this will only be possible if sound indicators and monitoring systems are established to generate high-quality annual data.

The experience of the MDGs underscores the importance of thinking through the indicators as early as possible to ensure that the goals and targets can be implemented. So far, the international community's attention has been focused on defining goals and targets. This focus must now be broadened to include the indicators and associated monitoring systems so that the world will be ready to implement the SDGs on 1 January 2016.

Success will require a data revolution, following some of the bold but imminently feasible steps outlined in this report. Key milestones in building an effective monitoring framework for the SDGs will include the establishment of a multi-stakeholder process to identify global indicators and

baselines; ongoing thematic consultations to agree upon long-lists of specialist indicators and to establish thematic monitoring groups; and the establishment of a Data Revolution Partnership.

- **Multi-stakeholder process to set Global Reporting Indicators and establish baselines**

The Statistical Commission (UNSC) at its 46th session (March 5-6, 2015) will discuss and decide on the roadmap for the development and implementation of the indicator and monitoring framework for the goals and targets of the post-2015 development agenda and the establishment of appropriate working mechanisms. Given the breadth and complexity of the SDG agenda, as well as the need to involve all branches of government, civil society, business, and other stakeholders, it is important that a multi-stakeholder process around the Expert Group on SDG Indicators develop the Global Reporting Indicators. We hope that this draft report will make a contribution towards this multi-stakeholder process and towards science-based SDG indicators.

A set of indicative indicators must be developed by September 2015, so that a definitive set can be adopted by the 47th session of the UNSC in 2016. An urgent priority will be to establish baselines for monitoring the indicators. Where indicators are already well understood and a consensus is emerging around them, the establishment of adequate baselines can start right away.

- **Thematic consultations**

During 2015, UN agencies and other organizations have an opportunity to convene multi-stakeholder consultations involving civil society, business, science, and academia in order to develop thematic monitoring frameworks as described above. These groups should fill gaps in available indicators and develop detailed recommendations on how to move towards annual reporting of priority thematic indicators. For example, more regular reporting on child nutrition may require increased investments in household surveys or health-sector administrative data collection. Alternatively, it may require investments in national statistical literacy to enable NSOs to compute robust year on year estimations.

Another key technical challenge for consideration in thematic consultations is how each Global Reporting Indicator can be collected with the required level of sophistication to enable detailed disaggregation. For some indicators, this may require twinning official metrics with geospatial data or using larger sample sizes. Each indicator will need to be accompanied by a comprehensive plan explaining how detailed disaggregated data can be compiled.

The consultations need to consider official statistics as well as non-official statistics and the potential offered by big data and innovative technologies. This will be particularly important to ensure that each indicator is sufficiently disaggregated so that countries can make sure that no one is left behind. It may also enable countries to leapfrog the use of labor-intensive statistical tools, in favor of cost-saving metadata analysis.

Currently, UN organizations work on these issues to a varying degree. Some have already started reaching out to businesses and NGOs, but others focus solely on official indicator sets. The UN Chief Executive Board for Coordination (CEB) could table this important issue to encourage leadership by agencies in their respective areas, identify best practice, promote coordination, and explore way in which the UN System can support innovation in driving the data revolution. Together these thematic consultations will help translate the data revolution into practical action, with clear roles and responsibilities for UN agencies, member states, the scientific community, civil society, and business.

- **Global Partnership for Sustainable Development Data: global standards, greater innovation, and adequate resources**

As per the recommendation of the Independent Expert Advisory Group on the Data Revolution, in its report *A World That Counts*, we recommend a UN-led "Global Partnership for Sustainable Development Data" (GPSDD). This role of the partnership would be to mobilize and coordinate as many initiatives and institutions as possible to achieve the data revolution. In practice, this partnership may consist of a high-level multi-stakeholder committee, with representatives from the UN, National Governments, businesses, academia, science and civil society. The committee would perform three essential functions; convening diverse data communities (such as Members of the Open Government Partnership and the G8 Open Data Charter) to foster consensus and harmonize global standards; incentivizing innovation and encouraging public-private partnerships for data; and mobilizing additional resources.

**A set of global standards** for data harmonization and use will be essential to enable national governments and NSOs to effectively compile, interpret, and utilize the broad range of development data. Such standards will be particularly important for non-official sources of data, such as business reporting, which over time, may be used to complement official metrics. In the short to medium term this may require more methodological research, to better understand how big data can be used to complement official sources. A high-level, powerful group will be essential to convene the various data and transparency initiatives under one umbrella, in support of sustainable development, and to secure the cooperation of both Member States and businesses.

Second, the partnership for development data should strive to **foster innovation** in SDG monitoring. The IEAG on the Data Revolution has recommended a web of data innovation networks to advance innovation and analysis. To focus energies and incentivize year on year progress, we also recommend an annual prize, awarded at an annual conference or 'World Forum on Sustainable Development Data.'[23] This award would be given to NSOs, specialist groups, civil society organizations, or businesses that have developed innovative approaches to improve SDG indicators (e.g. by increasing the frequency or disaggregation) or replace existing indicators with new metrics that are better and/or less expensive to collect.

A third core function of the partnership for development data will be to **mobilize additional resources** to support sound monitoring system. Over the coming months, the international community, and member states, need to undertake a careful needs assessments to determine the amount of incremental financing required – particularly for global monitoring systems and in low-income countries that might require more ODA to build effective SDG monitoring systems.

Some of this work has already been launched by PARIS21 working with the Bill and Melinda Gates Foundation. SDSN is working with interested organizations, including Open Data Watch, PARIS21, Simon Fraser University, the UN Statistics Division (UNSD), UNICEF, the World Bank, and others, to help consolidate available data on financing needs. We hope to be able to share initial findings in March 2015 in time for the meeting of the UN Statistical Commission and the Conference on Financing for Development in Addis Ababa in July 2015.

Current financing mechanisms and modalities for data are not only underfunded, they are also fragmented and beset with high transaction costs. In addition to quantifying incremental financing needs, the international community will therefore need to determine how additional resources can

[23] UN Secretary General, (2014), para. 143.

be used most effectively to ensure maximum results. Experience in other areas suggests that pooled financing mechanisms can be very effective by (i) reducing transaction costs and minimizing duplication; (ii) strengthening national ownership in the design and implementation of programs; (iii) facilitating knowledge transfer and the consolidation of lessons learnt across countries; (iv) facilitating partnerships with the private sector through dedicated windows for public-private partnerships; and (v) supporting transparent criteria for countries' resource mobilization.[24] Recommendations on pooled funding mechanisms for SDG data will require careful deliberation.

Based on a clear indicator framework and a robust needs assessment, the first steps towards a data revolution can start in early 2015, including vital resource mobilization. Given the public attention that will be paid to the SDGs during 2015, it would seem possible to complete the fundraising by the second half of the year – in time for implementation.

**Opportunities for Action: A timeline for key processes for monitoring and review**

| | |
|---|---|
| January 15-16, 2015: | • Global Conference on a Transformative Agenda for Official Statistics |
| January 19-21, 2015: | • First Intergovernmental Negotiation on Post-2015 (IGN) |
| February 27, 2015: | • Expert Group Meeting on SDG Indicators |
| March 5-6, 2015: | • UN Statistical Commission |
| June, 22-25, 2015: | • Fifth Intergovernmental Negotiation on Post-2015 (IGN) - focused on monitoring and review processes |
| June 26 – July 8, 2015: | • High Level Political Forum, under the auspices of ECOSOC |
| July 13-16, 2015: | • Financing for Development Conference |
| July 20-31, 2015: | • Final Intergovernmental Negotiation on Post-2015 (IGN) |
| September 25-27, 2015: | • 'Transforming the world: Realizing the post-2015 Development Agenda', SDG Summit |
| March, 2016: | • UN Statistical Commission |

In our consultations with the technical communities, including NSOs, UN and other international organizations, scientists, civil society groups, and business organizations, we have witnessed outstanding expertise and tremendous enthusiasm for making the SDGs and their monitoring a success. We are convinced that these practical steps can be taken in a timely fashion. The SDSN will continue to support UNSD and work with other interested partners to help develop a sound SDG indicator framework and make the data revolution a reality.

[24] Sachs, J. and Schmidt-Traub, G, (2013), *Financing for development and climate change post-2015*, SDSN Briefing Paper, Paris, France and New York, USA: SDSN.

## Table 1: Suggested SDG Indicators

| Indicator number | Potential and Indicative Indicator | Potential lead agency or agencies | Other goals indicator applies to |
|---|---|---|---|
| **Goal 1. End poverty in all its forms everywhere** | | | |
| 1 | Proportion of population below $1.25 (PPP) per day (MDG Indicator) | World Bank | 8 |
| 2 | Proportion of population living below national poverty line, differentiated by urban and rural (modified MDG indicator) | World Bank, UN DESA | 11 |
| 3 | Multidimensional Poverty Index | UNDP, World Bank, UNSD, UNICEF | 2, 3, 4, 8, 11 |
| 4 | Percentage of population covered by social protection programs | ILO | 8, 10, 11 |
| 5 | Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected | FAO, UNDP | 2, 5, 10, 11 |
| 6 | Losses from natural disasters, by climate and non-climate-related events, by urban/rural (in US$ and lives lost) | UNISDR, FAO, WHO, CRED | 2, 6, 11, 13 |
| | Complementary National Indicators:<br>1.1. Poverty gap ratio (MDG Indicator)<br>1.2. Percentage of population with access to banking services (including mobile banking)<br>1.3. [Disaster Risk Reduction Indicator] - to be developed | | |
| **Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture** | | | |
| 7 | Proportion of population below minimum level of dietary energy consumption (MDG Indicator) | FAO, WHO | 3 |
| 8 | Prevalence of anemia in women of reproductive age (including pregnant) | FAO, WHO | 3 |
| 9 | Prevalence of stunting and wasting in children under [5] years of age | WHO, UNICEF | 1, 3 |
| 10 | Crop yield gap (actual yield as % of attainable yield) | FAO | |
| 11 | Number of agricultural extension workers per 1000 farmers [or share of farmers covered by agricultural extension programs and services] | FAO | |
| 12 | [Nitrogen use efficiency in food systems] – to be developed | FAO, International Fertilizer Industry Association (IFA) | |
| 13 | [Phosphorus use efficiency in food systems] - to be developed | [UNEP or other agency, TBD] | 12 |
| 14 | [Access to drying, storage and processing facilities] - to be developed | FAO | |
| 15 | Annual change in degraded or desertified arable land (% or ha) | FAO, UNEP | 15 |
| 16 | [Crop water productivity (tons of harvested product per unit irrigation water)] – to be developed | FAO | 6 |

| | | | |
|---|---|---|---|
| | Complementary National Indicators:<br>2.1. Percentage of population with shortfalls of: iron, zinc, iodine, vitamin A, folate, vitamin B12, [and vitamin D]<br>2.2. Proportion of infants 6–23 months of age who receive a minimum acceptable diet<br>2.3. Cereal yield growth rate (% p.a.)<br>2.4. Livestock yield gap (actual yield as % of attainable yield).<br>2.5. Share of calories from non-staple crops<br>2.6. Percentage of total daily energy intake from protein in adults<br>2.7. [Indicator on genetic diversity in agriculture] - to be developed<br>2.8. [Indicator on irrigation access gap] - to be developed<br>2.9. [Farmers with nationally appropriate crop insurance (%)] - to be developed<br>2.10. Public and private R&D expenditure on agriculture and rural development (% of GNI)<br>2.11. [Indicator on food price volatility] - to be developed | | |
| **Goal 3. Ensure healthy lives and promote well-being for all at all ages** | | | |
| 17 | Maternal mortality ratio (MDG Indicator) and rate | WHO, UN Population Division, UNICEF, World Bank | 5 |
| 18 | Neonatal, infant, and under-five mortality rates (modified MDG Indicator) | WHO, UNICEF, UN Population Division | |
| 19 | HIV incidence, treatment rate, and mortality (modified MDG Indicator) | WHO, UNAIDS | |
| 20 | Incidence, prevalence, and death rates associated with TB (MDG Indicator) | WHO | |
| 21 | Incidence and death rates associated with malaria (MDG Indicator) | WHO | |
| 22 | Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease | WHO | 11 |
| 23 | Current use of any tobacco product (age-standardized rate) | WHO | 12 |
| 24 | Harmful use of alcohol | WHO | 12 |
| 25 | Percent of population overweight and obese | WHO | 12 |
| 26 | [Functioning programs of multisectoral mental health promotion and prevention in existence] - to be developed | WHO | |
| 27 | Road traffic deaths per 100,000 population | WHO | 9, 11 |
| 28 | [Consultations with a licensed provider in a health facility or the community per person, per year] - to be developed | WHO | |
| 29 | [Percentage of population without effective financial protection for health care] - to be developed | WHO | 11 |
| 30 | Percent of children receiving full immunization (as recommended by WHO) | UNICEF, GAVI, WHO | |
| 31 | Contraceptive prevalence rate (MDG Indicator) | UN Population Division and UNFPA | 5 |
| 32 | Healthy life expectancy at birth | WHO | |
| 33 | Mean urban air pollution of particulate matter (PM10 and PM2.5) | UN-Habitat, UNEP, WHO | 9, 11, 12 |

| | | | |
|---|---|---|---|
| | Complementary National Indicators:<br>3.1. Percentage of births attended by skilled health personnel (MDG Indicator)<br>3.2. Antenatal care coverage (at least one visit and at least four visits) (MDG Indicator)<br>3.3. Post-natal care coverage (one visit)<br>3.4. Coverage of iron-folic acid supplements for pregnant women (%)<br>3.5. Incidence rate of diarrheal disease in children under five years<br>3.6. Percentage of exclusive breastfeeding for the first 6 months of life<br>3.7. Percentage children born with low birth weight<br>3.8. Percentage of 1 year-old children immunized against measles (MDG Indicator)<br>3.9. Percent HIV+ pregnant women receiving PMTCT<br>3.10. Condom use at last high-risk sex (MDG Indicator)<br>3.11. Percentage of tuberculosis cases detected and cured under directly observed treatment short course (MDG Indicator)<br>3.12. Percentage of children under 5 with fever who are treated with appropriate anti-malarial drugs (MDG Indicator)<br>3.13. Percentage of people in malaria-endemic areas sleeping under insecticide-treated bed nets (modified MDG Indicator)<br>3.14. Percentage of confirmed malaria cases that receive first-line antimalarial therapy according to national policy<br>3.15. Percentage of suspected malaria cases that receive a parasitological test<br>3.16. Percentage of pregnant women receiving malaria IPT (in endemic areas)<br>3.17. Neglected Tropical Disease (NTD) cure rate<br>3.18. Incidence and death rates associated with hepatitis<br>3.19. Percentage of women with cervical cancer screening<br>3.20. Percentage with hypertension diagnosed & receiving treatment<br>3.21. Waiting time for elective surgery<br>3.22. Prevalence of insufficient physical activity<br>3.23. Fraction of calories from added saturated fats and sugars<br>3.24. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years<br>3.25. Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day<br>3.26. Percentage change in per capita [red] meat consumption relative to a 2015 baseline<br>3.27. Age-standardized (to world population age distribution) prevalence of diabetes (preferably based on HbA1c), hypertension, cardiovascular disease, and chronic respiratory disease.<br>3.28. Household Dietary Diversity Score<br>3.29. [Mortality from indoor air pollution] - to be developed<br>3.30. Percentage of fully and consistently equipped and supplied service delivery points to provide basic package of services<br>3.31. Percentage of population with access to affordable essential drugs and commodities on a sustainable basis<br>3.32. Percentage of new health care facilities built in compliance with building codes and standards<br>3.33. Public and private R&D expenditure on health (% GNP)<br>3.34. Ratio of health professionals to population (MDs, nurse midwives, nurses, community health workers, EmOC caregivers)<br>3.35. Percentage of women and men aged 15–49 who report discriminatory attitudes towards people living with HIV | | |
| **Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all** | | | |
| 34 | Percentage of children receiving at least one year of a quality pre-primary education program. | UNESCO, UNICEF, World Bank | |
| 35 | [Early Child Development Index (ECDI)] – to be developed | UNICEF, UNESCO | |
| 36 | Primary completion rates for girls and boys | UNESCO | 5 |

| | | | |
|---|---|---|---|
| 37 | [Percentage of girls and boys who master a broad range of foundational skills, including in literacy and mathematics by the end of the primary school cycle (based on credibly established national benchmarks)] – to be developed | UNESCO | 5 |
| 38 | Secondary completion rates for girls and boys | UNESCO | 5, 8 |
| 39 | [Percentage of girls and boys who achieve proficiency across a broad range of learning outcomes, including in literacy and in mathematics by end of the secondary schooling cycle (based on credibly established national benchmarks)] – to be developed | UNESCO | 5 |
| 40 | Tertiary enrollment rates for women and men | UNESCO | 5, 8 |
| | Complementary National Indicators:<br>4.1. [Percentage of girls and boys who acquire skills and values needed for global citizenship and sustainable development (national benchmarks to be developed) by the end of lower secondary] – to be developed<br>4.2. Percentage of children under 5 experiencing responsive, stimulating parenting in safe environments<br>4.3. [Percentage of adolescents (15-19 years) with access to school-to-work programs] - to be developed<br>4.4. Literacy rate of 15-24 year-olds, women and men (MDG indicator)<br>4.5. Percentage of young adults (18-24 years) with access to a learning program.<br>4.6. [Indicator on share of education facilities that provide an effective learning environment] - to be developed<br>4.7. [Indicator on scholarships for students from developing countries] - to be developed<br>4.8. [Indicator on supply of qualified teachers] - to be developed | | |
| **Goal 5. Achieve gender equality and empower all women and girls** | | | |
| 41 | Prevalence of women 15-49 who have experienced physical or sexual violence by an intimate partner in the last 12 months | WHO, UNSD | 3 |
| 42 | Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced | UN Women | 16 |
| 43 | Percentage of women aged 20-24 who were married or in a union before age 18 | UNICEF | 3 |
| 44 | Prevalence of harmful traditional practices, including female genital mutilation/cutting | WHO, UNICEF | 3 |
| 45 | Average number of hours spent on paid and unpaid work combined (total work burden), by sex | ILO with IAEG-GS (UNSD) | |
| 46 | Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator) | Inter-Parliamentary Union (IPU) | 10, 16 |
| 47 | Met demand for family planning (modified MDG Indicator) | UN Population Division, UNFPA | 3 |
| 48 | Total fertility rate | UN Population Division, UNFPA | |
| | Complementary National Indicators:<br>5.1. Gender gap in wages, by sector of economic activity<br>5.2. Share of women on corporate boards of national / multi-national corporations (MNCs)<br>5.3. Percentage of women without incomes of their own<br>5.4. Mean age of mother at birth of first child<br>5.5. Percentage of young people receiving comprehensive sexuality education | | |

| | | | |
|---|---|---|---|
| **Goal 6. Ensure availability and sustainable management of water and sanitation for all** | | | |
| 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | WHO/UNICEF Joint Monitoring Programme (JMP) | 1, 2, 3, 9, 11 |
| 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | WHO/UNICEF Joint Monitoring Programme (JMP) | 1, 2, 3, 9, 11 |
| 51 | [Percentage of wastewater flows treated to national standards, by municipal and industrial source] – to be developed | WHO/UNICEF Joint Monitoring Programme (JMP) | 3, 9, 11, 12, 14 |
| 52 | Proportion of total water resources used (MDG Indicator) | FAO, UNEP | 2, 9, 11, 12 |
| | Complementary National Indicators:<br>6.1. Percentage of population reporting practicing open defecation<br>6.2. Percentage of population with basic hand washing facilities in the home<br>6.3. Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters<br>6.4. Percentage of pupils enrolled in primary schools and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services.<br>6.5. Percentage of beneficiaries using hospitals, health centers and clinics providing basic drinking water, adequate sanitation, and adequate hygiene<br>6.6. Proportion of the flows of treated municipal wastewater that are directly and safely reused<br>6.7. [Reporting of international river shed authorities on transboundary river-shed management] - to be developed<br>6.8. [Indicator on Integrated Water Resources Management (IWRM)] - to be developed<br>6.9. [Indicator on international cooperation and capacity building in water and sanitation-related activities] - to be developed<br>6.10. [Indicator on participation of local communities for improving water and sanitation management] - to be developed | | |
| **Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all** | | | |
| 53 | Share of the population with access to modern cooking solutions, by urban/rural | Sustainable Energy for All, IEA, WHO | 1, 3, 5, 9, 11, 12 |
| 54 | Share of the population with access to reliable electricity, by urban/rural | Sustainable Energy for All, IEA, World Bank | 1, 3, 5, 9, 11, 12 |
| 55 | Implicit incentives for low-carbon energy in the electricity sector (measured as US$/MWh or US$ per ton avoided $CO_2$) | IEA, UNFCCC | 11, 13 |
| 56 | Rate of primary energy intensity improvement | Sustainable Energy for All, IEA | 11, 13 |
| | Complementary National Indicators:<br>7.1. Primary energy by type<br>7.2. Fossil fuel subsidies ($ or %GNI) | | |

| | | | |
|---|---|---|---|
| **Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all** | | | |
| 57 | GNI per capita (PPP, current US$ Atlas method) | IMF, World Bank, UNSD | 11 |
| 58 | Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts | UNSD | 12, 17 |
| 59 | Youth employment rate, by formal and informal sector | ILO | 11 |
| 60 | Ratification and implementation of fundamental ILO labor standards and compliance in law and practice | ILO | 5, 9, 10, 11, 17 |
| | Complementary National Indicators:<br>8.1. Growth rate of GDP per person employed (MDG indicator)<br>8.2. Working poverty rate measured at $2 PPP per capita per day<br>8.3. [Indicator of decent work] - to be developed<br>8.4. Household income, including in-kind services (PPP, current US$)<br>8.5. Employment to population ratio (EPR) by gender and age group (15–64)<br>8.6. Share of informal employment in total employment<br>8.7. Percentage of own-account and contributing family workers in total employment<br>8.8. Percentage of young people not in education, employment or training (NEET)<br>8.9. [Indicator on implementation of 10-year framework of programs on sustainable consumption and production] - to be developed | | |
| **Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation** | | | |
| 61 | Access to all-weather road (% access within [x] km distance to road) | World Bank | 2, 7, 11 |
| 62 | Mobile broadband subscriptions per 100 inhabitants, by urban/rural | ITU | 2, 11, 17 |
| 63 | [Index on ICT maturity] - to be developed | ITU | 17 |
| 64 | Manufacturing value added (MVA) as percent of GDP | World Bank, OECD, UNIDO | 8, 11 |
| 65 | Researchers and technicians in R&D (per million people) | OECD, UNESCO | 8, 17 |
| 66 | Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions ($tCO_2e$) | UNFCCC, OECD, UNIDO | 7, 11, 13 |
| | Complementary National Indicators:<br>9.1. Percentage of households with Internet, by type of service by urban/rural areas<br>9.2. Employment in industry (% of total employment) | | |
| **Goal 10. Reduce inequality within and among countries** | | | |
| 67 | [Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio] | UNSD, World Bank, OECD | 1, 8 |
| 68 | Percentage of households with incomes below 50% of median income ("relative poverty") | World Bank, OECD, UNSD | 1, 8 |

| | | | |
|---|---|---|---|
| | Complementary National Indicators:<br>10.1. Gini Coefficient<br>10.2. Income/wage persistence (intergenerational socioeconomic mobility)<br>10.3. [Indicator on migration] - to be developed<br>10.4. ODA as a percentage of vulnerable countries' GNI<br>10.5. Net ODA to the LDCs as percentage of high-income countries' GNI (modified from MDG Indicator)<br>10.6. Indicator on share of LDCs / LIC representatives on boards of IMF / WB (and other institutions of governance)<br>10.7. [Average remittance cost] – indicator to be developed | | |
| **Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable** | | | |
| 69 | Percentage of urban population living in slums or informal settlements (MDG Indicator) | UN-Habitat and Global City Indicators Facility | 1, 6 |
| *5* | Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented or recognized rights to housing, and (ii) percentage who perceive their rights to housing are recognized and protected | UN-Habitat, UNDP | 1, 5 |
| 70 | [Ratio of land consumption rate to population growth rate, at comparable scale] – to be developed | UN-Habitat, World Bank | 3, 12 |
| 71 | Percentage of people within 0.5km of public transit running at least every 20 minutes. | UN-Habitat | 9 |
| 72 | [Sub-national government revenues and expenditures as a percentage of general government revenues and expenditures] – to be developed | IMF, World Bank, UN-Habitat, OECD | 13, 17 |
| | Complementary National Indicators:<br>11.1. Area of public space as a proportion of total city space<br>11.2. [Indicator on urban-rural economic linkages] - to be developed<br>11.3. City Biodiversity Index (Singapore Index)<br>11.4. [Indicator on supporting LDCs for sustainable and resilient buildings using local materials] - to be developed<br>11.5. [Percentage of urban solid waste regularly collected and well managed] – to be developed<br>11.6. Percentage of cities with more than 100,000 inhabitants that are implementing risk reduction and resilience strategies informed by accepted international frameworks (such as forthcoming Hyogo-2 framework)<br>11.7. Presence of a national urban and human settlements policy framework | | |
| **Goal 12. Ensure sustainable consumption and production patterns** | | | |
| 73 | [Publication of resource-based contracts]- to be developed | EITI, UNCTAD, UN Global Compact | 15, 16, 17 |
| 74 | Global Food Loss Indicator [or other indicator to be developed to track the share of food lost or wasted in the value chain after harvest] | FAO | 2, 11 |
| 75 | Consumption of ozone-depleting substances (MDG Indicator) | UNEP Ozone Secretariat | 9 |
| 76 | Aerosol optical depth (AOD) | UNEP | 9, 11, 13 |

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|---|---|---|---|
| 77 | [Share of companies valued at more than [$1 billion] that publish integrated reporting] - to be developed | Global Compact, WBCSD, GRI, IIRC | 8, 17 |
| | Complementary National Indicators:<br>12.1. [Strategic environmental and social impact assessments required] - to be developed<br>12.2. [Legislative branch oversight role regarding resource-based contracts and licenses]-to be developed<br>12.3. [Indicator on chemical pollution] - to be developed<br>12.4. [$CO_2$ intensity of the building sector and of new buildings ($KgCO_2$/m2/year)]<br>12.5. [Indicator on policies for sustainable tourism] - to be developed | | |
| **Goal 13. Take urgent action to combat climate change and its impacts** | | | |
| 78 | Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050. | UNFCCC | 9, 11, 12, 17 |
| 79 | $CO_2$ intensity of new power generation capacity installed ($gCO_2$ per kWh), and of new cars ($gCO_2$/pkm) and trucks ($gCO_2$/tkm) | UNFCCC, IEA | 7, 8, 9, 11 |
| 80 | Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector ($tCO_2e$) | UNFCCC | 2, 15 |
| 81 | Official climate financing from developed countries that is incremental to ODA (in US$) | OECD DAC, UNFCCC, IEA | 17 |
| | Complementary National Indicators:<br>13.1. [Climate Change Action Index] - to be developed<br>13.2. GHG emissions intensity of areas under forest management ($GtCO_2e$ / ha) | | |
| **Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development** | | | |
| 82 | [Ocean Health Index] | Ocean Health Index Partnership | 9, 12 |
| 83 | Proportion of fish stocks within safe biological limits (MDG Indicator) | FAO | 2, 12 |
| | Complementary National Indicators:<br>14.1. Area of coral reef ecosystems and percentage live cover<br>14.2. [Indicator on the implementation of spatial planning strategies for coastal and marine areas]— to be developed<br>14.3. [Eutrophication of major estuaries] - to be developed<br>14.4. Share of coastal and marine areas that are protected<br>14.5. [Use of destructive fishing techniques] - to be developed<br>14.6. [Indicator on access to marine resources for small-scale artisanal fishers] - to be developed<br>14.7. [Indicator on transferring marine technology] - to be developed | | |
| **Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss** | | | |
| 84 | Annual change in forest area and land under cultivation (modified MDG Indicator) | FAO, UNEP | 2, 12, 13 |

| | | | |
|---|---|---|---|
| 85 | Area of forest under sustainable forest management as a percent of forest area | FAO, UNEP | 12 |
| 86 | Red List Index | IUCN | |
| 87 | Protected areas overlay with biodiversity | UNEP-WCMC | |
| | Complementary National Indicators:<br>15.1. Improved land ownership and governance of forests<br>15.2. [Indicator on the conservation of mountain ecosystems] - to be developed<br>15.3. Vitality Index of Traditional Environmental Knowledge<br>15.4. [Indicator on access to genetic resources] - to be developed<br>15.5. Abundance of invasive alien species<br>15.6. [Indicator on financial resources for biodiversity and ecosystems] - to be developed<br>15.7. [Indicator on financial resources for sustainable forest management] - to be developed<br>15.8. [Indicator on global support to combat poaching and trafficking of protected species] - to be developed<br>15.9. Living Planet Index | | |
| **Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels** | | | |
| 88 | Violent injuries and deaths per 100,000 population | UNODC, WHO, UNOCHA | 3, 5, 11 |
| 89 | Refugees and internal displacement caused by conflict and violence | UNHCR, OCHA | 3 |
| 90 | Assets and liabilities of BIS reporting banks in international tax havens (as per OECD definition), by country (US$) | OECD | 17 |
| 91 | [Publication of all payments made to governments under resource contracts]-to be developed | UN Global Compact, EITI, and/or UNCTAD | 17 |
| 92 | Percentage of children under age 5 whose birth is registered with a civil authority | UNICEF | 3, 5, 10 |
| 93 | Existence and implementation of a national law and/or constitutional guarantee on the right to information | UNESCO | 10 |
| 94 | Perception of public sector corruption | Transparency International | |
| | Complementary National Indicators:<br>16.1. Percentage of women and men who report feeling safe walking alone at night in the city or area where they live<br>16.2. Compliance with recommendations from the Universal Periodic Review and UN Treaties<br>16.3. Number of children out of school in conflict- or disaster-affected countries<br>16.4. [Indicator on security sector reform] - to be developed<br>16.5. Frequency of payment of salaries within security forces<br>16.6. [Compliance with OECD or other applicable Anti-Bribery Convention] - to be developed<br>16.7. [Indicator on illicit financial flows] - to be developed<br>16.8. [Indicator on international cooperation in preventing violence and combating terrorism and crime] – to be developed<br>16.9. Percent of UN Emergency Appeals delivered<br>16.10. Number of journalists and associated media personnel that are physically attacked, unlawfully detained or killed as a result of pursuing their legitimate activities. | | |

| Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development | | | |
|---|---|---|---|
| 95 | Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), World Trade Organization (WTO) [other organizations to be added] on relationship between international rules and the SDGs and the implementation of relevant SDG targets | BIS, IASB, IFRS, IMF, WIPO, WTO | 2, 10 |
| 96 | Official development assistance (ODA) and net private grants as percent of high-income country's GNI | OECD, IMF | 10 |
| 97 | Domestic revenues allocated to sustainable development as percent of GNI | IMF | 10 |
| 98 | Private net flows for sustainable development at market rates as share of high-income country GNI | OECD DAC | 10 |
| 99 | Share of SDG Indicators that are reported annually | UNSD, OECD World Bank | 10, 11 |
| 100 | Evaluative Wellbeing and Positive Mood Affect | SDSN, OECD | 3 |
| | Complementary National Indicators:<br>17.1. Total Official Support for Development<br>17.2. [Indicator on debt sustainability] - to be developed<br>17.3. Gross domestic expenditure on R&D as share of GDP<br>17.4. [Indicator on technology sharing and diffusion] - to be developed<br>17.5. [Indicator on the creation of / subscription to the Technology Bank and STI (Science, Technology and Innovation) Capacity Building Mechanism for LDCs by 2017] - to be developed<br>17.6. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries (MDG Indicator)<br>17.7. Value of LDC exports as a percentage of global exports<br>17.8. [Indicator on investment promotion regimes for LDCs] - to be developed<br>17.9. Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms | | |

# Annex 1: Detailed Description of Proposed Indicators and Reporting Framework

This annex provides a description of all the Indicators listed in Table 1. For each Global Reporting Indicator, we provide the rationale and definition, suggest potential levels of disaggregation, and discuss some of the limitations or other remarks. The Complementary National Indicators have brief definitions.

For each Global Reporting Indicator, we also include the primary data source, which is the preferred source of robust data for the indicator. However, this preferred data source is sometimes not available, particularly in many low-income countries with weak data collection systems. Where this is the case, we note what the alternative data source can be for the indicator. Further, we identify a potential lead agency, which could be responsible for compiling the data at the international level.

We also include a preliminary assessment of data availability, which was conducted by the Friends of the Chair Group on Broader Measures of Progress in April 2014.[25] The assessment provides an initial, rough illustration of the current indicator and data availability, showing in which areas information is more readily available and where information is potentially sparse. Assessments are based on a limited number of countries, most of which are high-income. Indicators are ranked from A-C or are listed as 'to be determined':

- "A" signifies that 80% of countries have at least 2 data points / the indicator is feasible to measure;
- "B" signifies that 50-80% of countries have at least 2 data points / the indicator will be feasible with some effort;
- "C" signifies that less than 50% of countries have at least 2 data points / the indicator will be very difficult or infeasible within the time frame.

Moving forward, UNSD had recommended that a tier system be developed, through an interactive process between responsible agencies, national statistics offices, and other key players. Tiering should take into account the detailed recommendations set out in the Compendium of Statistical Notes, prepared by the Friends of the Chair Group.

The classification would have three tiers:

1- Indicator is conceptually clear, with an agreed international definition and data are regularly produced by countries.
2- Indicator is conceptually clear, with an agreed international definition, but data are not yet regularly produced by countries.
3- Indicator for which international standards (concepts and definitions) still need to be developed.

Such a tiered system is useful and necessary especially when developed with relevant inputs from key stakeholders, and we particularly welcome inputs to help make these determinations.

[25] The Friends of the Chair Group (FOC) on broader measures of progress was established by the United Nations Statistical Commission as a response to the request of the Rio+20 conference to launch a programme of work on broader measures of progress to complement GDP in order to better inform policy decisions. See their website for the details of their evaluations of the SDSN proposed indicators: http://unstats.un.org/unsd/broaderprogress/work.html

# Goal 1. End poverty in all its forms everywhere

## Potential and Illustrative Global Reporting Indicators:

### Indicator 1: Proportion of population below $1.25 (PPP) per day (MDG Indicator)

Rationale and definition: This MDG Indicator is defined as the percentage of the population living below the international poverty line, where the average daily consumption (or income) is less than $1.25 per person per day. The $1.25 threshold is a measure of extreme income poverty that allows comparisons to be made across countries when it is converted using purchasing power parity (PPP) exchange rates for consumption. In addition, poverty measures based on an international poverty line attempt to hold the real value of the poverty line constant over time, allowing for assessments of progress toward meeting the goal of eradicating extreme poverty.[26]

Disaggregation: By sex, age, urban/rural, and other qualifiers. Of particular importance is to identify (i) the sex of the head of the household since households headed by women may be more likely to experience extreme poverty and (ii) percentage of children (under 18) living in poverty as children are generally overrepresented among the extremely poor[1], and are explicitly highlighted in OWG outcome document target 1.2

Comments and limitations: The poverty rate has the drawback that it does not capture the depth of poverty; some people may be living just below the poverty line, while others are far below. To help capture disparities, data should as much as possible be disaggregated by sex, age, ethnicity, geography, and other attributes within a population. The SDSN also proposes to include a separate indicator for urban income poverty, as the $1.25 poverty line is poorly adapted to urban environments where basic services (housing, water, energy, etc.) need to be purchased.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys, for example household budget surveys or other surveys covering income and expenditure.

Potential lead agency or agencies: World Bank.

### Indicator 2: Proportion of population living below national poverty line, differentiated by urban and rural (modified MDG indicator)

Rationale and definition: This modified MDG Indicator is defined as the percentage of the population living below the national poverty line, where the average daily consumption (or income) is less than a certain amount per person per day. These poverty thresholds are defined at the country level below which a person is deemed to be poor. The national poverty line should be differentiated for urban versus rural settings within the country to account for differences in cost of living.

Disaggregation: By sex, age, urban/rural, and other qualifiers. Of particular importance is to identify (i) the sex of the head of the household since households headed by women may be more likely to experience extreme poverty and (ii) percentage of children (under 18) living in poverty as children are generally overrepresented among the extremely poor, and are explicitly highlighted in OWG outcome document target 1.2

[26] United Nations, (2003).

Comments and limitations: National poverty lines do not provide a uniform measure, so this indicator does not allow for direct comparison across countries.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys, for example household budget surveys or other surveys covering income and expenditure.

Potential lead agency or agencies: World Bank, UN DESA.

### Indicator 3: Multidimensional Poverty Index

Rationale and definition: Multidimensional poverty assessments aim to measure the non-income based dimensions of poverty, to provide a more comprehensive assessment of the extent of poverty and deprivation. Several international multidimensional poverty tools exist, including the EU-2020 official poverty measure (combining income, work, and material deprivation), UNDP's MPI (a headline index summarizing the proportion of people in poverty and the intensity of their poverty, which breaks down by indicator), UNICEF's MODA (similar to MPI for children), and IFAD's MPAT (10 separate indicators).

The Multidimensional Poverty Index (MPI) is published by the UNDP's Human Development Report Office and tracks deprivation across three dimensions and 10 indicators: health (child mortality, nutrition), education (years of schooling, enrollment), and living standards (water, sanitation electricity, cooking fuel, floor, assets).[27] It first identifies which of these 10 deprivations each household experiences, then identifies households as poor if they suffer deprivations across one - third or more of the weighted indicators.[28] Based on the Alkire Foster methodology, the MPI is created by multiplying together two numbers: the percentage of the population who are poor; and the average percentage of the weighted indicators that poor people experience (intensity). Including intensity provides an incentive to reach the poorest of the poor. The MPI reflects those in acute poverty; alternative cutoffs are used to report those who are vulnerable and those in severe poverty.

To ensure our conceptualization of multidimensional poverty is firmly rooted in the Open Working Group Outcome Document and proposed SDGs, we support the creation of a revised MPI. At a minimum this 'MPI2015' would track extreme deprivation in nutrition, health, education, water, sanitation, clean cooking fuel and reliable electricity, to show continuity with MDG priorities. More specifically it would reflect the following deprivations:

1. Adult or child malnourishment
2. Disrupted or curtailed schooling (a minimum of years 1-8)
3. The absence of any household member who has completed 6 years of schooling
4. Child mortality within the household within the last 5 years
5. Lack of access to safe drinking water
6. Lack of access to basic sanitation services
7. Lack of access to clean cooking fuel
8. Lack of basic modern assets (radio, TV, telephone, computer, bike, motorbike, etc.)
9. Lack of access to reliable electricity

[27] UNDP, (2013), *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*, New York, NY: UNDP.

[28] UNDP also classifies those having deprivations in 1/5 to 1/3 as vulnerable, and those deprived in ½ or more as in severe poverty

Potential additional indicators to reflect the SDGs include work, housing, violence, social protection, quality of schooling, health system functioning, teenage marriage or pregnancy, solid waste disposal, birth registration, internet access (as suggested by the MPPN[29]); farm assets and a household's vulnerability to economic shocks and those posed by natural hazards (see MPAT's dimensions[30]) and/or quality of work; and empowerment or psychological wellbeing (see OPHI's Publications[31]).

Although it might seem preferable to determine multidimensional poverty based on deprivation in any indicator, previous MPIs have found considerable abnormalities in using only one deprivation, partly because of cultural and climactic diversity, and partly because the scale of these deprivations is widespread. Determining poverty levels in a country like India on the basis of any single deprivation would result in poverty rates above 90%, potentially obscuring the considerable progress that has been made in one or more areas and disincentivizing political action.[32] We therefore propose using the Alkire and Foster method of calculation[33], and setting a threshold of multiple deprivations,[34] to determine who is or is not considered poor. Establishing the thresholds will require participatory discussions as well as expert consultation. Complementary National and Regional MPIs could also be designed for specific contexts, as Mexico, Columbia, Philippines, South Africa and Bhutan have done.[35]

Disaggregation: An MPI based on the Alkire and Foster method has the potential to be disaggregated by both regions and groups.[36] At present MPI is disaggregated by rural-urban for 106 countries, and decomposed by 780 subnational regions, and by some ethnic groups. A linked measure assesses inequality among the poor. Although identification is at the household level, if the MPI is disaggregated by gender and age category it shows MPI affects women and children disproportionately. Additional modules can be used to develop individual-level adult and child poverty measures.[37]

Comments and limitations: As a general rule, we recommend that the SDG indicator framework do not include any composite indices (see principles in section III), but we believe the MPI should be included for a number of reasons. The index provides the only comprehensive measure available for non-income poverty, which has become a critical underpinning of the SDGs. Critically the MPI comprises variables that are already reported under the Demographic Health Surveys (DHS) and Multi-Indicator Cluster Surveys (MICS), so it would not increase the statistical burden to NSOs or the international community.

But being dependent on high-quality household survey data also has its limitations. The number of countries producing such surveys has increased dramatically since the mid-1980s, to around 130 countries at present, but surveys are still irregular. Furthermore, many of the data for developed

[29] See the indicators proposed in the Multidimensional Poverty Peer Network's Light Survey proposal, available at: www.ophi.org.uk/mppn-and-ophi-propose-light-powerful-household-survey-for-post-2015/
[30] See IFAD website: www.ifad.org/mpat/
[31] See OPHI website: http://www.ophi.org.uk/research/missing-dimensions/
[32] Alkire, S. and G. Robles (2014). "Identifying the multidimensionally poor: some considerations"
[33] Alkire, S. and J. Foster, (2011), "Counting and Multidimensional Poverty measurement," *The Journal of Public Economics*, 95(7–8), 476–487. ; and Alkire, S. and A. Sumner, (2013), *Multidimensional Poverty and the Post-2015 MDGs*, OPHI Briefing Note.
[34] Alternative cutoffs will be reported, as UNDP's HDRs do for MPI, and the World Bank does for $1.25.
[35] See examples of national level application here: See also CEPAL's Regional MPI for Latin America (forthcoming).
[36] Alkire, S. and A. Sumner, (2013).
[37] For a child poverty measure see for example, Alkire, S. and J.M. Roche, (2012), "*Beyond Headcount: Measures that* Reflect *the* Breadth *and* Components *of* Child Poverty", In Alberto Minujin and Shailen Nandy, eds. *Global Child Poverty and Well-Being: Measurement, Concepts, Policy and Action.* Bristol: The Policy Press. For a gendered measure see S. Alkire M. Apablaza and E. Jung. (2014). "Multidimensional Poverty Measurement for EU-SILC Countries", OPHI *Research in Progress* 36d.

countries, such as the EU's Statistics on Income and Living Conditions (available for 31 countries), are incompatible with data from developing countries, undermining our ability to prepare a global comparative measure.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: This index relies fundamentally on household surveys. At present, the global MPI is based primarily on DHS and MICS, and also includes high quality national data with standardized indicator definitions.

Potential lead agency or agencies: World Bank, UNSD, UNICEF, UNDP.

### Indicator 4: Percentage of population covered by social protection programs

Rationale and definition: Access to adequate social protection is recognized as a basic right, enshrined in the Universal Declaration of Human Rights, but more than half of the world's population lacks social protection coverage.[38] This indicator measures the percentage of the population covered by these social safety nets. The ILO includes the following ten elements as part of comprehensive social security coverage: medical care, sickness benefits, and protection of disability, old age, survivor, maternity, children, unemployment, employment injury, and general protection against poverty and social exclusion.[39] The most common types of social protection are labor market interventions to promote employment and protect workers, social insurance such as health or unemployment insurance, and social assistance to support vulnerable individuals or households. New instruments of social protection have also gained popularity, including conditional cash transfers.

Disaggregation: By gender, age, urban/rural, and by type (medical, employment etc).

Comments and limitations: In practice, access to social security can be limited by discrimination, which may not be captured here.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data, or household surveys if not available.

Potential lead agency or agencies: ILO.

### Indicator 5: Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected

Rationale and definition: Whether the rural poor, including women, men, indigenous peoples, and local communities, can have secure tenure over the land and other natural resources on which they depend has important implications for economic development and poverty reduction. Yet for many rural poor households, access to land and natural resources is increasingly undermined. In particular, controversies involving large-scale land acquisitions by foreign and domestic investors for

[38] UN Research Institute For Social Development, (2010), *Combating Poverty and Inequality: Structural Change, Social Policy and Politics*, Geneva, Switzerland: UNRISD.
[39] See ILO Social protection website: http://www.ilo.org/global/topics/social-security

agribusiness, forestry, extractive, or other large-scale projects have placed land rights and the issue of responsible investment firmly on the global development agenda, and highlighted the importance of ensuring secure tenure rights for those who rely on land and natural resources for their well-being and livelihoods.

This proposed new indicator comprises two components: (i) percentage with documented or recognized evidence of tenure and (ii) percentage who perceive that their rights to land, property, or other productive resources are recognized and protected. Documentation and perception provide critical and complementary information on tenure security and resource rights. In addition, they both highlight outcomes and on-the-ground realities. The proposed focus on "documented or recognized evidence of tenure" is flexible enough to cover a range of tenure rights in different country contexts. Because documentation alone, while important, is often not sufficient to gauge true tenure security, the perception measure provides valuable complementary information. In addition, the perception measure may facilitate more useful comparisons across countries.
.
Disaggregation: Gender, indigenous peoples, and local communities as priority groups for disaggregation. Further opportunities for disaggregation to be reviewed.

Comments and limitations: The urban component is under Goal 11.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Household survey.

Potential lead agency or agencies: FAO, UNDP.

### Indicator 6: Losses from natural disasters, by climate and non-climate-related events, by urban/rural (in US$ and in lives lost)

Rationale and definition: Cities around the world, as well as rural populations, are at growing risk from natural hazards, including extreme climate-related events that are projected to increase in frequency and severity as a result of climate change. Population growth and urbanization will also affect vulnerability and exposure.

This indicator measures losses, both lives lost and economic costs, in urban and rural areas due to natural disasters,[40] disaggregated by climate and non-climate-related events. Extreme climate-related natural disasters include the following: (i) hydro-meteorological events (storms, floods, mass movements (wet)) and (ii) climatological events (extreme temperature, drought, wildfire).[41] Non-climate-related natural disasters consist primarily of geophysical events (earthquakes, volcano eruptions, tsunamis, dry mass movements). Other disasters that may be climate or non-climate related include biological events (epidemics, insect infestations, animal stampedes). If in doubt, we propose that the events be categorized as "non-climate related."

[40] Consistent with the definitions used by CRED and the Munich database, we use the term 'natural disasters' to comprise biological, geophysical, meteorological, hydrological, climatological and extra-terrestrial disasters. There is growing evidence that some climate-related disasters are due to anthropogenic climate change and may therefore not be termed "natural", but given the difficulty involved in establishing causality we propose to include them under natural disasters. See Below, R., A. Wirtz, and D. Guha-Sapir, (2009), *Disaster Category Classification and peril Terminology for Operational Purposes*, Working Paper, Centre for Research on the Epidemiology of Disasters (CRED) and Munich Reinsurance Company (Munich RE), Brussels: UCL.

[41] As defined by the EM-DAT, the International Disasters Database, managed by the Centre for Research on the Epidemiology of Disasters (CRED) at the University of Louvain. Available at http://www.emdat.be/classification

Effective adaptation and disaster risk reduction measures are needed to reduce the economic and social impact of natural disasters, including extreme climate events, on agriculture and rural areas. The economic dimensions of this indicator would track crop and animal production losses associated with climate and non-climate-related events, primarily through utilizing real-time remote sensing technology as the core of high-resolution agricultural monitoring systems. Such an indicator would also track the success of adaptation and other preparedness measures in areas that are most at risk, including, for example, the adoption of new stress tolerant varieties or other resilience-enhancing technologies that minimize the risk of crop losses.[42]

Other economic loss dimensions, including damage at the replacement value of totally or partially destroyed physical assets; losses in the flows of the economy that arise from the temporary absence of the damaged assets; resultant impact on post-disaster macroeconomic performance, with special reference to economic growth/GDP, the balance of payments and fiscal situation of the Government, as per the Damage and Loss Assessment Methodology developed by UN-ECLAC.[43]

Human losses would be measured by the number of person's deceased or missing as a direct result of the natural disaster, confirmed using official figures.

Disaggregation: This indicator can be disaggregated spatially (inc. urban/rural) and by the age and sex of those killed. Further opportunities for disaggregation to be reviewed, including the socio-economic profile of those impacted.

Comments and limitations: Some biological disasters (epidemics, insect infestations, animal stampedes) can be climate-related. The indicator would need to specify clearly which of these events are considered climate-related.

It should also be noted that there are some limitations around measuring the scale of disaster losses recorded. For example, the CRED's International Disasters Database (EM-DAT) has a lower-end threshold for recording losses than other commonly used reinsurance databases such as Swiss Re's Sigma or Munich Re's NatCatSERVICE. A precise threshold will need to be agreed upon.[44]

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Vital registration for the mortality (household surveys if not available), and administrative data (national accounts and statistics) to assess economic damage and loss.

Potential lead agency or agencies: Such an indicator could be reported by UNISDR working with FAO, WHO, the Centre for Research and Epidemiology of Disasters (CRED), and a consortium of reinsurance companies that track this data. The data is widely reported under the Hyogo Framework of Action.[45]

[42] Mitchell, T., L. Jones, E. Lovell, and E. Comba (eds), (2013), *Disaster Management in Post-2015 Development Goals: Potential Targets and Indicators.* London, UK: Overseas Development Institute (ODI).
[43] See DaLA Methodology, at the Global Facility for Disaster Reduction and Recovery, available here: https://www.gfdrr.org/Track-III-TA-Tools
[44] For a full discussion of this see Kousky, C., (2012), *Informing Climate Adaptation: A Review of the Economic Costs of Natural Disasters, Their determinants and Risk Reduction Options*, Discussion Paper 12-28, Washington: Resources for the Future.
[45] UN International Strategy for Disaster Reduction (ISDR), (2007), *Hyogo Framework for Action 2005-2015. Extract from the Final Report of the World Conference on Disaster Reduction*. Geneva, Switzerland: ISDR.

**Complementary National indicators that countries may consider:**

1.1. **Poverty gap ratio (MDG Indicator)**, which estimates the depth of poverty by estimating how far on average the extreme poor's incomes are from the extreme poverty line of $1.25 PPP per day.

1.2. **Percentage of population with access to banking services (including mobile banking):** Access to banking services, such as a checking account, is important for the economic empowerment of the poor. It will be important to disaggregate by sex, age and type of service (mobile banking, microfinance, formal banking etc.).

1.3. **[Disaster Risk Reduction (DRR) Index]— to be developed**. Composite index that measures reduction of disaster risk, including existence of DRR management plan, DRR authority, early warning systems, and availability of DRR funding.

# Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 7: Proportion of population below minimum level of dietary energy consumption (MDG Indicator)

Rationale and definition: The percentage of the population below the minimum level of dietary energy consumption is defined as the percentage of people in a population who suffer from hunger or food deprivation (caloric). This MDG Indicator collected by FAO is expressed as a percentage, and it is based on the following three parameters:

- The three-year moving average amount of food available for human consumption per person per day;
- The level of inequality in access to that food; and
- The minimum dietary energy required for an average person– expressed in kilocalories per day.

Disaggregation: This indicator measures an important aspect of the food insecurity of a population. In assessing food insecurity, it is important to consider geographical areas that may be particularly vulnerable (such as areas with a high probability of major variations in food production or supply) and population groups whose access to food is precarious or sporadic, such as particular ethnic or social groups. In addition, intra-household access to food may show disparities by sex. Therefore, whenever household survey food consumption data are available disaggregated by sex, efforts should be made to conduct sex-based undernourishment analyses.[46]

Comments and limitations: Some experts argue caloric intake alone is not a helpful measure of sufficient healthy food. Instead they recommend measuring dietary diversity, the percentage of calories from non-staple crops, or the share of calories from protein. An additional indicator that could be utilized is the Food Insecurity Experience Scale developed by FAO.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: This indicator is based on a combination of national food balances (administrative data), population data (census), and household consumption (household surveys).

Potential lead agency or agencies: FAO, WHO.

### Indicator 8: Prevalence of anemia in women of reproductive age (including pregnant)

Rationale and definition: Micronutrients are essential for good health, however shortfalls of one or more micronutrients are common in some regions due to diet, poverty, and/or illness.[47] Micronutrient deficiencies are especially devastating to pregnant women and children, as deficiencies during the first 1000 days can have lifelong affects on physical, mental, and emotional development. Anemia is a multi-factorial disorder caused mainly by iron deficiency and infections

[46] United Nations, (2003).

[47] Persons have a shortfall in an essential micronutrient when that nutrient is not at adequate levels in the body. This could result from insufficient intake of the micronutrient in food, or insufficient uptake into the body due to illness.

and to a lesser extent by deficiencies of vitamin A, vitamin B12, folate, and riboflavin. Anemia affects half a billion women worldwide, or about 29% of non-pregnant women and 38% of pregnant women, mostly in south Asia and central and West Africa. It is estimated that half the cases of anemia are due to iron deficiency.[48] Anemia in women of reproductive age serves as a proxy for micronutrient deficiencies in the absence of more comprehensive indicators. Data on anemia prevalence collected in 1993-2005 are available for 73% of non-pregnant women of reproductive age, in 82 countries, (WHO 2012).

Disaggregation: Disaggregated by age, socioeconomic status, rural/urban, and race/ethnicity.

Comments and limitations: Tracking anemia in women of reproductive age accurately measures the risk of micronutrient deficiency to the most vulnerable (the developing fetus), but is not a perfect proxy for status of all micronutrients across all populations and sub-populations. Ideally, countries would track deficiencies of iron, zinc, iodine, vitamin A, folate, vitamin B12, and vitamin D across all ages, genders, and other socioeconomic gradients. This would give a more robust portrait of the nutritional state of a country. Today it would be challenging to implement such an indicator, but the development of rapid diagnostic tests for micronutrient deficiency could make this feasible before the end of the SDG period. In fact, some countries are already collecting data on iron, iodine, vitamin A, folate, and vitamin B12 at a national level.[49]

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data from health ministries survey reports.

Potential lead agency or agencies: Such data is collected by FAO and WHO and would need to be combined into a composite index that would form an essential component of a post-2015 monitoring framework.

### Indicator 9: Prevalence of stunting and wasting in children under [5] years of age

Rationale and definition: This indicator will measure children under age [5] who exhibit stunting and wasting. The indicator will track children who are a) neither stunted nor wasted, b) stunted but not wasted, c) wasted but not stunted, and c) both wasted and stunted, as interventions differ for the two conditions. This will provide an accurate picture of under-5 nutrition. Proper nutrition during the first 1,000 days of life is vital for children to reach their full potential. Stunting and wasting in children can have severe and potentially irreversible impacts on their physical, mental, and emotional development.

Stunting is low height for age; the indicator measures children age [5] years and under whose height for age is two or more standard deviations below the median height for age of a reference population. Stunting is caused by chronic nutrient deficiency and/or illness.

Wasting is low weight for age; the indicator measures children age [5] years and under whose weight for age is two or more standard deviations below the median weight for age of a reference population. Wasting is caused by acute food shortages and/or disease, and is strongly correlated with under-5 mortality.

[48] United Nations Standing Committee on Nutrition, *Measurement of and Accountability for Results in Nutrition In the Post-2015 Sustainable Development Goals: A Technical Note*, United Nations Standing Committee on Nutrition: November 2014. Available at http://www.unscn.org/files/Publications/Briefs_on_Nutrition/Final_Nutrition%20and_the_SDGs.pdf
[49] WHO, (2014c).

Disaggregation: This indicator can be disaggregated by sex, age, household income, and other socioeconomic and spatial qualifiers.

Comments and limitations: When reporting in the MDG annual report, UNICEF includes data on both underweight and the stunting/wasting.
Some advocate for measuring children aged 2 years and under. A final decision on the age at which to measure will need to be taken.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household survey and/or administrative data from health records

Potential lead agency or agencies: The indicator is routinely measured and data could be collected by UNICEF and WHO.[50]

### Indicator 10: Crop yield gap (actual yield as % of attainable yield)

Rationale and definition: This indicator tracks yield gaps for major commodities, i.e. actual yields relative to the yield that can be achieved under good management conditions, taking into account climate and the sustainable use of water (i.e. water-limited yield potential). This indicator is a benchmark for productivity that shows the exploitable yield gap. Countries could aim, for example, for the majority of their farms to achieve at least 80% of the attainable water-limited yield potential on a sustainable basis, which requires implementing the right policy and technology roadmaps.

Disaggregation: It can be disaggregated by crops of highest priority for a country and is suitable for spatial disaggregation, from local to global scales.

Comments and limitations: This indicator must be interpreted in conjunction with other indicators expressing efficiency of critical resources, such as water and nutrients, to ensure agro-ecologically sustainable solutions. It requires improved data collection and monitoring systems, including modeling and remote sensing.[51]

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Administrative data, and/or agricultural-based household survey.

Potential lead agency or agencies: FAO.

### Indicator 11: Number of agricultural extension workers per 1000 farmers [or share of farmers covered by agricultural extension programs and services]

Rationale and definition: It will not be possible to increase sustainable agriculture yields in all countries without a functioning public and or private agricultural extension system. The proposed indicator has been developed by FAO to track the total number of qualified agricultural professionals across different sectors that provide training, information, and other extension support and services to farmers and small to medium enterprises in rural value chains.

[50] WHO, (2014b).
[51] Dobermann, A. and Nelson, R. et al., (2013), *Solutions for Sustainable Agriculture and Food Systems,* Technical report of the Thematic Group on Sustainable Agriculture and Food Systems, Paris, France and New York, USA: SDSN.

Disaggregation: This indicator can be disaggregated at sub-national scales, by gender, and by public vs. private sector extension workers.

Comments and limitations: The current indicator has a few limitations. First, the indicator does not distinguish between levels of training of extension workers. It should only include professionals with a minimum level of education, training, and certification. Second, the indicator does not measure the effectiveness of the agricultural extension system in terms of actually reaching farmers with new information, knowledge and services. Therefore, an additional indicator could be developed to measure the percentage of farmers who are effectively and regularly covered by quality agricultural extension or similar programs.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data, and/or agricultural-based household survey.

Potential lead agency or agencies: Data for the indicator is collected by the FAO.[52]

### Indicator 12: [Nitrogen use efficiency in food systems] - to be developed

Rationale and definition: Nitrogen plays a central role for the productivity, sustainability and environmental impact of crop and animal production systems. Nitrogen is essential for feeding the world's population and to enable intensive farming, which in turn limits the conversion of land to agriculture.

Most of the anthropogenic nitrogen produced enters global cycles as fertilizer in crop production. Hence, optimizing nitrogen management so that high yields can be achieved with high nitrogen fertilizer efficiency is a core component of food security as well as environmental sustainability. At the same time, some food systems (e.g. smallholder food production in sub-Saharan Africa) consume more nitrogen than is replenished – they "mine" nitrogen in soils. An effective nitrogen indicator therefore needs to track the levels as well as efficiency of nitrogen use.

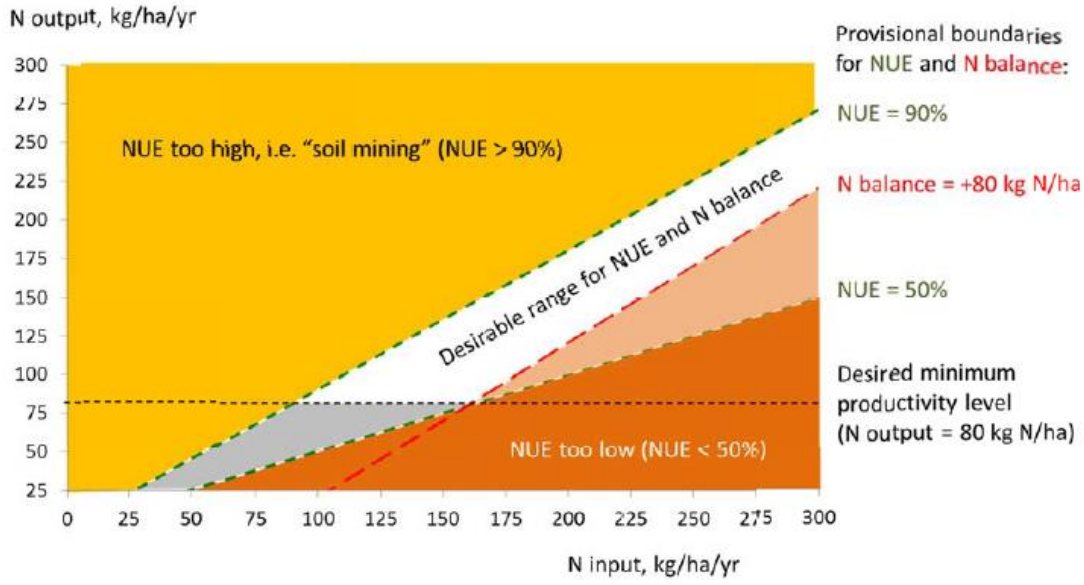
Nitrogen use efficiency is based on the mass balance principle and defined as nitrogen output in harvested products divided by the nitrogen inputs to the farm or the food system. It must be corrected for changes in the stock of nitrogen inside the system.

The indicator can be presented graphically by mapping nitrogen input against nitrogen output. For each food system and agro-ecological area, optimal ranges of nitrogen use efficiency can be defined, which in turn makes it possible to determine whether a given system uses nitrogen optimally or has too low/high nitrogen use efficiency. Additionally, the presentation of the indicator can identify minimum nitrogen use levels that denote minimum food production thresholds. Food systems, such as many smallholder farmers in Africa, that use too little nitrogen would therefore be encouraged in increase nitrogen use. Finally, the graphs can specify acceptable nitrogen balance surplus for each food system.

Such a graph is illustrated schematically below. All values are purely indicative and for illustration purposes only.

[52] Ibid.

**Figure 3: Example for acceptable boundaries of nitrogen output/input ratios, nitrogen use efficiency, minimum productivity levels, and maximum nitrogen surplus balance at a national scale. The example only serves to illustrate the interpretation of the proposed indicator.**[53]




Targets for crop nitrogen use efficiency are context-specific, primarily depending on climate, yield, current nitrogen use, soil quality, irrigation, and other crop management practices. This indicator needs to be interpreted in relation to other indicators, such as the crop yield gap indicator and the water productivity indicator. A possible target range for this indicator would require careful consideration.

Tracking nitrogen will require major improvements of the necessary data collection systems in two ways: (i) annual nutrient use and crop removal statistics at sub-national level and by crops (fertilizers and other nutrient sources) and (ii) regular field monitoring of nitrogen use efficiency and other nutrient-related indicators (e.g. soil fertility, management practices for better nutrient stewardship).

Currently this indicator is not used widely. It has recently been recommended by a task force of the UNEP Global Partnership on Nutrient Management (GPNM), the EU Nitrogen Experts Panel and other expert groups.

Disaggregation: Food production systems are extremely diverse and context specific. Therefore it is important that nitrogen indicators can be tracked at different geographic scales (local, national, global) as well as by farming systems (e.g. maize, wheat, cassava). Nitrogen use efficiency can be estimated at different scales. Countries can track it for each major farming system, agroecological zone, or watershed.

Comments and limitations: This indicator tracks only nitrogen use and is complemented by a similar indicator for phosphorus. We believe that nitrogen and phosphorus are the two most important nutrients to track, but we underscore that sustainable food systems will require sound management of many other nutrients, including potassium, and of soil organic matter.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

[53] Source: EU Nitrogen Expert Panel

Primary data source: TBD

Potential lead agency or agencies: Data for this indicator could be collected by FAO working with the International Fertilizer Industry Association (IFA) and national agencies.[54]

### Indicator 13: [Phosphorus use efficiency in food systems] —to be developed

Rationale and definition: Phosphorus is a major nutrient for food systems and with impact on the environment. We propose that a phosphorus use efficiency indicator be developed analogously to the nitrogen use indicator (Indicator 12). The details for such a phosphorus indicator would need to be worked out, as would data collection methods and protocols.

Disaggregation: To be reviewed once the indicator has been defined.

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD

Potential lead agency or agencies: UNEP or other agency.

### Indicator 14: [Access to drying, storage, and processing facilities]— to be developed

Rationale and definition: Good infrastructure for drying and storing agricultural produce as well as inputs is critical to reducing losses due to contamination by mycotoxins, insects, or other food contaminants. Drying, storage, and processing facilities also increase the earnings of farmers by allowing them more time in which to sell their crops and wait for good prices. Expanding rural processing capacity generates employment opportunities, enhances access to markets, and facilitates value addition (including the production of foods to enhance infant/child nutrition and reduce maternal drudgery). It is therefore important to develop an indicator that estimates access to drying, storage, and processing facilities.[55]

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been developed.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD

Potential lead agency or agencies: FAO.

### Indicator 15: Annual change in degraded or desertified arable land (% or ha)

Rationale and definition: The FAO defines land degradation as a reduction in the condition of the land, which affects its ability to provide ecosystem goods and services and to assure its functions

[54] Ibid.
[55] Dobermann, A. and Nelson, R. et al., (2013).

over a period of time.[56] Components of land degradation include salinization, erosion, loss of soil nutrients, and sand dune encroachment. Data on land degradation is continuously being improved through advances in remote sensing, digital mapping, and monitoring. A central objective should be to halt all net land degradation by 2030.

Disaggregation: The FAO supports methodologies to determine the extent of degradation, distinguishing between light, moderate, strong, and extreme. Data will be disaggregated by these categories and by sub-region.

Comments and limitations: To date, data on degraded and desertified arable land has been patchy. Efforts have been stepped up since the UN appointed 2010-2020 'the decade of desertification', mostly led by FAO and UNCCD[57], but there is still some way to go. Investments in remote sensing, digital mapping, and monitoring will be crucial to this effort.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Remote sensing/satellite and administrative data.

Potential lead agency or agencies: FAO, UNEP.

### Indicator 16: [Crop water productivity (tons of harvested product per unit irrigation water)]— to be developed

Rationale and definition: The proposed indicator is directly related to freshwater use for irrigation. Under the System of Environmental-Economic Accounting (SEEA) water productivity is defined as the value added of agriculture divided by water use by agriculture. More work is needed to define this indicator.

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been defined.

Comments and limitations: Another alternative is to define water productivity as the efficiency with which water is converted to harvested product, i.e. the ratio between yield and seasonal water supply, including rainfall and irrigation.[58]

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: TBD

Potential lead agency or agencies: FAO.

[56] See FAOSTAT: http://faostat.fao.org/site/375/default.aspx
[57] See for example a new methodology being developed by the FAO: ftp://ftp.fao.org/agl/agll/docs/landdegradationassessment.doc and an example of current data availability in UNCCD, (2014) *Desertification: The invisible Front Line*, UNCCD: Bonn.
[58] Van Ittersum, M.K. et al., (2013).

## Complementary National indicators that countries may consider:

2.1. **Percentage of population with shortfalls of: iron, zinc, iodine, vitamin A, folate, vitamin B12, [and vitamin D].** Currently, some countries track selected micronutrient deficiencies in a full population. The micronutrients they choose to track are often based on data that is years or even decades old, over which time diets have changed dramatically in many countries. We propose countries perform a baseline survey on the status of all above-mentioned micronutrients, identify those of concern in partnership with WHO, and continue reporting on micronutrients of concern over the SDG period. The United Nations Standing Committee on Nutrition also recommends developing and tracking micronutrient metrics beyond anemia.[59]

2.2. **Proportion of infants 6–23 months of age who receive a minimum acceptable diet.** Children (breastfed or not) 6–23 months of age who had at least the minimum dietary diversity (4 food groups) and the minimum meal frequency (depends on age of infant) during the previous day (numerator), divided by children (breastfed or not) 6–23 months of age (denominator).

2.3. **Cereal yield growth rate (% p.a.).** Averaged over several years, this indicator tracks long-term increases in crop yields, which must make an important contribution to meeting future food needs.

2.4. **Livestock yield gap (actual yield as % of attainable yield).** This indicator tracks yield gaps for major livestock commodities like milk, eggs and meat, taking into account climate, disease conditions and the sustainable use of water and feed. This indicator must be interpreted in conjunction with other indicators expressing efficiency of critical resources such as feed and water to ensure agro-ecologically sustainable solutions, as well as total livestock numbers at the household and national levels. It also should ensure increased yields do not come at the expense of animal welfare and that farmers can access veterinary services.

2.5. **Share of calories from non-staple crops**. This simple indicator can be used to track progress towards more diverse and healthier diets.

2.6. **Percentage of total daily energy intake from protein in adults**. The percentage of calories from protein consumption in adults.

2.7. **[Indicator on genetic diversity in agriculture] - to be developed**. This indicator will track seed and genetic plant diversity.

2.8. **[Indicator on irrigation access gap]— to be developed**. Increasing irrigation in areas where it can be done sustainably but is currently underutilized will be important to raise crop yields. An appropriate indicator to measure this is needed.

2.9. **[Farmers with nationally appropriate crop insurance (%)]— to be developed**. This indicator seeks to quantify resilience (to storms, floods, drought, pests, etc.) in agricultural systems.

2.10. **Public and private R&D expenditure on agriculture and rural development (% of GNI)**. This indicator tracks public and private resource mobilization for R&D on agriculture and rural development as a share of GNI.

2.11. **[Indicator on food price volatility] - to be developed**. Extreme food price volatility is an important driver in food security and should be tracked.

[59] United Nations Standing Committee on Nutrition, *Measurement of and Accountability for Results in Nutrition In the Post-2015 Sustainable Development Goals: A Technical Note*, United Nations Standing Committee on Nutrition: November 2014. Available at http://www.unscn.org/files/Publications/Briefs_on_Nutrition/Final_Nutrition%20and_the_SDGs.pdf

# Goal 3. Ensure healthy lives and promote well-being for all at all ages

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 17: Maternal mortality ratio (MDG indicator) and rate

Rationale and definition: The maternal mortality ratio is the annual number of maternal deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, per 100,000 live births per year. This indicator reflects the capacity of health systems to effectively prevent and address the complications occurring during pregnancy and childbirth. It may also highlight inadequate nutrition and general health of women and reflect the lack of fulfillment of their reproductive rights resulting in repeated and poorly spaced pregnancies.

The maternal mortality rate is the number of maternal deaths in a population divided by the number of women of reproductive age. It captures the likelihood of both becoming pregnant and dying during pregnancy (including deaths up to six weeks after delivery).

Disaggregation: As data systems improve, it will be important to disaggregate by age, geographic location (e.g. urban vs. rural), and income level.[60]

Comments and limitations: Both metrics are difficult to measure as vital registration and health information systems are often weak in developing countries. The ratio does not capture deaths during pregnancy or the puerperium, which may be due to complications from pregnancy or delivery, as rate does, which is why we suggest measuring both.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Complete vital statistics registration systems are the most reliable data source, but these are rare in developing countries so household surveys are often used.

Potential lead agency or agencies: WHO, UN Population Division (UNPD), UNICEF, and World Bank maintain databases on maternal mortality.

### Indicator 18: Neonatal, infant, and under-five mortality rates (modified MDG Indicator)

Rationale and definition: The under-five mortality rate is the probability for a child to die before reaching the age of five, if subject to current age-specific mortality rates. The neonatal (<28 days) and infant (<1 year) mortality rates are important subcomponents. This indicator measures child health and survival and is expressed as the number of deaths per 1,000 live births. It captures more than 90 percent of global mortality among children under the age of 18. Data on disease incidence are frequently unavailable, so mortality rates are used.[61]

[60] See WHO website on maternal and perinatal health: www.who.int/reproductivehealth/topics/maternal_perinatal/en/index.html

[61] UNICEF, WHO, World Bank and UNPD, (2007), *Levels and Trends of Child Mortality in 2006: Estimates developed by the Inter-agency Group for Child Mortality Estimation,* New York, NY: UNICEF, 9.

Disaggregation: Data should be heavily disaggregated so as to identify particularly vulnerable populations.

Comments and limitations: The neonatal (<28 days) and infant (<1 year) mortality rates are important to include as past trends show slower declines in neonatal and infant deaths than among children age 1 to 4.[62]

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Complete vital statistics registration systems are the most reliable data source, but these are rare in developing countries so household surveys are often used.

Potential lead agency or agencies: UNICEF, WHO, and the UN Population Division report on infant and child mortality. Data collection on neonatal mortality rates will need to be improved.

### Indicator 19: HIV incidence, treatment, and mortality rates (modified MDG Indicator)

Rationale and definition: This indicator measures the spread of HIV and the ability for countries to provide treatment and services to those who are living with HIV. The incidence aspect measures the estimated number of new HIV infections per 1000 population, as well as treatment rates with anti-retroviral therapy (ART) by age group. This tracks progress towards reducing HIV infection and improving access to treatment. Treatment describes the percent of people living with HIV who are receiving ART, which consists of the use of at least three antiretroviral (ARV) drugs to maximally suppress HIV and stop the progression of the disease. It adds tracking of mortality from HIV/AIDS. The mortality rate is the estimated number of people that have died due to HIV as a ratio to people living with HIV.

Disaggregation: By sex and age. UNAIDS also recommends that whenever possible, disaggregation should be based on key populations: sex workers, men who have sex with men, and people who inject drugs. It can also be further determined nationally who is at greater risk of HIV infection.

Comments and limitations: It is important that all HIV indicators are measured for all age groups, as some of the biggest gaps in ART are in the treatment of children.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data from health facilities are the most reliable,
HIV incidence is measured directly in surveys or estimated in models. The treatment rate is available from health facilities, but these are rare in developing countries so models are often used. The mortality rate is also calculated using models. These data are reported annually by countries to UNAIDS. [63]

Potential lead agency or agencies: WHO, UNAIDS.

[62] Ibid, 10.
[63] UNAIDS, (2013), 30.

### Indicator 20: Incidence, prevalence, and death rates associated with TB (MDG Indicator)

Rationale and definition: The incidence rate of TB is the number of new cases of TB per 100,000 people per year. Prevalence is the number of TB cases in a population at a given point in time per 100,000. The TB death rate is the number of deaths caused by TB per 100,000 in one year. Detecting and curing TB are key interventions for addressing poverty and inequality. Prevalence and deaths are more sensitive markers of the changing burden of tuberculosis than new cases, but data on incidence are more comprehensive and give the best overview of the impact of global tuberculosis control.

Disaggregation: Data should be disaggregated by age group, sex, urban/rural, and income, as well as by TB strain, with special attention to drug-resistant varieties. Additionally it should be disaggregated by site of disease (pulmonary/extra-pulmonary), type of laboratory confirmation (usually sputum smear), and history of previous treatment.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data from health facilities are the most reliable, but these are rare in developing countries so household surveys are often used.

Potential lead agency or agencies: WHO is responsible for reporting this indicator at the international level.[64]

### Indicator 21: Incidence and death rates associated with malaria (MDG Indicator)

Rationale and definition: The incidence rate of malaria is the number of new cases of malaria per 100,000 people per year. The malaria death rate is the number of deaths caused by malaria per 100,000 people per year.

Disaggregation: Data should be disaggregated by age group, sex, geographic location (e.g. urban vs. rural), and income, as well as by causal agents of malaria.[65]

Comments and limitations: The quality of the data is particularly sensitive to the completeness of health facility reporting. In addition, since the symptoms of malaria are similar to those of other diseases, incidences and deaths are sometimes misreported in poorly resourced countries. The invention of rapid diagnostic testing for malaria should be leveraged to improve data quality.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data from health facilities are the most reliable, but these are rare in developing countries, so household surveys are often used.

Potential lead agency or agencies: WHO is responsible for reporting this indicator at the international level.[66]

[64] See WHO website on TB: http://www.who.int/tb/en
[65] United Nations, (2003).
[66] See WHO website on malaria: http://www.who.int/topics/malaria/en

### Indicator 22: Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease

Rationale and definition: The disease burden from non-communicable diseases (NCDs) among adults is increasing due to aging and health transitions. Measuring the risk of dying from target NCDs is important to assess the burden from mortality due to NCDs in a population. This indicator measures the risk of premature death due to the most common NCDs. It is the percentage of 30-year-old people who would die before their 70th birthday from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease, assuming that s/he would experience current mortality rates at every age and s/he would not die from any other cause of death, like accidents or HIV/AIDS.[67]

Disaggregation: By sex and geographical location like rural and urban (to support targeting of healthcare systems) Other opportunities for disaggregation to be reviewed.

Comments and limitations: One limitation is that data on adult mortality is limited, notably in low-income countries.[68]

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data from health facilities are the most reliable, but these are rare in developing countries so household surveys are often used.

Potential lead agency or agencies: WHO.

### Indicator 23: Current use of any tobacco product (age-standardized rate)

Rationale and definition: Tobacco use is a leading cause of preventable death in many developed countries, and is a growing problem and contributor to the burden of disease in developing countries. This indicator measures the prevalence of current smoking (daily, non-daily, or occasional) of any tobacco product, including cigarettes, cigars, pipes, etc., for adults aged 15 years and over.[69] It expands upon the WHO's recommendation to further track use of smokeless tobacco products (including chewing, snuff, and electronic cigarettes). The age-standardized prevalence rate of tobacco use (adjusted according to the WHO regression method) allows for comparisons across countries and across time periods to determine trends.[70]

Disaggregation: By sex and age.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys.

[67] WHO Indicator and Measurement Registry, Version 1.7.0 (2011). See: http://apps.who.int/gho/indicatorregistry/App_Main/indicator_registry.aspx (2011).
[68] Agyepong, I. Liu, G, and Reddy, S. et al. (2014). *Health In the Framework of Sustainable Development.* Paris, France and New York, USA: SDSN.
[69] WHO Indicator and Measurement Registry, (2011).
[70] Ibid.

Potential lead agency or agencies: WHO.

### Indicator 24: Harmful use of alcohol

Rationale and definition: WHO recommends a reduction in the harmful use of alcohol as part of the Global Monitoring Framework for Non-Communicable Diseases.[71] WHO recommends tracking two dimensions of alcohol overuse/abuse: total (recorded and unrecorded) alcohol consumption within a calendar year in liters of pure alcohol (to assess long-term consumption), and age-standardized prevalence of heavy episodic (binge) drinking (HED) among adolescents and adults. HED is defined as consuming 60 or more grams of alcohol on a single occasion at least once in the last 30 days.

This indicator provides information regarding the patterns of alcohol consumption in a given country, and consequently highlights the population that has a higher risk of experiencing alcohol-related acute harm, such as alcohol poisoning and automobile accidents, as well as chronic health complications, such as liver cancer and hypertension.

Disaggregation: By sex and age.

Comments and limitations: Another possible indicator of alcohol overuse/abuse would be to use the Alcohol Use Disorders Identification Test (AUDIT) that also diagnoses both short- and long-term over use.[72]

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys.

Potential lead agency or agencies: The data is gathered through population-based national surveys.[73] WHO would ensure comparable data is collected globally.

### Indicator 25: Percent of population overweight and obese

Rationale and definition: This indicator tracks the share of a country's population that is overweight or obese. Obesity at any age has significant effects on health, but is particularly damaging to children who often carry obesity into adulthood. The body mass index (BMI) is a measure of body fat based on height and weight that is calculated by dividing a person's weight by their height squared. WHO defines overweight for adults as having a BMI greater than or equal to 25. A BMI greater than or equal to 30 defines obesity. Overweight in children is defined by WHO's Child Growth Standards as the percentage of children aged 0-5 whose weight-for-height is above +2 standard deviations of the WHO Child Growth Standards median. Prevalence of overweight in adolescents is the percentage of adolescents who are one standard deviation above the BMI for age and sex.[74]

Disaggregation: By sex and age.

Comments and limitations: The BMI is an imperfect measure, as it does not allow for the relative proportions of bone, muscle and fat in the body, and it ignores waist size, which is a clear indicator of obesity level.

[71] WHO, (2014a).
[72] For more information, see: http://whqlibdoc.who.int/hq/2001/who_msd_msb_01.6a.pdf
[73] WHO, (2013c).
[74] WHO Indicator and Measurement Registry, (2011).

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys.

Potential lead agency or agencies: WHO.

### Indicator 26: [Functioning programs of multisectoral mental health promotion and prevention in existence]— to be developed

Rationale and definition: There is growing recognition of the need for comprehensive mental health services to be offered as part of a universal health care (UHC) package. The World Health Organization's Mental Health Action Plan proposes a number of indicators on mental health, including this indicator, which measures the effectiveness of programs to promote mental health and get necessary services to patients.[75]

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been developed.

Comments and limitations: The actual methodology for this type of data collection needs to be developed. Countries may choose to complement the above indicator with an outcomes-based indicator, such as number of persons receiving treatment per 1000 population, however additional research will be required to determine an appropriate target range for such an indicator. There have been a number of conferences and meetings discussing mental health in the post-2015 development agenda and possible indicators.[76] These activities should aim to build consensus around a clearly-defined indicator of mental health for the post-2015 development agenda.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: TBD.

Potential lead agency or agencies: WHO.

### Indicator 27: Road traffic deaths per 100,000 population

Rationale and definition: This indicator measures road safety and is the rate of road traffic fatal injury deaths calculated per 100,000 population. Road traffic injuries are a major health and development challenge: they are the eighth overall cause of death globally, and the leading cause of death for youth aged 15-29.[77] On current trends road traffic fatalities may become the fifth leading cause of death by 2030.

Disaggregation: WHO tracks deaths of pedestrians, cyclists, drivers of 4-wheeled vehicles, drivers of 2- or 3- wheeled motorized vehicles, and other. Disaggregate information by geography, including rural and urban to realize targeting of solutions.

[75] WHO, (2013d).
[76] See for example the Movement for Global Mental Health Post-2015 article: http://www.globalmentalhealth.org/post-2015-development-agenda
[77] WHO, (2013e), *Global status report on road safety.* http://www.who.int/violence_injury_prevention/road_safety_status/2013/report/en/

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Civil registration and vital statistics.

Potential lead agency or agencies: WHO.

### Indicator 28: [Consultations with a licensed provider in a health facility or the community per person, per year]— to be developed

Rationale and definition: Physical access to primary health care services, including emergency obstetric care (EmOC) facilities, is necessary for achieving the health targets.[78] Primary health services are defined broadly to include preventative, curative, and palliative care of communicable and non-communicable diseases, sexual and reproductive health services, family planning, routine immunizations, and mental health. All of these elements are equally important to ensure good health and wellbeing.

The proposed indicator tracks the average number of consultations – including preventative and curative services – with a licensed provider. Licensed providers in health facilities include all adequately trained personnel registered and integrated in a national health system. This includes consultations with community health workers (CHWs) but excludes pharmacists.

Disaggregation: By gender, income, and region. Further opportunities for disaggregation to be reviewed.

Comments and limitations: Data availability may be a limiting factor for applying this indicator in rural areas and some low-income countries, especially when tracking visits with CHWs. Yet, modern information and communication technologies make it possible to collect such data effectively and at low cost. Since the same data can be used to assess the performance of a health system and its various facilities, its collection should be encouraged.

A second limitation of the indicator is that it measures the average number of consultations across an entire population. Such averages do not give information on how many people are excluded from the health system for some or all types of consultations.

Alternative measures for access to health care services are expressed as “percent of population living within [x] kilometers of service delivery point.” A service delivery point is typically defined as any location where a licensed provider (including CHWs but excluding pharmacists) provides services. In the case of EmOC facilities, WHO defines the acceptable level of access as five facilities (including at least one comprehensive facility) for every 500,000 population. The difficulty with such geospatial indicators is that they do not adequately capture utilization and access, which may be conditioned by factors beyond physical proximity and affordability.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD.

Potential lead agency or agencies: WHO.

[78] WHO, (2009*), Monitoring emergency obstetric care: a handbook*, Geneva, Switzerland: WHO Press, 10.

### Indicator 29: [Percentage of population without effective financial protection for health care] – to be developed

Rationale and definition: A central component of universal health coverage (UHC) is financial affordability and transparency in billing of preventative and curative health services. It is critical that global efforts to eradicate extreme poverty and promote social inclusion are not undermined by impoverishing expenditure to use needed health services, and that the poorest people can afford critical care.[79] For this reason, a monitoring framework for the SDGs must include a Global Monitoring Indicator on financial protection for health care.

Yet, measuring financial affordability and protection for a broad range of health services is difficult. An indicator for financial affordability and protection requires accurate data from a number of sources, including public health financing rules and household surveys. Data availability should be good in countries implementing universal health care (UHC), but may be a challenge in other countries.

Below we describe available options for this indicator and outline major limitations. We believe that these limitations can be overcome, but for now we present a placeholder for this indicator. The SDSN looks forward to working with interested organizations to identify the appropriate indicator and to promote it as part of the indicator framework for the SDGs.

Available or conceivable options for defining a Global Monitoring Indicator on financial protection in the health sector include:

- The number of households falling below the poverty line (or being pushed deeper into poverty) due to out-of-pocket spending on health care
- Out-of-pocket expenditure as a share of total health expenditure
- The percentage of households experiencing catastrophic health expenditure (usually defined as a share of annual household income net of subsistence needs)
- More synthetic measures of the financial protection of health care systems.

Many of these indicators can also be framed in reverse, e.g. the share of the population that does not experience catastrophic health expenditure.

A recent report by the WHO and the World Bank recommended the first option.[80] Such an indicator captures important elements of financial protection. Data availability has improved in recent years so that this indicator can be computed for a large number of countries. However, the indicator does not adequately measure the common and often deadly condition of an already impoverished household that simply does not access health services because of the cost of health services.[81] Being "pushed into or deeper into poverty" is quite different from being stuck in poverty without health care access. The latter situation describes a large proportion of those in need.

Indicator options 2 and 3 face the same challenge of under reporting by households that do not access health services – adequately or at all – as a result of cost. Moreover, the indicators do not

[79] Agyepong, I., Liu, G., Reddy, S. et al., (2014), *Health In the Framework of Sustainable Development*, Paris, France and New York, USA: SDSN.
[80] World Health Organization, World Bank, (2013), *Monitoring progress towards universal health coverage at country and global levels*, Joint WHO / World Bank Group Discussion Paper, Geneva, Switzerland.
[81] Moreno-Serra R., Millett C., Smith P.C., (2011), *Towards Improved Measurement of Financial Protection in Health*. PLoS Med 8(9): e1001087. World Health Organization, World Bank (2013).

provide a clear indication of the impact that out-of-pocket health expenditure might have on the health and economic situation of households.

Finally, it is also possible to evaluate the financial protection of health care systems in more synthetic ways, based on the rules of public financing for outpatient services, inpatient care, laboratory services, and medicines. Systems with full public financing will score high; those with heavy co-payments or out-of-pocket payments will score low. These synthetic calculations made annually based on the health care rules can be cross-checked and validated by comparison with the share of out-of-pocket outlays and by survey questions (e.g. "Were you and family members unable to access needed health services or medicines because of lack of family income?").

Disaggregation: By sex and wealth quintile.

Comments and limitations: To be determined once the indicator has been specified.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD.

Potential lead agency or agencies: WHO gathers data on health expenditures by triangulating information from several sources to estimate both government and private expenditures on health.[82]

### Indicator 30: Percent of children receiving full immunization (as recommended by WHO)

Rationale and definition: The World Health Organization recommends that all children receive vaccination against BCG, Hepatitis B, Polio, DTP, *Haemophilus influenza* type b, Pneumococcal (Conjugate), Rotavirus, Measles, Rubella, and that adolescent girls (aged 9-13) receive vaccination against HPV.[83] This indicator measures the percent of children and adolescents who have received all aforementioned immunizations at the appropriate age, as recommended by WHO. Countries may also wish to include additional vaccinations, such as tetanus, yellow fever, etc., as recommended by the WHO's *Global Vaccine Action Plan.*[84]

Disaggregation: By sex and age. Other opportunities for disaggregation to be reviewed.

Comments and limitations: Ideally we should track all the vaccines individually as it is unlikely that countries will meet the full immunization requirement. An alternate indicator is "Percent of children receiving immunization in accordance with national schedules." However, these schedules are often not as ambitious as they could/should be.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys. Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) include this information.

[82] WHO Indicator and Measurement Registry (2011).
[83] WHO, (2013a).
[84] See: http://www.who.int/immunization/documents/general/ISBN_978_92_4_150498_0/en/index.html

Potential lead agency or agencies: WHO currently collects data on immunization. UNICEF and GAVI are other important stakeholders.

### Indicator 31: Contraceptive prevalence rate (MDG Indicator)

Rationale and definition: The contraceptive prevalence rate is defined as the percentage of women of reproductive age who use (or whose partners use) a contraceptive method at a given point in time. Women 'of reproductive age' is usually defined as women aged 15 to 49, but sexually active adolescents under 15 should also be included. Increased contraceptive prevalence is also an important proximate determinant of inter-country differences in fertility and of ongoing fertility declines in developing countries. Contraceptive prevalence is influenced by people's fertility desires, availability of high-quality products and services; social norms and values; levels of education; and other factors, such as marriage patterns and traditional birth-spacing practices. It is an indicator of population and health, particularly women's access to reproductive health services. The level of contraceptive use has a strong, direct effect on the total fertility rate (TFR) and, through the TFR, on the rate of population growth. It also serves as a proxy measure of access to reproductive health services that are essential for meeting many health targets, especially the targets related to child mortality, maternal health, HIV/AIDS, and gender equality.[85]

Disaggregation: By age and marital status.

Comments and limitations: Common limitations to this indicator include under-reporting and underestimation of overall use, vague time references, and insufficient accuracy.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys – some key surveys that include this information are: Demographic and Health Surveys (DHS), Fertility and Family Surveys (FFS), Reproductive Health Surveys (RHS) conducted with assistance from the US CDC, Multiple Indicator Cluster Surveys (MICS), and other national surveys.

Potential lead agency or agencies: Data for this indicator comes from household surveys, such as Demographic and Health Surveys (DHS) and Multiple Indicators Cluster Surveys (MICS), and contraceptive prevalence surveys. The UN Population Division and UNFPA could ensure the collection of internationally comparable data.

### Indicator 32: Healthy life expectancy at birth

Rationale and definition: This indicator measures the average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.

Disaggregation: By sex and income level.

Comments and limitations: The main limitation of this indicator is the lack of reliable data on mortality and morbidity from vital registration systems, especially from low-income countries, and the long lags (WHO collects only every 5 years). Other issues include lack of comparability of self-

[85] UN Population Division, (2011), *World Contraceptive Use 2011,* New York: UN. See: http://www.un.org/esa/population/publications/contraceptive2011/contraceptive2011.htm

reported data from health interviews and the measurement of health-state preferences for such self-reporting.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Civil registration and vital statistics. In case of inadequate sources of age-specific mortality rates, data is derived from estimated under-5 mortality rates and adult mortality rates.

Potential lead agency or agencies: WHO.[86]

### Indicator 33: Mean urban air pollution of particulate matter (PM10 and PM2.5)

Rationale and definition: Rapid urbanization has resulted in increasing urban air pollution in major cities, especially in developing countries. It is estimated that over 1 million premature deaths can be attributed to urban ambient air pollution.[87] This has severe economic and health impacts, particularly for young children. We therefore propose that the post-2015 framework include an indicator tracking the mean urban air pollution of particulate matter.

PM10 is the concentration of particles with a diameter equal to or greater than 10 microns (μ), which are usually produced from construction and mechanical activities while PM2.5 is the concentration of particles with a diameter equal to or greater than 2.5 microns usually produced from combustion. These smaller particles are actually more damaging as they permeate the lung more deeply. WHO has set guidelines for PM10 at 20 μg/m3 annual mean and 50 μg/m3 24-hour mean and for PM2.5 at 10 μg/m3 annual mean and 25 μg/m3 24-hour mean,[88] however many cities regularly experience concentrations over ten times higher than these recommendations.

Disaggregation: By city and province.

Comments and limitations: Many countries track the concentration of PM10 (i.e. particles with a diameter equal to or greater than 10 microns) and PM2.5 (diameter equal to or greater than 2.5 microns) for large cities and report this data to WHO. We recommend that both indicators be tracked in all urban agglomerations of great than [250,000] people. Global statistics agencies should develop a framework for gathering the data. Complementary indicators include population-based measures, such as "percentage of population whose exposure to PM10 and PM2.5 is above certain μg/m3 (i.e. 15) threshold," that can provide city authorities with important information on how to direct policies to lower the health impact of air pollution.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Other environmental data.

Potential lead agency or agencies: UN-Habitat, UNEP, WHO.

[86] WHO Indicator and Measurement Registry, (2011).
[87] WHO Global Health Observatory. See: http://apps.who.int/gho/data/view.main
[88] WHO, (2005), *WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide*, available at http://whqlibdoc.who.int/hq/2006/WHO_SDE_PHE_OEH_06.02_eng.pdf.

## Complementary National indicators that countries may consider:

3.1. **Percentage of births attended by skilled health personnel (MDG Indicator)**. The percentage of total live births that are attended by a skilled birth attendant trained in providing lifesaving obstetric care.

3.2. **Antenatal care coverage (at least one visit and at least four visits) (MDG Indicator)**. The percentage of women aged 15–49 with a live birth in a given time period that received antenatal care, provided by skilled health personnel, at least once during their pregnancy and by any provider four or more times during their pregnancy.

3.3. **Post-natal care coverage (one visit)**. Similar to antenatal care coverage, the percentage of women aged 15–49 with a live birth that received post-natal care (usually for both mother and baby) provided by skilled health personnel at least once following the birth of their child and by any provider four or more times after birth.

3.4. **Coverage of iron-folic acid supplements for pregnant women (%)**. Percent of pregnant women regularly taking the recommended dose of iron-folic acid supplements.

3.5. **Incidence rate of diarrheal disease in children under five years**. Diarrhea is defined as 3 or more loose stools in a period of 24 hours or less.

3.6. **Percentage of exclusive breastfeeding for the first 6 months of life**. The percentage of mothers feeding infants exclusively on breast milk (not formula or solid foods) for the first 6 months of life.

3.7. **Percentage children born with low birth weight**. The low birth weight (LBW) rate is the number of newborns with a birth weight of less than 2,500g, and is the most common indicator of fetal growth

3.8. **Percentage of 1 year-old children immunized against measles (MDG Indicator)**. The percentage of children under one year of age who have received at least one dose of measles-containing vaccine.

3.9. **Percentage of HIV+ pregnant women receiving PMTCT**. This indicator tracks the percent of HIV+ pregnant women on a regimen for the prevention of mother-to-child HIV transmission (PMTCT). In the absence of intervention, 15-45% of HIV+ pregnant women transmit the virus to their children. This rate can be reduced to levels below 5% with intervention.

3.10. **Condom use at last high-risk sex (MDG Indicator)**. The percentage of young men and women aged 15–24 reporting the use of a condom the last time they had sexual intercourse with a non-marital, non-cohabiting sexual partner of those who had sex with such a partner in the last 12 months.

3.11. **Percentage of tuberculosis cases detected and cured under directly observed treatment short course (MDG Indicator).** The percentage of tuberculosis (TB) cases detected and cured, also known as the TB treatment success rate, is the number of new TB cases in a given year that were cured or completed a full treatment of directly observed treatment short (DOTS).

3.12. **Percentage of children under 5 with fever who are treated with appropriate anti-malarial drugs (MDG Indicator)**. The percentage of children aged 0–59 months who were ill with a fever in the two weeks before the survey and who received any anti-malarial drugs during that time.

3.13. **Percentage of people in malaria-endemic areas sleeping under insecticide-treated bed nets (MDG Indicator).** The percentage of people who slept under an insecticide-treated mosquito net the night prior to the survey, disaggregated by age.

3.14. **Percentage of confirmed malaria cases that receive first-line antimalarial therapy according to national policy.** The percent of positively-diagnosed malaria cases that are treated with appropriate drugs.

3.15. **Percentage of suspected malaria cases that receive a parasitological test.** In malaria-endemic areas, all persons with fever seeking medical care should undergo diagnostic testing before treatment for malaria. Affordable, rapid-diagnostic test kits enable definitive diagnoses for all malaria cases.

3.16. **Percentage of pregnant women receiving malaria IPT (in endemic areas).** Malaria in pregnancy affects both the mother and the fetus. Intermittent preventive treatment in pregnancy (IPT) can effectively prevent malaria in pregnant women; all pregnant women in moderate- to high- malaria-transmission areas should receive IPT.

3.17. **Neglected Tropical Disease (NTD) cure rate.** It is vital that the billion people affected by neglected tropical diseases each year retrieve adequate treatment all the way to cure. The exact means by which this can be measured still needs to be defined.

3.18. **Incidence and death rates associated with hepatitis**. Prevalence and mortality rates for the various strains of hepatitis (A, B, E, etc.).

3.19. **Percentage of women with cervical cancer screening.** The percent of women receiving screening for cervical cancer. The World Health Organization's Global Monitoring Framework for Non-Communicable Diseases recommends this indicator.

3.20. **Percentage of people with hypertension diagnosed and receiving treatment.** The World Health Organization's Global Monitoring Framework for non-communicable diseases calls for a 25% reduction in hypertension (raised blood pressure); to achieve this goal we recommend tracking the number of people diagnosed with hypertension and those receiving treatment.

3.21. **Waiting time for elective surgery.** This indicator measures how long a patient has to wait to have an elective procedure. Wait times help measure the availability of health services; cataract surgery is one example of an elective procedure that this indicator could measure.

3.22. **Prevalence of insufficient physical inactivity**. The percentage of people not reaching WHO recommendations for physical activity.[89]

3.23. **Fraction of calories from added saturated fats and sugars (%)**. Percent of caloric intake coming from added saturated fats and sugars; an indicator of a healthy diet.

3.24. **Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years**. The amount of salt consumed per day; overconsumption of salt can affect hypertension and other non-communicable diseases.

3.25. **Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day**. Consumption of fruits and vegetables is crucial both for ensuring a healthy diet and maintaining a healthy weight; this indicator tracks the percent of people not eating the recommended amount of fruits and vegetables.

3.26. **Percent change in per capita [red] meat consumption relative to a 2015 baseline**. Over-consumption of red meat is a risk factor for many non-communicable diseases; this indicator tracks changes in per capita red meat consumption, with the goal of reducing overconsumption in some countries.

3.27. **Age-standardized (to world population age distribution) prevalence of diabetes (preferably based on HbA1c), hypertension, cardiovascular disease, and chronic respiratory disease**. In addition to tracking mortality rates from non-communicable

[89] WHO, (2010).

diseases, it will be important to track prevalence rates. As persons suffering from NCDs receive better treatment and live longer, mortality rates may no longer be an adequate measure of the health system's effectiveness at addressing these diseases (i.e. longer lives means higher mortality from NCDs as countries address communicable diseases). This indicator will help assess long-term management of these conditions.

3.28. **Household Dietary Diversity Score**. This indicator measures a snapshot of a household's diet, and from it draws conclusions on a household's ability to afford a variety of foods. The diversity of one's diet is a good indicator of the availability of micronutrients (vitamins and minerals) and servings of fruits and vegetables.

3.29. **[Mortality from indoor air pollution] - to be developed**. This indicator tracks mortality from illnesses attributable to the household air pollution (often caused by cooking with solid fuels) including pneumonia, stroke, heart disease, chronic obstructive pulmonary disease (COPD), and lung cancer.

3.30. **Percentage of fully and consistently equipped and supplied service delivery points to provide basic package of services**. Based on a package of required equipment (e.g. surgical instruments, ultrasound machines) and supplies (e.g. latex gloves, vaccines) determined by the World Health Assembly and/or at the national level by ministries of health, this indicator tracks the number of service delivery points meeting minimum requirements.

3.31. **Percentage of population with access to affordable essential drugs and commodities on a sustainable basis.** The percentage of the population that has reliable physical and financial access to essential drugs (e.g. vaccines, antibiotics, anti-retrovirals) and commodities (non-pharmaceutical equipment and supplies). This could be tracked in relation to Indicator 33 but should be complemented by survey data.

3.32. **Percentage of new health care facilities built in compliance with building codes and standards.** This indicator measures whether or not new health facilities are in compliance with national standards for human health and safety, as well as standards to withstand natural hazards (floods, earthquakes, and typhoons), a key component of disaster preparedness.

3.33. **Public and private R&D expenditure on health (% GNP):** This indicator tracks public and private resource mobilization for R&D on health as a share of GNP

3.34. **Ratio of health professionals to population (MDs, nurse midwives, nurses, community health workers, EmOC caregivers).** The overall ratio of trained medical professionals to population; WHO currently tracks the ratio of physicians, nurses, and midwives, but Community Health Workers (CHWs) should be included where relevant.

3.35. **Percentage of women and men aged 15-49 who report discriminatory attitudes towards people living with HIV**: This indicator measures stigma and discrimination towards people living with HIV. This indicator is already collected in some countries through DHS surveys and is reported by UNAIDS in the Global AIDS Response Progress Reports.

# Goal 4. Ensure inclusive and equitable quality education and promote life-long learning opportunities for all

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 34: Percentage of children receiving at least one year of a quality pre-primary education program.

Rationale and definition: The indicator measures the percentage of children in the 36-59 months age group that are enrolled in an early childhood program. Programs can be defined fairly broadly ranging from private or community care, to formal pre-school programs.

This is an important indicator for measuring child development. Exposure to at least a year of high-quality pre-primary education has consistent and positive short-term and long-term effects on children's development. In the short run, early cognitive skills, including reading and math skills, are positively affected by pre-primary education. In low- and middle-income countries, access to quality pre-primary education increases the share of students who enter primary school on time. High-quality preschool can produce lifelong benefits for society, with positive effects observed on years of completed schooling, secondary school completion, reduced crime, reduced early pregnancy, and increased earnings. These results encompass both small-scale demonstrations and large-scale programs, and are responsible for the impressive benefit-cost ratios for preschool (6 or larger, across high-, middle-, and low-income countries). Pre-primary education benefits all children, no matter their economic background, yet as with many other ECD services, those from the most disadvantaged backgrounds benefit the most.[90]

Disaggregation: By sex, location, and household income.

Comments and limitations: The indicator is less helpful in measuring the quality of pre-primary education care. Quality standards of structure (safety, access to clean water, small group sizes, etc.) and process (instructional and interactive skills of the teacher or caregiver) are important for children's learning and development, but much harder to measure.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys, including the Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS).

Potential lead agency or agencies: UNESCO, UNICEF, World Bank.

### Indicator 35: [Early Child Development Index (ECDI)] – to be developed

Rationale and definition: Developmental potential in early childhood is measured as an index, currently represented in the Multiple Indicator Cluster Survey (MICS) that assesses children aged 36-59 months in four domains: language/literacy, numeracy, physical, socio-emotional, and cognitive development. Each of these four domains is measured through instruments based on real-time observation. The MICS surveys calculate an overall Index Score as the percentage of children aged 36-59 months who are on track in at least three of the four domains.

[90] Myers, R., (1992), *The twelve who survive: Strengthening Programmes of Early Childhood Development in the Third World*, London, UK: Routledge.

Disaggregation: By sex and age.

Comments and limitations: A major shortcoming of this metric is that it describes a composite index. As emphasized in this report (Section III), composite indices should generally not be used for SDG monitoring purposes - particularly since they expand the number of variables that need to be considered under Global Reporting Indicators. Moreover, it will be difficult to track the ECD Index in all countries since it relies on MICS data, which is only collected in a sub-set of countries. We therefore welcome suggestions for how the critical issue of ECD can be tracked in an indicator framework.

Other measures of caregiver- or parent-reported young child development exist or are under development, including the Early Development Instrument and the Index of Early Human Capability, which incorporate items representing each of these domains and are being used across high-, middle-, and low-income countries.[91] Important complements to this form of measure are those assessments that can capture development in specific areas over time (e.g. growth in language or emotional skills).

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys, including the Multiple Indicator Cluster Surveys (MICS).

Potential lead agency or agencies: UNICEF, UNESCO.

### Indicator 36: Primary completion rates for girls and boys

Rationale and definition: The indicator measures the percentage of children entering grade 1 who complete the last grade of primary school. Primary Completion measured by the Gross Intake Ratio to Last Grade of primary education is the total number of new entrants in the last grade of primary education (according to the International Standard Classification of Education or ISCED97), regardless of age, expressed as percentage of the total population of the theoretical entrance age to the last grade of primary. Primary education is defined by ISCED97 as programs normally designed on a unit or project basis to give pupils a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects such as history, geography, natural science, social science, art, and music.

The Gross Intake Ratio to Last Grade of primary reports on the current primary access to last grade, stemming from previous years' of schooling and past education policies on entrance to primary education. It is a measure of first-time completion of primary education as it excludes pupils repeating the last grade. A high Gross Intake Ratio to Last Grade denotes a high degree of completion of primary education. As this calculation includes all new entrants to last grade (regardless of age), the Gross Intake Ratio may exceed 100%, due to over-aged or under-aged pupils entering the last grade of primary school for the first time.[92]

Disaggregation: It is particularly important to disaggregate data for this indicator by sex, income, disability, region, and household income quintile, with particular attention to children in regions of conflict, since children in such regions are at greatest risk of dropping out of the schooling system.

[91] Janus, M. and Offord, D.R., (2007), Development and psychometric properties of the Early Development Instrument, *Canadian Journal of Behavioural Science*, 39, 1-22.
[92] As defined by UN DESA for the MDG Indicators, available at http://mdgs.un.org/unsd/mdg/Metadata.aspx

Comments and limitations: Since the primary completion rate is typically a lagging rather than leading indicator, it will be important to find ways to strengthen regular and timely reporting of this indicator to measure progress. In addition, this indicator does not capture those children who never enter school.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data is preferred, but when there is limited data availability, it can be complemented with household surveys.

Potential lead agency or agencies: UNESCO.

### Indicator 37: [Percentage of girls and boys who master a broad range of foundational skills, including in literacy and mathematics, by the end of the primary school cycle (based on credibly established national benchmarks)] – to be developed

Rationale and definition: This indicator is designed to measure the proportion of children who are proficient in reading and comprehending text in their primary language of instruction and those that are able to, at the very least, count and understand core mathematical operations and concepts, as a proportion of total children at the end of the primary schooling cycle in the country. Proficiency will need to be defined at the national level, but should cover the ability to read, decode, comprehend and analyze text in their primary language of instruction. This is a new aggregate indicator proposed to ensure such proficiency can be captured, as can the learning of basic mathematical skills that are known to have strong links with future academic performance.

Disaggregation: By sex.

Comments and limitations: Since 2005, over 60 developing countries have used some measure of reading or have participated in internationally comparable assessments of reading comprehension. There are no internationally recognized standards for defining "proficiency in reading" primarily because of differences in language, curriculum design, and pedagogical approaches. However, it is recommended that each country adopts and/or defines a core set of standards that can be assessed either through school-based or household-based assessments. Several countries have national standards of foundational numeracy skills that are identified in national curricula frameworks. It is further recommended that each country adopts and/or defines foundational numeracy skills standards that, while being locally relevant, are referenced in some way to international benchmarks. It is particularly important that foundational numeracy skills are comparable to global standards since these skills are relevant across countries and can form the basis for future global competitiveness of the country's labor force.

The need to have measures of reading and mathematical skills has been stressed by various global initiatives including the Learning Metrics Task Force (which recommends such skills be measured at grade 3).[93] We recommend that such skills be measured at the end of the country's primary school cycle to capture variations within and across education system structures in different countries.

This indicator should not be restricted to measurement of reading and mathematics; as countries develop comparable indicators for other domains of learning (physical wellbeing, social and

[93] UNESCO Institute for Statistics and the Center for Universal Education at the Brookings Institution, (2013), *Toward Universal learning: Recommendations from the Learning Metrics Task Force.*

emotional skills, culture and arts, literacy and communications, learning approaches and cognition, and science and technology), it is recommended that these indicators be tracked in a composite measure at the end of the primary school cycle. We support the ongoing efforts of the Learning Metrics Task Force to develop the indicators to track these areas globally. We also support ongoing efforts by the Task Force, UNESCO, UNICEF and other organizations in developing international benchmarks for these indicators, recognizing the variation of education systems and contexts across countries.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: UNESCO.

### Indicator 38: Secondary completion rates for girls and boys

Rationale and definition: The indicator measures the percentage of girls and boys entering the first grade of secondary school who complete the last grade of secondary school. It is computed by dividing the total number of students in the last grade of secondary education school minus repeaters in that grade by the total number of children of official completing age. It captures dropout rates within secondary school as well as the transition rate between primary to secondary schooling by using as its denominator the total number of children of official completing age.

Secondary completion rates are important to measure since the dropout rates are highest in lower secondary grades. These are the ages when both the actual cost and the opportunity cost of education become higher, and when education systems struggle to provide high-quality instruction. There may be gender differences, as willingness to school girls is far more strongly determined by income and the broader costs of education than is the case for boys, and families are often unwilling to invest in the education of girls if this investment will not bring equivalent and direct economic gains to them and if girls continue to be valued only as wives and mothers.

Disaggregation: It is particularly important to disaggregate this indicator by sex, income, disability, region, and separately for children in regions of conflict, since children in such regions are at greatest risk of dropping out of the schooling system.

Comments and limitations: Secondary completion rates are more difficult to compare across countries since the structure of schooling varies widely, and the relevant age groups differ accordingly. Secondary completion rates therefore can only be calculated on a national basis with reference to the number of years of schooling of that particular country. They are not easily comparable across countries.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data is preferred, but when there is limited data availability, it can be complemented with household surveys.

Potential lead agency or agencies: UNESCO.

### Indicator 39: [Percentage of girls and boys who achieve proficiency across a broad range of learning outcomes, including in reading and in mathematics by end of the lower secondary schooling cycle (based on credibly established national benchmarks)] – to be developed

Rationale and definition: The indicator measures the percentage of girls and boys at age 14 years who are "proficient" in broad learning outcomes, and at a minimum in reading and in mathematics. Proficiency will need to be defined through national level standards, but should cover the ability to read, decode, comprehend, and analyze text in the primary language of instruction, and to understand advanced mathematical concepts, reason, and resolve complex problems.

While the mathematics measure is easier to compare across countries, each country will need to identify its own set of standards for proficiency. It is recommended that there be a serious effort to benchmark national standards against comparable international standards where they exist. It is also recommended that this indicator be measured through either school-based or household-based assessments annually to track progress of the education system. The fundamental danger of skills-based indicators is that such indicators can only capture a small slice of the range of competencies that students are expected to acquire; assessing a subset can often focus education systems too exclusively on that subset, thereby leading to neglect of the broader set of competencies. This indicator is intended to measure the baseline or minimum set of skills expected of students at the end of the lower secondary schooling cycle. A broader indicator should be designed to ensure that other competencies are not neglected.

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been defined.

Comments and limitations: Proficiency standards do not exist systematically within countries; we recommend that countries identify/adopt a core set of standards that are designed with reference to global standards, where they exist.

Other international efforts such as the Learning Metrics Task Force, recommends measuring proficiency in mathematics, amongst others, at end of lower secondary. We support the ongoing efforts of the Learning Metrics Task Force to develop the indicators to track these areas globally. We also support ongoing efforts by the Task Force, UNESCO, UNICEF and other organizations in developing international benchmarks for these indicators, recognizing the variation of education systems and contexts across countries.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data.

Potential lead agency or agencies: UNESCO.

### Indicator 40: Tertiary enrollment rates for women and men

Rationale and definition: The indicator measures the total enrollment in tertiary education regardless of age, expressed as a percentage of the total population of the five-year age group following on from secondary school leaving. Tertiary education is defined as per the International Standard Classification of Education (1997) levels 5 and 6.

Tertiary enrollment rates are indicative of the quality of the labor force in the country, and a wide gap between the tertiary enrollment rates and unemployment rates indicate either an inability of

the economy to absorb its trained graduates, or the "employability" of the graduates which indicates a mismatch between the skills being imparted through the tertiary education system and the skills demanded by the market.

Disaggregation: By sex and by field of study (to track women in science, mathematics, engineering, sciences and technology).

Comments and limitations: Tertiary enrollment rates by themselves are not predictors of youth unemployment rates.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data is preferred, but when there is limited data availability, it can be complemented with household surveys.

Potential lead agency or agencies: UNESCO.

### Complementary National indicators that countries may consider:

4.1. **[Percentage of girls and boys who acquire skills and values needed for global citizenship and sustainable development (national benchmarks to be developed) by the end of lower secondary] – to be developed.** This indicator measures the percentage of children who acquire skills and values needed for them to be productive "global citizens", recognizing that beyond basic academic work, there are values and skills that enable children to grow up to become socially responsible, emotionally mature, and productive members of society.

4.2. **Percentage of children under 5 experiencing responsive, stimulating parenting in safe environments**. The MICS indicator measures the percentage of children below 5 years with whom an adult has engaged in four or more activities to promote learning and school readiness in the past 3 days.[94]

4.3. **[Percentage of adolescents (15-19 years) with access to school-to-work programs] – to be developed.** This indicator measures the percentage of adolescents who are offered programs that enable them to transition from school to employability and work, either through vocational or apprenticeship of training programs. It is marked as "to be developed" as there is no global definition yet of what constitutes a school-to-work program.

4.4. **Literacy rate of 15-24 year-olds, women and men (MDG indicator).** This MDG indicator measures the proportion of young adult women and men that are literate as a proportion of the total population within that age group.

4.5. **Percentage of young adults (18-24 years) with access to a learning program.** This indicator measures the percentage of young adult women and men that can enroll and learn a new skill or course to improve their knowledge, skills, and competencies.

4.6. **[Indicator on share of education facilities that provide an effective learning environment] - to be developed.**

4.7. **[Indicator on scholarships for students from developing countries] - to be developed.**

4.8. **[Indicator on supply of qualified teachers] - to be developed**. This indicator will track the supply of qualified teachers.

[94] See UNICEF webpage on ECD Indicators in Multiple Indicator Cluster Surveys (MICS): http://www.childinfo.org/ecd_indicators_mics.html

# Goal 5. Achieve gender equality and empower all women and girls

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 41: Prevalence of women 15-49 who have experienced physical or sexual violence by an intimate partner in the last 12 months

Rationale and definition: Violence against women and girls is important not only because of the moral or public health issues it raises, but also since the threat of 'domestic' violence keeps women in the home and further constrains women's movements and actions, limiting their life choices. The Global Burden of Disease estimates that over 30% of all women aged 15 and older suffer physical or sexual partner abuse during their lifetime. Knowing the incidence and prevalence of violence is a first step to ensuring adequate prevention policies.

This indicator measures the occurrence of violence against women by intimate partners. Violence is defined as physical and/or sexual violence and the threat of such violence. Since most violence against women is perpetrated by their husband or intimate partner, this measure captures most incidences of violence against women. The 12-month measure of partner violence is better suited than a lifetime measure, to reveal changes in levels and risks of violence over time.

Disaggregation: By frequency, age, marital status, urban/rural and type of and severity of violence.

Comments and limitations: Measures of partner violence in high-income countries would need to be re-calculated to conform to the data available globally.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys.

Potential lead agency or agencies: WHO and UNSD collect this data based on international and national surveys.[95]

### Indicator 42: Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced

Rationale and definition: Sexual and gender-based violence remains widespread, and too often ends in impunity. This indicator, recommended as a measure under UNSCR 1325 on women and peace and security, assesses how the police and justice system process and manage violence against women and children. The three stages- reporting, investigating, and sentencing- are all important and interrelated. Reporting suggests confidence in the system, investigation shows commitment by the police/legal establishment, while sentencing shows justice being achieved.

This indicator is also a good proxy for a broader measure of the quality of the rule of law and access to justice in a given country. In order to know whether a justice system is performing, several aspects must be measured: the capacity to redress crimes, whether citizens trust formal system enough to actually go to police and courts, and the rates of redress. Each of these pieces of

[95] UN Statistics Division, (2010), *The World's Women 2010: Trends and Statistics*, New York, NY: UN Statistics, 127.

information gives an important part of the picture, and focusing on the treatment of particularly vulnerable groups is a good test of the system as a whole.

Disaggregation: By sex and age. Further opportunities for disaggregation to be reviewed.

Comments and limitations: Limitations include the lack of data and inconsistency in reporting across countries; lack of gender-sensitivity, capacity and resources of the police and judicial system; persistent discriminatory attitudes and practices, and the likelihood that these crimes are often resolved informally within the community are major ongoing challenges.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: Civil society networks such as the Global Network of Women Peacebuilders are actively engaged in building capacity to measure and implement this and other indicators from the UNSCR 1325.[96] UN Women could take on responsibility for gathering data.

### Indicator 43: Percentage of women aged 20-24 who were married or in a union before age 18

Rationale and definition: This indicator tracks the prevalence of child marriage, as defined by UNICEF. Child marriage is a violation of basic rights and may cause lifelong harm. Evidence shows that most girls who marry early abandon formal education and many have early, often high-risk, pregnancies.[97] Child brides are also at higher risk of abuse, exploitation, and separation from family and friends, which can all have major consequences on health and wellbeing.

Disaggregation: By age, urban/rural, ethnicity, income level.

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: UNICEF.

### Indicator 44: Prevalence of harmful traditional practices, including female genital mutilation/cutting

Rationale and definition: The prevalence of harmful traditional practices, particularly the practice of female genital mutilation (FGM) is measured as the percentage of women aged 15-49 who respond positively to surveys asking if they themselves have been cut. FGM refers to all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons. FGM has no known health benefits, and is on the contrary painful and

[96] Global Network of Women Peacebuilders, (2012), *Women Count - Security Council Resolution 1325: Civil Society Monitoring Report*.
[97] See UNICEF webpage on Child marriage http://www.childinfo.org/marriage.html

traumatic, with immediate and long-term health consequences. The practice reflects deep-rooted gender inequality and is an extreme form of discrimination against women.[98]

Disaggregation: By age, ethnicity, and income level. WHO further distinguishes by four categories of FGM: Types I, II, III, and "nicking" Type IV.[99]

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: WHO, UNICEF.

### Indicator 45: Average number of hours spent on paid and unpaid work combined (total work burden), by sex

Rationale and Definition: This indicator captures individuals' work burden, both paid and unpaid. It follows the recommendations of the Stiglitz Commission (2007) and the minimum set of gender indicators proposed by the Inter-agency and Expert Group on Gender Statistics (IAEG-GS).[100]

Measuring unpaid work helps to expose the full range of possible economic contributions, including the home production of goods and services. It also exposes women's disproportionate unpaid work burden. For example, in Nepal and Kenya when unpaid and paid work are combined, women work 1.4 hours for every hour worked by Nepalese or Kenyan men.[101] Time poverty is relevant for welfare and wellbeing analysis since it can reflect reduced leisure time (except if this is due to non-voluntary unemployment).[102]

Measuring unpaid work is also essential to ensure the effectiveness of women's empowerment programs. The time spent by women and girls to collect water, for example, or on care activities can be significantly reduced by a gender impact analysis of public service provision and infrastructural development, such as electricity, roads, rural schools, or water.

Disaggregation: By sex and age.

Comments and limitations: Despite considerable advances in time use surveys over the past two decades, time use data is relatively limited. In a 2012 UNSD review of gender statistics, time use surveys were found in only 48% of respondent countries (approximately 60 countries). Substantial financial investments are therefore required to bolster the technical capacity of National Statistical

[98] World Health Organization, (2008), *Eliminating female genital mutilation: An interagency statement - OHCHR, UNAIDS, UNDP, UNECA, UNESCO, UNFPA, UNHCR, UNICEF, UNIFEM, WHO.* Online at http://www.who.int/reproductivehealth/publications/fgm/9789241596442/en/

[99] See WHO website on Female Genital Mutilation (FGM): http://www.who.int/reproductivehealth/topics/fgm/en/

[100] UN Statistics Division, (2013), *Time Use Statistics to Measure Unpaid Work, Presentation to the Seminar on Measuring the Contribution of Men and Women to the Economy*, UNSD: New York. See: http://unstats.un.org/unsd/statcom/statcom_2013/seminars/Measuring/Presentation_of_UN%20Statistics%20Division.pdf. See also, UN Economic and Social Council, (2012), *Report of the Secretary General on Gender Statistics*, http://unstats.un.org/unsd/statcom/doc13/2013-10-GenderStats-E.pdf

[101] ActionAid, (2013), *Making Care Visible: Women's unpaid care work in Nepal, Nigeria, Uganda and Kenya*, Action Aid: London.

[102] OECD, (2014), *Time Use as a transformative indicator for gender equality in the post-2015 agenda*, OECD Development Centre. OECD: Paris.

Offices and to design universally applicable time use survey methods, see for example the work of the UN Trial International Classification of Activities for Time-Use Statistics (ICATUS).

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: ILO, with IAEG-GS (UNSD).

### Indicator 46: Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator)

Rationale and definition: This modified MDG Indicator measures the ratio of the percentage of seats held by women and minorities[103] (including indigenous people) in legislative bodies (national, regional, local) divided by their respective population share. It demonstrates the extent to which women and minorities have equal access to key decision-making positions within formal political processes. Participation in elected office is a key aspect of women's and minorities' opportunities in political and public life, and is therefore linked to their empowerment. Their presence in decision-making bodies alters dynamics and can help bring to light women's and minorities' concerns.

Disaggregation: Further opportunities for disaggregation to be reviewed.

Comments and limitations: This indicator cannot measure actual political decision-making power, and women and minorities can still face many obstacles in carrying out their political mandates.[104] Also, it cannot be assumed that because there are more women and/or minorities in parliament that they will automatically promote gender or minority issues.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data.

Potential lead agency or agencies: Data on women in national parliament is readily obtainable from national sources and from the Inter-Parliamentary Union (IPU). Data on women in city, state or provincial level elected office are less available. The United Cities and Local Governments (UCLG) Standing Committee on Gender Equality has started gathering information on women councilors and mayors.[105] Data on minorities are generally less available, so a significant effort would need to be made to collect such disaggregated data.

### Indicator 47: Met demand for family planning (modified MDG Indicator)

Rationale and definition: This indicator tracks the proportion of demand satisfied for family planning. It is the percentage of women (or their partners) who desire either to have no further children or to postpone the next child and who are currently using a modern contraceptive method.

[103] Minorities are here defined as a group numerically inferior to the rest of the population of a State, in a non-dominant position, whose members - being nationals of the State - possess ethnic, religious or linguistic characteristics differing from those of the rest of the population and show, if only implicitly, a sense of solidarity, directed towards preserving their culture, traditions, religion or language.
[104] United Nations, (2003), p.30.
[105] See website of the UCLG Standing Committee on Gender Equality: http://women.uclg.org

This is now a broadly accepted indicator that reflects both "the extent to which partners, communities and health systems support women in acting on their choices, and monitors whether women's stated desires regarding contraception are being fulfilled. It calls attention to inequities in service access and is therefore used to promote a human rights-based approach to reproductive health."[106] Women have the right to determine whether or not to have children, as well as the number and spacing of their pregnancies, and family planning is a key dimension of access to reproductive health. In less developed countries, between one-fourth and one fifth of pregnancies are unintended.[107]

Disaggregation: By age, income quintile, marital status, urban/rural, ethnicity, etc.

Comments and limitations: This indicator is an improvement over the MDG Indicator on unmet need because it is more easily understood and is linearly correlated with contraceptive prevalence. The indicator is calculated as a percentage of all women of reproductive age who are married or in a union[108], so it does not include adolescents who are sexually active. This is a key omission since cultural norms and/or lack of sex education may prohibit sexually active adolescents from exercising their right to reproductive health services.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys.

Potential lead agency or agencies: UNFPA and the UN Population Division collect data for this survey-based indicator.

### Indicator 48: Total fertility rate

Rationale and definition: The total fertility rate is the average number of live births a woman would have by age 50 if she were subject, throughout her life, to the age-specific fertility rates observed in a given year. The calculation assumes that there is no maternal mortality. Falling total fertility rates may demonstrate an improvement in women's ability to exercise their right to make informed and free choices over if, when, and how many children they would like to have.

Paragraph 13 of the Programme of Action adopted by the International Conference on Population and Development (ICPD) and the SDSN *Action Agenda* highlight also that reducing population growth through voluntary transition to lower fertility levels is one component of achieving sustainable development.[109]

Disaggregation: By age and rural/urban.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

[106] UNFPA, (2010), *How Universal is Access to Reproductive Health? A review of the evidence,* New York: UNFPA. See: https://www.unfpa.org/webdav/site/global/shared/documents/publications/2010/universal_rh.pdf
[107] WHO, (2005), *The World health report 2005: make every mother and child count,* Geneva: WHO. See: http://www.who.int/whr/2005/whr2005_en.pdf?ua=1
[108] See WHO webpage: http://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en
[109] SDSN, (2013a).

Primary data source: Civil registration and vital statistics.

Potential lead agency or agencies: Total fertility estimates are calculated for all countries by the Population Division of the Department of Economic and Social Affairs and appear in the biennial United Nations publication World Population Prospects. UNFPA would also be an important lead agency. [110]

## Complementary National indicators that countries may consider:

5.1. **Gender gap in wages, by sector of economic activity**. This indicator is the difference between male and female earnings, expressed as a percentage of male earnings. It is a measure of gender equality and discrimination, and should be disaggregated by sector of activity.

5.2. **Share of women on corporate boards of national/multinational corporations (MNCs)**. This indicator is the overall percentage of women on the corporate boards of national / multinational corporations and is measure of gender equality.

5.3. **Percentage of women without incomes of their own**. This indicator measures the number of women heads of household or women partners of male heads of household who do not have independent sources of income. The measure allows some indication of women's economic dependency within households.

5.4. **Mean age of mother at birth of first child.** This indicator is the mean age and can help track teenage pregnancies.

5.5. **Percentage of young people receiving comprehensive sexuality education.** Comprehensive sexuality education includes age-appropriate programs both within and out of schools that enable young people to make informed decisions about their sexuality. These programs cover scientific information about human development, anatomy, and pregnancy, as well as information about contraception and sexually transmitted infections (STIs). UNFPA monitors these types of programs. They additionally recommend that curricula should address social issues surrounding sexuality and reproduction, "including cultural norms, family life and interpersonal relationships[111]

[110] A revised version of the report (2012) is at http://esa.un.org/unpd/wpp/index.htm
[111] See UNFPA website: http://www.unfpa.org/comprehensive-sexuality-education

# Goal 6. Ensure availability and sustainable management of water and sanitation for all

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 49: Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator)

Rationale and definition: This indicator measures the percentage of the urban and rural population with access to safely managed drinking water services, as defined by the WHO/UNICEF Joint Monitoring Programme. This ambitious indicator goes beyond the previous "basic drinking water" indicator as it has been designed to incorporate an assessment of the quality and safety of the water people use."

Households are considered to have access to safely managed drinking water service when they use water from an improved source with a total collection time of 30 minutes or less for a round trip, including queuing. The term 'safely managed' is proposed to describe a higher threshold of service -- for water this includes measures for protecting supplies and ensuring water is safe to drink.[112]

Lack of safe drinking water is a major cause of illness and mortality, as a result of exposure to infectious agents, chemical pollutants, and poor hygiene. Inadequate access to water in the home is also a source of economic disadvantage by requiring large commitment of human resources to fetching and carrying water.[113]

An improved drinking water source is a source or delivery point that by nature of its construction or through active intervention is protected from outside contamination with fecal matter. Improved drinking water sources can include: piped drinking water supply on premises; public taps/stand posts; tube well/borehole; protected dug well; protected spring; rainwater; and bottled water (when another improved source is used for hand washing, cooking or other basic personal hygiene purposes).[114]

Disaggregation: By urban/rural. Further opportunities for disaggregation to be reviewed.

Comments and limitations: The monitoring methodology for this indicator is ready and being piloted in several countries. Where the data is unavailable, we suggest that countries may, an interim basis, continue to use the "basic drinking water" indictor, defined as the percentage of population using an improved source with a total collection time of 30 minutes or less for a round trip including queuing.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

[112] See Water Supply & Sanitation Collaborative Council (WSSCC), (2014), *WASH POST-2015: proposed targets and indicators for drinking-water, sanitation and hygiene.*
[113] UNESCO Water World Assessment Programme. See: http://webworld.unesco.org/water/wwap/wwdr/indicators/pdf/F4_Access_to_safe_drinking_water.pdf
[114] WHO-UNICEF Joint Monitoring Programme, (2013), "Post-2015 WASH Targets and Indicators."

Potential lead agency or agencies: WHO, UNICEF, and other members of the Joint Monitoring Program collect data for this indicator. To the extent possible, the collection and reporting mechanisms should be fully integrated in the national statistical systems.

### Indicator 50: Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator)

Rationale and definition: The indicator measures the percentage of the population in urban and rural areas with access to safely managed sanitation services, as defined by the WHO/UNICEF Joint Monitoring Programme. This ambitious indicator goes beyond the pre-2015 "improved sanitation" indicator.

Safely managed sanitation services are those that effectively separate excreta from human contact, and ensure that excreta do not re-enter the immediate environment. This means that household excreta are contained, extracted, and transported to designated disposal or treatment site, or, as locally appropriate, are safely re-used at the household or community level. Each of the following types of facilities are considered adequate if the facility is shared among no more than 5 households or 30 persons, whichever is fewer: a pit latrine with a superstructure, and a platform or squatting slab constructed of durable material (composting latrines, pour-flush latrines, etc.); a toilet connected to a septic tank; or a toilet connected to a sewer network (small bore or conventional).[115]

Access to adequate excreta disposal facilities is fundamental to decrease the fecal risk and the frequency of associated diseases. The use of improved sanitation facilities reduces diarrhea-related morbidity in young children and also helps accelerate economic and social development in countries where poor sanitation is a major cause for missed work and school days because of illness. Its association with other socioeconomic characteristics (education, income) and its contribution to general hygiene and quality of life also make it a good universal indicator of human development.[116]

Disaggregation: By urban/rural. Further opportunities for disaggregation to be reviewed.

Comments and limitations: N/A.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: WHO, UNICEF, and other members of the Joint Monitoring Program collect data for this indicator. To the extent possible the collection and reporting mechanisms should be fully integrated in the national statistical systems.

### Indicator 51: [Percentage of wastewater flows treated to national standards, by domestic and industrial source] – to be developed

Rationale and definition: Lack of treatment of domestic and industrial wastewater presents a serious health and environmental hazard in many cities, particularly in developing countries where 80-90%

[115] Ibid.

[116] UN DESA, (2007b), *Indicators of Sustainable Development: Guidelines and Methodologies – Methodology sheets,* New York: United Nations.
http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets/poverty/improved_sanitation.pdf.

of urban wastewater is untreated or insufficiently treated when discharged.[117] Even in developed countries wastewater is not universally treated. Global rates of wastewater generation are increasing at an exponential rate as a result of rapid population growth and urbanization. A huge volume of untreated wastewater is dumped directly into water sources, threatening human health, ecosystems, biodiversity, food security, and the sustainability of water resources.[118]

For this reason we propose that an indicator on wastewater treatment be added to the post-2015 monitoring framework. There are many ways to define wastewater. Broadly defined, wastewater is a combination of one or more of: domestic effluent consisting of blackwater (excreta, urine and fecal sludge) and greywater (kitchen and bathing wastewater); water from commercial establishments and institutions, including hospitals; industrial effluent, storm water and other urban run-off; agricultural, horticultural and aquaculture effluent, either dissolved or as suspended matter.[119]

Wastewater treatment is the process of removing suspended and dissolved physical, chemical, and biological contaminants to produce (a) water that is safe to be discharged to the environment or suitable for reuse and (b) a solid sludge suitable for disposal or reuse (e.g. as fertilizer). Using advanced technology, it is now possible to re-use used water after treatment for agricultural purposes, industry or even as drinking water.[120]

Disaggregation: By municipal and industrial wastewater, by city.

Comments and limitations: The global community has only recently started working to build a common vision on wastewater management. Currently, it is estimated that 80% of effluent flows are not monitored, so data availability will be a challenge.

Primary data source: Administrative data.

Preliminary assessment of current data availability by Friends of the Chair: B

Potential lead agency or agencies: To be determined, options include WHO/UNICEF Joint Monitoring Programme (JMP), UNEP, and UN-Habitat.

### Indicator 52: Proportion of total water resources used (MDG Indicator)

Rationale and definition: This MDG Indicator measures the water stress and is defined as the total volume of groundwater and surface water abstracted from their sources for human use (e.g.in sectors such as the agricultural, the industrial or municipal use), expressed as a percentage of the total annual renewable water resources. This indicator shows whether a country abstracts more than its sustainable supply of freshwater resources. It can be used to track progress in the sustainable, integrated, and transparent management of water resources.

[117] UNESCO, (2011), Global Challenge of Wastewater: Examples from Different Countries. Presentation at World Water Week in Stockholm, August 21-27, 2011.
[118] Ibid.
[119] Corcoran, E., C. Nellemann, E. Baker, R. Bos, D. Osborn, H. Savelli (eds), (2010), *Sick Water? The central role of waste-water management in sustainable development,* A Rapid Response Assessment, United Nations Environment Programme, UN-HABITAT. GRID-Arendal. See: www.grida.no
[120] Ibid, and UNESCO, (2011).

Disaggregation: Since the indicator can be disaggregated to show the abstractions by sector (also showing use efficiencies for each sector), it can help identify and manage competing claims on water resources by different users, and in different geographical locations.[121]

Comments and limitations: Many countries do not have good assessments of their aquifer volumes and recharge/discharge calculations, so important efforts will need to be made to improve data gathering. Ideally the indicator should be calculated for individual water basins since demand and supply need to be balanced at the basin level.
In addition,

This indicator does not measure progress towards the important issue of increasing water-use efficiency. Public policies must try to address water stress and manage water resources sustainably, while satisfying all different demands.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data.

Potential lead agency or agencies: The FAO and/or UNEP can help collect data at the country level.[122]

## Complementary National indicators that countries may consider:

6.1. **Percentage of population reporting practicing open defecation**. This indicator measures population not using any sanitation facility and is a strong measure of poverty.

6.2. **Percentage of population with basic hand washing facilities in the home**. This indicator measures access to soap and water at hand washing facilities in the home, using WHO-UNICEF JMP definitions.

6.3. **Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters**

6.4. **Percentage of pupils enrolled in primary and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services**. This indicator measures access to drinking water, gender separated sanitation facilities, and hand washing facilities in schools, using WHO-UNICEF JMP definitions.

6.5. **Percentage of beneficiaries using hospitals, health centers, and clinics providing basic drinking water, adequate sanitation, and adequate hygiene**. This indicator measures access to drinking water, gender separated sanitation amenities, and hand washing facilities for patients in health facilities, using WHO-UNICEF JMP definitions.

6.6. **Proportion of the flows of treated municipal wastewater that are directly and safely reused.**

6.7. **[Reporting of international river shed authorities on transboundary river-shed management]— to be developed**. Rivers, as well as other freshwater ecosystems, are crucial for human survival. They are also very rich in biodiversity. Rivers travel across borders and within each country, they are subject to damming, pollution, and reservoirs. A suitable indicator must be developed to measure progress towards a sustainable trans-boundary management of rivers.

[121] See UN DESA, (2007a).
[122] For more information see: http://www.fao.org/ag/aquastat

6.8. **[Indicator on Integrated Water Resources Management (IWRM)] - to be developed**. This indicator will track the implementation of integrated water resources management at all levels, and through transboundary cooperation as appropriate.

6.9. **[Indicator on international cooperation and capacity building in water and sanitation-related activities] - to be developed.**

6.10. **[Indicator on participation of local communities for improving water and sanitation management] - to be developed.**

# Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 53: Share of the population with access to modern cooking solutions, by urban and rural (%)

Rationale and definition: This indicator measures the share of the population relying primarily on non-solid fossil fuels for cooking, as defined by the Sustainable Energy For All (SE4All) Framework Report.[123] Currently available databases (including the WHO's Global Household Energy Database, and the IEA World Energy Statistics and Balances) only support binary tracking of access (that is a household either has, or does not have access). This is why, as a starting point, the SE4All global tracking framework is using this simple definition of access to modern cooking solutions. While the binary approach serves the immediate needs of global tracking, there is a growing consensus that measurement of access should reflect a continuum of improvement, as recognized in the SE4All report.

Indeed, defining access to modern cooking solutions as the share of the population relying primarily on non-solid fossil fuels for cooking omits the role of the cook stove. Yet, it is the combination of the two that will determine levels of efficiency, pollution, and safety outcomes. Meanwhile, individual behaviors, cooking practices, and housing characteristics also affect the actual performance of a household's cooking solutions.

For this reason, the SE4All is planning to use a multi-tier metric for tracking access to modern cooking solutions. This metric will measure access to modern cooking solutions by measuring the technical performance of the primary cooking solution (including both the fuel and the cook stove) and assessing how this solution fits in with households' daily life. This metric also includes consideration on indoor air pollution/ventilation and kerosene cooking/lighting. Measuring access to modern cooking solutions presents the possibility to improve the health of poor households, in particular women and girls who generally have the responsibility for cooking for the household. WHO estimates that over 4 million people die prematurely from illness attributable to the household air pollution from cooking with solid fuels.[124]

Disaggregation: By urban/rural and sex of head of household.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys.

Potential lead agency or agencies: The Sustainable Energy for All (SE4All), IEA and WHO, can provide data for this indicator.

[123] Banerjee, S.G. et al., (2013), *Global tracking framework*, Vol. 3, Sustainable energy for all, Washington D.C.; The World Bank; and World Energy, (2012), *Energy Access: Tracking Methodology for Access to Modern Cooking Solutions*. See: http://www.worldenergy.org/documents/monaco_consultation_energy_access__cooking.pdf

[124] WHO, Household air pollution and health Fact sheet N°292, online at: http://www.who.int/mediacentre/factsheets/fs292/en/

### Indicator 54: Share of the population with access to reliable electricity, by urban and rural (%)

Rationale and definition: This indicator measures the share of the population with an electricity connection available at home or relying primarily on electricity for lighting, as defined by the Sustainable Energy For All (SE4All) Framework Report.[125] As for access to modern cooking solutions, currently available global databases (including the World Bank's Global Electrification Database, and the IEA World Energy Statistics and Balances) only support a binary tracking of access to electricity. This metric does not capture important dimensions of access to electricity, including: (i) off-grid and isolated mini-grids solutions, which are required in many countries as transitional alternatives to grid-based electricity, and could potentially serve as long-term solutions in geographically remote areas; (ii) supply problems, which are common in developing countries, where grid electricity suffers from irregular supply, frequent breakdowns; and (iii) problems of quality (such as low or fluctuating voltage); (iv) the difference between electricity supply and electricity services, which implies the ownership of the appropriate electrical appliance and the actual use of electricity.

For these reasons, the SE4All is planning to use a multi-tier metric for measuring access to electricity. This metric will measure the degree of access to electricity supply along various dimensions, including quantity (peak available capacity), duration, evening supply, affordability, legality, and quality. This is complemented by a parallel multi-tier framework that captures the use of key electricity services.[126]

Disaggregation: By urban/rural and sex of head of household.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Potential lead agency or agencies: The SE4All, IEA and World Bank can provide data for this indicator.

### Indicator 55: Implicit incentives for low-carbon energy in the electricity sector (measured as US$/MWh or US$ per ton avoided $CO_2$)

Rationale and definition: To reduce greenhouse gas emissions to the socially optimal level, the social cost of greenhouse gas emissions needs to be applied, which in turn requires government policies to apply carbon prices using a range of measures, including but not limited to regulation, taxes, or carbon markets. This indicator measures (in $/t$CO_2$e) the level of effective carbon price in the electricity sector, as defined by the OECD report on effective carbon prices, as a net cost for society for each unit of GHG abatement induced. [127] A similar definition was proposed by the Australian Productivity Commission report on carbon emission policies in key economies.[128]

Prices on carbon can be explicit, such as carbon taxes or prices of emission allowances in GHG emission trading systems, or they can be implicit, reflecting the cost to society per ton of $CO_2$e abated as a result of any type of policy measure that have an impact on GHG emissions. Comparisons of the effective price put on carbon by policies in different sectors and countries

[125] Ibid.
[126] Ibid.
[127] OECD, (2013b), *Effective Carbon Prices,* OECD Publishing.
[128] Productivity Commission, (2011), *Carbon Emission Policies in Key Economies*, Research Report, Canberra.

provide valuable insights into the existence of incentives to reduce emissions and the cost-effectiveness of alternative policies to reduce greenhouse emissions, and their potential impacts on competiveness. The numerical results of this comparison should, however, be treated with caution, since there is no one carbon price equivalent that can comprehensively capture what a diverse set of policies in a given country intends to achieve, nor at what cost.

As a starting point, we propose that the post-2015 framework track the effective carbon price for electricity generation. This indicator covers a large share of GHG emissions and is methodologically easier to track since the relevant technologies are global in nature, emissions and policies are concentrated, and some information is available on a comparable basis from governments and international and other organizations.

Disaggregation: Opportunities for disaggregation to be reviewed.

Comments and limitations: We underscore that this indicator is agnostic to the type of policies pursued by governments. It does not give preference to taxes, markets or regulatory instruments. So governments retain their full flexibility for identifying and pursing the instruments that are best adapted to their context.

The methodology developed by the Australian Productivity Commission and the OECD could be used as reference. Once better methodologies are available for other emission areas, the indicator can be extended to a wider sectoral focus.

The indicator estimates costs of greenhouse gas abatement and their impact on prices without comparing them to societal benefits.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Administrative data.

Potential lead agency or agencies: UNFCCC with the IEA.

### Indicator 56: Rate of primary energy intensity improvement

Rationale and definition: This indicator is used as the proxy for energy efficiency, one of the pillars of the Sustainable Energy for All (SE4ALL) framework. The indicator can be used to track the extent to which economic growth is decoupled from energy use – a key requirement for sustainable energy and decarbonization.

Energy efficiency is defined as the ratio between the gross consumption of energy and gross domestic product (GDP). Typically, the gross energy consumption is reported across five major sources of energy: solid fuels/biomass, oil, gas, nuclear, and renewable resources. The indicator is expressed as the compound annual growth rate (CAGR) of energy intensity of GDP, measured in purchasing power parity (PPP) terms.[129]

Disaggregation: By sector.

[129] Sustainable Energy for All, (2013), *Global Tracking Framework Report.* Online at http://www.se4all.org/tracking-progress/

Comments and limitations: Energy intensity is an imperfect proxy indicator because it is affected by external factors such as fluctuations in the volume and sectoral structure of GDP. However, there are statistical decomposition methods that allow these types of effects to be stripped out.[130] Statisticians will need to specify whether the indicator is expressed as a moving average over multiple year or whether growth is reported year-on-year

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data.

Potential lead agency or agencies: SE4ALL, IEA.

## Complementary National indicators that countries may consider:

7.1. **Primary energy by type**. IEA reports annual data on the primary energy sources used by each country, such as coal, oil, gas, renewables, or biomass.

7.2. **Fossil fuel subsidies ($ or %GNI).** This indicator measures subsidies to fossil fuels that are consumed directly by end-users or consumed as inputs to electricity generation. It uses the price-gap approach, the most commonly applied methodology for quantifying consumption subsidies, in particular by the IEA.[131]

[130] Ibid.

[131] For more information about the methodology and assumptions, see: http://www.iea.org/publications/worldenergyoutlook/resources/energysubsidies/methodologyforcalculatingsubsidies/

# Goal 8. Promote Sustained, Inclusive and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 57: GNI per capita (PPP, current US$ Atlas method)

Rationale and definition: Gross national income measures the total earnings of the residents of an economy adjusted for the cost of living in each country (purchasing power parity, PPP). These earnings are defined as the sum of value added by all resident producers, plus any product taxes (less subsidies) not included in the valuation of output, plus net receipts of primary income (compensation of employees and property income) from abroad. The International Comparison Program (ICP) can be used to compute purchasing power parity (PPP) adjustments. The Atlas method is a World Bank method of computing exchange rates to reduce the impact of market fluctuations in the cross-country comparison of national incomes.

Disaggregation: Spatially (rural/urban, province/district).

Comments and limitations: As underscored in this report, GNI and GDP are important indicators, but they measure only part of the economic dimension of sustainable development. Both economic measures do not adequately capture people's material conditions.[132]

We therefore recommend that they be complemented by other "beyond GDP" indicators (See also Table 1 in the report). For example, the System of Environmental-Economic Accounting 2012 Central Framework will help support a wider set of indicators related to sustainable development and green growth, which aims at fostering economic growth while ensuring that natural resources continue to provide the resources and environmental services on which wellbeing relies. The environmental-economic framework makes it possible to create indicators linking poverty reduction and natural resource management. Interdependencies related to food security and nutrition should also be considered. These issues are central to pro-poor growth and social protection policies in developing countries.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: The UN Statistics Division, the World Bank and the IMF compile GNI data.

### Indicator 58: Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts

Rationale and definition: The UN Statistical Commission adopted the System of Environmental-Economic Accounting (SEEA) in 2012 as the first international standard for environmental-economic accounting. The SEEA brings statistics on the environment and its relationship to the economy into the core of official statistics and thereby expands the traditional System of National Accounts (SNA),

[132] As noted by the UN Statistics Division, (2014), paragraph 13.8.

which focuses on measuring economic performance. Examples of information provided by the SEEA includes the assessment of trends in the use and availability of natural resources, the extent of emissions and discharges to the environment resulting from economic activity, and the amount of economic activity undertaken for environmental purposes.[133] The UN Statistical Commission will develop the reporting templates for the SEEA Central Framework.
This indicator measures whether a country applies and reports on a national SEEA. It takes into account the fact that some elements of the SEEA may not be applicable to a particular country and that the implementation is incremental starting from selected accounts depending on policy priorities.

Disaggregation: The presence of SEEAs is a national indicator, but SEEAs themselves are highly disaggregated (by sector of activity, environmental resource, sub-national unit, etc.).

Comments and limitations: A challenge with this indicator derives from the need to establish an institutional framework for compiling integrated data, and the statistical production process and information management in the countries' statistical systems.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: International reporting.

Potential lead agency or agencies: UNSD.

### Indicator 59: Youth employment rate, by formal and informal sector

Rationale and definition: The youth employment rate is the percentage of the youth labor force that is employed. Young people are defined as persons aged between 15 and 24. The labor force comprises all persons within the above age group currently available for work and actively seeking work, and the sum of those that are employed and unemployed.

To the extent possible, the youth employment rate should be reported separately for formal and informal employment. The latter is of particular importance in developing countries. The 17th International Conference of Labor Statisticians recommends that informal employment should include: (i) own-account workers (self-employed with no employees) in their own informal sector enterprises, (ii) employers (self-employed with employees) in their own informal sector enterprises, (iii) contributing family workers, irrespective of type of enterprise, (iv) members of informal producers' cooperatives (not established as legal entities, (v) employees holding informal jobs as defined according to the employment relationship (in law or in practice, jobs not subject to national labor legislation, income taxation, social protection or entitlement to certain employment benefits (paid annual or sick leave, etc.)), and (vi) own-account workers engaged in production of goods exclusively for final use by their household.[134]

Disaggregation: We recommend that the indicator be disaggregated by gender to understand the differential composition of men and women in the formal and informal sectors.

[133] European Commission, Food and Agriculture Organization, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations, World Bank, (2012), *System of Environmental-Economic Accounting, Central Framework*, New York.
[134] ILO, (2009), *ILO school-to-work transition survey: A methodological guide,* Geneva: ILO. See: http://www.ilo.org/global/research/global-reports/global-employment-trends/youth/2013/WCMS_212423/lang--en/index.htm,

Comments and limitations: A broad-based employment metric for formal and informal youth employment is preferable to standard unemployment measures that focus only on the formal sector. However, informal employment is not systematically measured in all countries, though many are beginning the process of defining and measuring informal employment. As a result data quality and availability may be poor.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Labor Force surveys.

Potential lead agency or agencies: ILO tracks data on this indicator.

### Indicator 60: Ratification and implementation of fundamental ILO labor standards and compliance in law and practice

Rationale and Definition: The ILO conventions describe key labor standards aimed at promoting opportunities for decent and productive work, where men and women can work in conditions of equity, non-discrimination, security, freedom and dignity. The proposed indicator tracks countries' ratification of and compliance with the 8 fundamental ILO conventions, which cover the following issues: freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced or compulsory labor; the minimum age for labor and the immediate elimination of the worst forms of child labor; and the elimination of discrimination in respect of employment and occupation, including equal remuneration.[135]

Countries are required to report on ratified conventions every two years. The reporting system is backed up by a supervisory system that helps to ensure implementation. The ILO regularly reviews the application of standards in member states and makes recommendations.

Disaggregation: By country and by convention.

Comments and limitations: The exact method for measurement of this indicator needs to be developed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: International reporting.

Potential lead agency or agencies: ILO.

### Complementary National indicators that countries may consider:

8.1. **Growth rate of GDP per person employed (MDG Indicator).** This indicator is a key measure of labor productivity.

8.2. **Working poverty rate measured at $2 PPP per capita per day**. This indicator measures the share of the working population who earn less than $2 PPP per day.

[135] See ILO webpage on Conventions and Recommendations: http://ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm

8.3. **[Indicator of decent work] - to be developed.** We propose that an indicator be considered to track countries' compliance with the decent work agenda adopted by member states of the ILO.[136] Decent work, as defined by the ILO, includes access to full and productive employment with rights at work, social protection and the promotion of social dialogue, with gender equality as a cross-cutting issue. Currently, such a single indicator does not exist, but it could be created (potentially as a composite indicator).

8.4. **Household income, including in-kind services (PPP, current US$ Atlas method).** This indicator is derived from the system of national accounts (SNA).

8.5. **Employment to population ratio (MDG Indicator) by gender and age group (15–64).** This indicator complements the various measures of unemployment since it tracks the overall share of the population that is employed.

8.6. **Share of informal employment in total employment**. This indicator covers the total number of people who have an informal employment situation, that is, workers whose employment relationships are not subject to labor legislation, income taxation, social protection or other employment benefits in law or in practice.[137]

8.7. **Percentage of own-account and contributing family workers in total employment**. This indicator tracks the share of the working population who are employed as family workers or who work on their own account. This metric is particularly important in countries with a large informal labor market.

8.8. **Percentage of young people not in education, employment, or training (NEET).** This indicator tracks the share of youth who are neither in formal employment nor in full-time education or training. It is a measure of the percentage of youth who are either unemployed, work in the informal sector, or have other forms of precarious jobs.

8.9. **[Indicator on implementation of 10-year framework of programs on sustainable consumption and production] - to be developed.**

[136] See ILO, (2012b).
[137] See ILO Resource Guide on the Informal Economy, online at: www.ilo.int/public/english/support/lib/resource/subject/informal.htm

# Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 61: Access to all-weather road (% access within [x] km distance to road)

Rationale and definition: Access to roads that are reliably passable year-round is critical for many rural development processes, including access to inputs, markets, education, and health services. This indicator tracks the share of population that lives within [x] km of roads that are reliably passable all-year round. Preferably such roads should be paved to ensure all-year access for heavy vehicles.[138]

Disaggregation: This indicator can be disaggregated spatially. Other opportunities to be reviewed.

Comments and limitations: This indicator is more ambitious than the alternate measure of access to 'all-season' roads, which are cheaper to construct and maintain.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data. It may also be possible to collect this data from remote sensing or satellite.

Potential lead agency or agencies: World Bank.

### Indicator 62: Mobile broadband subscriptions per 100 inhabitants by urban/rural

Rationale and definition: Broadband access is a key enabling technology that provides economic benefits (access to the formal economy, access to regional and global markets for local entrepreneurs, and access to banking services); health benefits (linking health workers to national health systems); and promotes citizen participation in government. It is projected that within a few years the majority of the world's population, including in sub-Saharan Africa, will have access to mobile broadband. This indicator measures the number of mobile broadband subscriptions per 100 inhabitants. The Broadband Commission describes broadband as: (a) always on; (b) high-capacity connectivity; and (c) enabling combined provision of multiple services simultaneously.[139] The ITU definition refers to access to data communications (e.g. the Internet) at broadband downstream speeds greater than or equal to 256 Kbit/s.
This indicator must be seen in conjunction with indicator 63.

Disaggregation: By urban/rural, sex, age. Other opportunities for disaggregation to be reviewed.

Comments and limitations: While this indicator provides a useful metric to monitor the uptake of mobile broadband technology, the data may include people having more than one mobile broadband subscription and can overestimate the percentage of the population with access to mobile broadband subscriptions.

[138] Dobermann, A. and Nelson, R. et al., (2013).
[139] From the core list of ICT indicators developed by the Partnership on Measuring ICT for Development, please see the report that was prepared for the forthcoming UN Statistical Commission meeting (Annex1): http://unstats.un.org/unsd/statcom/doc14/2014-8-ICT-E.pdf

This indicator will need to be flexible and adaptable to the pace of technological innovations. The technological landscape in 2020 will likely be very different to the current one and, perhaps then, mobile broadband subscriptions will no longer be a good reflection of the access to enabling ICTs.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: ITU.

### Indicator 63: [Index on ICT maturity]— to be developed.

Rationale and definition: Information and communication technologies (ICT) and other advanced technologies are critical for economic development and achieving the other SDGs. We propose that an index be developed to track the quality, performance, and affordability of countries' ICT infrastructure.

The proposed index would measure four equally weighted dimensions of ICT maturity:

1. *Fixed broadband quality* measured as mean downlink speed (in kilobits per second), as established through user speed tests;
2. *Mobile broadband quality* measured as the proportion of download speed test measurements with 10 Mbps downlink speed (or better);
3. *International bandwidth capacity* measured as bandwidth connected across international borders to metropolitan areas as of mid-year (expressed in megabit per second (mbps); and
4. *Mobile broadband affordability* measured as the mobile broadband prices as a percentage of per capita monthly GNI.

Each component of the index and the overall index could be normalized to values between 1 and 100.

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been developed.

Comments and limitations: This indicator and indicator 62, which measures the urban and rural usage dimension of the ICT infrastructure, are strongly interlinked and must be reviewed together. Since ICT standards and associate usage evolve rapidly, any index for the quality of a country's ICT infrastructure will need to be revised periodically – perhaps every five years. Access to data could be a limitation to developing in this index.

We underscore our general reluctance to include composite indices in the SDG monitoring framework (see Section III). However, the proposed Index on ICT maturity would depend largely on data that is not collected through NSOs and could be provided by an industry association. In this case it would not add to the statistical burden on NSOs. We welcome suggestions for alternative metrics for ICT maturity.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD

Potential lead agency or agencies: ITU in collaboration with providers of the speed test and bandwidth data.

### Indicator 64: Manufacturing value added (MVA) as percent of GDP

Rationale and definition: This indicator is a measure of manufacturing output as share of a country's economy. Manufacturing is broadly defined as the "physical or chemical transformation of materials into new products," regardless of the process (by machines or by hand), location (factory or home), or sale method (wholesale or retail).[140] The value added is the net output of the manufacturing sector, calculated after adding up all the outputs and subtracting the intermediate inputs. It is determined by the International Standard Industrial Classification (ISIC) revision 3, and calculated without deducting the depreciation of the fabricated assets, or the depletion and degradation of any natural resources.[141] The indicator is expressed as a share of gross domestic product (GDP).

Disaggregation: Can be disaggregated by individual sectors (as per ISIC definitions) and by geography (urban/rural).

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data.

Potential lead agency or agencies: World Bank, OECD, UNIDO

### Indicator 65: Researchers and technicians in R&D (per million people)

Rationale and definition: Technology development, diffusion, and adoption require trained staff engaged in R&D. This indicator measures the number of researchers and technicians engaged in research and development per million people. Countries may consider this indicator as a proxy for "technology workers".

Disaggregation: In some cases the data can be broken down further by the following sectors: government, business enterprise, higher education, and private non-profit.[142]

Comments and limitations: Data is available for some 140 countries, but significant challenge in need to be overcome to ensure that data becomes comparable across countries. The indicator only tracks workers in R&D and may need to be expended to cover researchers and technicians in high technology sectors.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Labor Force Surveys.

Potential lead agency or agencies: The OECD and the UNESCO Institute of Statistics.

[140] See https://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2
[141] See World Bank data: http://data.worldbank.org/indicator/NV.IND.MANF.ZS
[142] See OECD stats database: http://stats.oecd.org/Index.aspx?DataSetCode=PERS_OCCUP

### Indicator 66: Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions ($tCO_2e$)

Rationale and definition: This indicator tracks total greenhouse gas (GHG) emissions in ton of $CO_2$ equivalent ($tCO_2e$), broken down by gas (including $CO_2$, $N_2O$, $CH_4$, HFCs, PFCs, and SF6) and sector (including petroleum refining, electricity and heat production, manufacturing industries and construction, transport, commercial and residential buildings, fugitive emissions, as well as emissions from industrial processes) in line with the Intergovernmental Panel on Climate Change (IPCC) 2006 guidelines for the national GHG inventory,[143] and the special chapters on energy[144] and industry-related emissions.[145]

The UNFCCC collects GHG emissions data, estimated using a production-based (sometimes also referred to as territorial-based) accounting method. Under this approach, all emissions taking place "within national territory and offshore areas over which the country has jurisdiction" (as defined by IPCC 2006 guidelines for the national GHG inventory) are assigned to a country.

A complementary accounting method focuses on demand-based or consumption-based emissions. Under this approach emissions attributed to domestic final consumption and those caused by the production of its imports are attributed to a country.[146] In other words GHG emissions for the importing country are augmented by the GHG content of the imports. Similarly, emissions for an exporting country are lowered.[147]Demand or consumption-based emissions are estimated using international input-output tables and therefore require a more complex methodology.

Disaggregation: By sectors and gas, as described above. The disaggregation by sector should – to the extent possible – be made consistent with systems of national accounts. It might be advisable to also report the data by International Standard Industrial Classification of All Economic Activities ISIC.

Comments and limitations: The use of production-based emissions accounting is well established and consistent with the definition of GDP. Yet, since it omits emissions embodied in international trade, there is a growing body of literature arguing in favor of a demand-based or consumption-based accounting of emissions. We therefore recommend that countries report their emissions using both production and demand-based measures.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: Countries' data for this indicator are regularly submitted to United Nations Framework Convention on Climate Change (UNFCCC). The OECD can also report this data. UNIDO monitors the GHG emissions for manufacturing sectors.

[143] Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K., (eds.) (2006), *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. (5 volume collection), http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html
[144] Ibid, see volume 2 on Energy: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html
[145] Ibid, see volume 3 on Industrial Processes and Product Use: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol3.html
[146] Peters, G. and Hertwich, E., (2008), Post-Kyoto greenhouse gas inventories: production versus consumption, *Climatic Change*, Volume 86, Issue 1-2, 51-66.
[147] Boitier, B., (2012), *$CO_2$ emissions production-based accounting vs. consumption: Insights from the WIOD databases.*

**Complementary National indicators that countries may consider:**

9.1. **Percentage of households with Internet, by type of service in rural areas**. This indicator measures the percentage of households with Internet access by type (dial-up, DSL, etc.).

9.2. **Employment in industry (% of total employment)**. This indicator measures the share of employment in industry, including in mining, manufacturing, construction, and public utilities, as a share of total employment.

# Goal 10. Reduce inequality within and among countries

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 67: [Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio]

Rationale and definition: Concerns about inequality focus on the top and bottom ends of the income distribution. Indicator 68, on "relative poverty", tracks the bottom end of the income distribution, whilst this indicator monitors changes at the top end of the distribution. We see two options for such an indicator. First, countries may track the share of incomes generated by the richest 10% of the population. An alternative indicator is the increasingly popular Palma Ratio, defined as the ratio of richest 10% of the population's share of gross national income (GNI) divided by the poorest 40% of the population's share.

The Palma ratio seeks to overcome some of the limitations of the widely used Gini coefficient, which fails to take into account changing demographic structure (e.g. the effects of a baby boom or an aging population) and is insensitive to changes in the tails (top and bottom) of the income distribution, which is where most movement occurs.[148] Furthermore, using a simple ratio, as opposed to the more complex Gini-coefficient measurement, is more intuitive for policy makers and citizens. For example, for a given, high Palma value it is clear what needs to change: to narrow the gap you raise the share of income of the poorest 40% and/or you reduce the share of the top 10%.

Disaggregation: The income share of the top decile and the Palma ratio are formulated using household survey data relating to income and consumption (usually from World Bank PovCal / World Development Indicators). Such data can be disaggregated by income deciles in countries, allowing for comparative analyses between countries and regions. Further disaggregation by centiles, regions or groups would require complex analysis of the original household survey data, which at present may not be feasible on a national / global scale.

Comments and limitations: An important limitation of the income share of the top decile and the Palma ratio (as well as the Gini-Coefficient) is that the indicators cannot be decomposed (i.e. overall inequality is related consistently to inequality among sub-groups). Furthermore, data is based on household surveys, some of which measure income and some consumption. The mix makes international comparison quite challenging, as the distribution of consumption tends to be less unequal than that of income. But since no means of adjustment (income vs. consumption) is readily acceptable, it is common practice not to adjust the surveys. To improve the quality of this data we recommend expanding the collection of pure income-based data, for example via the Luxembourg Income Study, which currently has micro-data for 40 countries.[149]

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Household surveys

Potential lead agency or agencies: UNSD, World Bank, OECD (with Luxembourg Income Study).

[148] Palma, G., (2011), *Homogeneous middles vs. heterogeneous tails, and the end of the 'Inverted-U': The share of the rich is what it's all about*, Cambridge Working Papers in Economics, See: http://www.econ.cam.ac.uk/dae/repec/cam/pdf/cwpe1111.pdf

[149] See a list of LIS available datasets: http://www.lisdatacenter.org/our-data/lis-database/documentation/list-of-datasets/

### Indicator 68: Percentage of households with incomes below 50% of median income ("relative poverty")

Rationale and definition: Relative poverty is defined as the percentage of households with incomes less than half of the national median income. It is an indicator of inequality at the bottom of the income distribution, which acts as a cause of social exclusion and undermines equality of opportunity.

Disaggregation: The data should be disaggregated by sex and age of the head of household and by urban/rural locality. If possible with the given survey methodology, ethnicity, religion, language, disability and indigenous status should also be reviewed.

Comments and limitations: This indicator requires measurement of the national distribution of household income, which is only conducted once every two to three years and data becomes available with reporting lags of up to three years.[150]

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data are preferred, but household surveys can also be used.

Potential lead agency or agencies: The indicator can be compiled from income distribution data. UNSD, World Bank, or the OECD could take the lead in compiling data.

### Complementary National indicators that countries may consider:

10.1. **Gini coefficient**. The Gini measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini value of 0 represents perfect equality, and a value of 1 denotes perfect inequality. It is a well-known indicator for income inequality, which has been in use for over 100 years.

10.2. **Income/wage persistence**. This is a measure of intergenerational socioeconomic mobility, which is generally defined as the relationship between the socioeconomic status of parents and the status their children will attain as adults. Economic mobility can be measured either through wage or income, and it is expressed as the fraction of parental income or wages reflected in their offspring's.

10.3. **[Indicator on migration] - to be developed**. This indicator will track the orderly, safe, and responsible migration and mobility of people

10.4. **ODA as a percentage of vulnerable countries' GNI**. This indicator is the amount of ODA received by a country as a percentage of its gross national income. This indicator is a continuation of indicators under MDG Goal 8 and is a measure of aid dependency.

10.5. **Net ODA to the LDCs as percentage of high-income countries' GNI (modified from MDG Indicator**). This indicator measures progress towards aid commitments. The agreed target range for this indicator is 0.15-0.2%.

10.6. **Indicator on share of LDCs / LIC representatives on boards of IMF / WB (and other institutions of governance).**

[150] See OECD Income Distribution Database: http://www.oecd.org/social/income-distribution-database.htm

10.7. **[Average remittance cost] - to be developed.** Remittances are increasingly important to many economies, but accurate measurement remains difficult. The G20 committed to reducing global average remittance cost by 5%, so enhanced statistical methodology is needed to improve data collection for monitoring of remittance costs.[151]

[151] UN Statistics Division, (2014).

# Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 69: Percentage of urban population living in slums or informal settlements (MDG Indicator)

Rationale and definition: This indicator measures the percentage of the urban population living in slums or informal settlements, as defined by UN-Habitat. The indicator is calculated by taking the number of people living in slums of a city divided by the total population of this city, expressed as a percentage. At the country level, this percentage is calculated by taking the total number of people living in slums of all the cities of a country divided by the total population living in all the cities of the given country.[152]

UN-Habitat has developed a household level definition of a slum household in order to be able to use existing household-level survey and census data to identify slum dwellers among the urban population. A slum household is a household that lacks any one of the following five elements:

- Access to improved water (access to sufficient amount of water for family use, at an affordable price, available to household members without being subject to extreme effort)
- Access to improved sanitation (access to an excreta disposal system, either in the form of a private toilet or a public toilet shared with a reasonable number of people)
- Security of tenure (evidence of documentation to prove secure tenure status or de facto or perceived protection from evictions)
- Durability of housing (permanent and adequate structure in non-hazardous location)
- Sufficient living area (not more than two people sharing the same room)

Disaggregation: By sex of head of household and age.

Comments and limitations: Not all slums are the same and not all slum dwellers suffer from the same degree of deprivation. The degree of deprivation depends on how many of the five conditions that define slums are prevalent within a slum household. Approximately one-fifth of slum households live in extremely poor conditions, defined by UN-Habitat as lacking more than three basic shelter needs.[153] The definition of the water and sanitation component of the index may need to be reviewed to ensure full consistency with the water supply and sanitation indicators currently under development by the WHO/UNICEF JMP (indicators 57 and 58).

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Household surveys.

Potential lead agency or agencies: UN-Habitat and the Global City Indicators Facility (GCIF).

[152] Global City Indicators Facility. See: http://mdgs.un.org/unsd/mdg/seriesdetail.aspx?srid=710
[153] UN-Habitat, (2006), State of the World's Cities 2006/7. See: http://www.unhabitat.org/documents/media_centre/sowcr2006/sowcr%205.pdf

### *Indicator 5: Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented or recognized rights to housing, and (ii) percentage who perceive their rights to housing are recognized and protected*

Rationale and definition: The absence of security of tenure for urban dwellers over their housing can have important implications for economic development, poverty reduction, and social inclusion. This proposed new indicator comprises two components: (i) percentage with documented or recognized rights to housing and (ii) percentage who perceive their rights to housing are recognized and protected. Documentation and perception provide critical and complementary information on tenure security. In addition, they both highlight outcomes and on-the-ground realities. The proposed focus on "documented or recognized rights" is flexible enough to cover a range of tenure rights in different country contexts. Because documentation alone, while important, is often not sufficient to gauge true tenure security, the perception measure provides valuable complementary information. In addition, the perception measure may facilitate more useful comparisons across countries.

Disaggregation: By gender and income. Further opportunities for disaggregation to be reviewed.

Comments and limitations: The rural component of this indicator is included under Goal 1.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: UN-Habitat, UNDP.

### Indicator 70: [Ratio of land consumption rate to population growth rate, at comparable scale] –to be developed.

Rationale and Definition: Cities are expected to absorb between two and three billion additional people by the year 2050. Whether they manage to do so sustainably depends on whether they harness the efficiency gains from agglomeration. Agglomeration provides the compactness, concentration and connectivity that leads to prosperity and sustainability.

More than half of the area expected to be urban in 2030 has yet to be built.[154] Therein lies an extraordinary opportunity to make the future city more productive and sustainable. However, most cities are forfeiting these advantages, becoming more expansive, growing spatially faster than their population and haphazardly absorbing land needed for agriculture and ecosystem services. With impending resource limits and twin climate change and food crises, we have little time to reverse this trend.

As a measure of land-use efficiency, this indicator benchmarks and monitors the relationship between land consumption and population growth. It informs and enables decision-makers to track and manage urban growth at multiple scales and enhances their ability to promote land use efficiency. In sum, it ensures that the SDGs address the wider dimensions of space and land adequately and provides the frame for the implementation of several other goals, notably health, food security, energy and climate change.

This land use efficiency indicator not only highlights the *form* of urban development but also

[154] Elmqvist et al (2013): *Urbanization, Biodiversity and Ecosystem Services: Challenges and Opportunities*. Springer.

illuminates human settlement patterns. It can be employed to capture the three dimensions of land use efficiency: economic (e.g. proximity of factors of production), environmental (e.g. lower per capita rates of resource use and GHG emissions,) and social (e.g. avoidance of settlement on vulnerable land, promotion of reduced travel times/distances). Finally, urban configuration largely predetermines the technologies and behavioral patterns within a city. Once built, cities are expensive and difficult to reconfigure. Fast growing cities in the developing world must 'get it right' before they are beset by infrastructural constraints.

Disaggregation: Geographic (urban / rural), region (functional metropolitan area),

Comments and Limitations: The data for this indicator is free and publically accessible. For more than five decades, the US Geological Survey/NASA Landsat data has been freely available, is frequently updated and its resolution is continually improving. The European Community's Joint Research Center has developed the Global Human Settlement Layer, an even higher resolution land cover dataset with similar frequency and distribution practices as Landsat. Many researchers have used these technologies to measure land cover and urban expansion.[155] Both measure built up area as buildings, compacted soils and impervious surfaces. WorldPop overlays demographic data on GIS maps. [156] But over time, to ensure regular and sustainable collection of this data, NSOs might consider providing spatially continuous demographic data (not bounded by jurisdiction) in digital form and to integrate mapping into their official census data.

Preliminary Assessment of Current Data Availability: TBD.

Primary Data Source: Satellite imagery and census data.

Potential Lead Agency: UN-Habitat, World Bank.

### Indicator 71: Percentage of people within 0.5 km of public transit running at least every 20 minutes

Rationale and definition: This indicator measures access to reliable public transportation, using a proxy of percentage of population within [0.5] kilometers of public transit running at least every [20] minutes. Public transportation is defined as a shared passenger transport service that is available to the general public. It includes buses, trolleys, trams, trains, subways, and ferries. It excludes taxis, car pools, and hired buses, which are not shared by strangers without prior arrangement.

Effective and low-cost transportation for mobility is critical for urban poverty reduction and economic development because it provides access to jobs, health care, education services, and more. The Partnership on Sustainable Low-Carbon Transport (SLoCaT)[157] and others propose indicators for urban access to sustainable transport that include: mean daily travel time, percentage of income spent by urban families on transport, and percentage of households within 500 meters of good quality, affordable public transportation.

[155] Angel et al (2011): *Making Room for a Planet of Cities*. Cambridge: Lincoln Institute of Land Policy ; Seto et al (2011): *A Meta-analysis of Global Urban Land Expansion*. PLoS ONE.
[156] Gaughan AE, Stevens FR, Linard C, Jia P and Tatem AJ, 2013, High resolution population distribution maps for Southeast Asia in 2010 and 2015, *PLoS ONE,* 8(2): e55882.
[157] Sayeg, P., Starkey, P., and Huizenga, C., (2014), *Updated Draft Results Framework on Sustainable Transport*, SLoCAT (Partnership on Sustainable Low Carbon Transport). See: http://www.slocat.net/results-framework-sustainable-transport

Disaggregation: Households should be disaggregated spatially and in terms of potential disadvantage (such as gender, age, disability) to ensure access for all.

Comments and limitations: No internationally agreed methodology exists for measuring convenience and service quality of public transportation. In addition, global data on urban transport systems do not exist. Although some data exists for public transport companies and individual cities, harmonized and comparable data on the world level do not yet exist. To obtain this data would require going down to municipal/city level, as urban transport is most often not under direct responsibility of national governments. In general, there is currently a lack of data on the number of people with access to mass transit and on transport infrastructure.[158]

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data.

Potential lead agency or agencies: UN-Habitat.

### Indicator 72: [Sub-national government revenues and expenditures as a percentage of general government revenues and expenditures] – to be developed.

Rationale and definition: This indicator seeks to measures (i) the percentage of revenues that are either raised by, or allocated to, sub-national governments (regional and local governments) as a proportion of general government revenue and (ii) the percentage of total public expenditure undertaken by sub-national levels of government as a proportion of general government spending (excluding social security funds and public corporations).

As recognized by the UN Secretary General, "…*many of the investments to achieve the SDGs will take place at the sub-national level and be led by local authorities*.[159]" The respective revenue and expenditure of each tier of government is a very tangible indicator of the authority and capacity of each level of governments to mobilize resources, and promote and invest in the essential elements of urban and local development- particularly bulk and connector infrastructure, and the provision and maintenance of basic/essential services. The ability to transfer funds to, and spend funds at, the local level presupposes appropriate regulatory and institutional capacity at the sub-national scale. The fiscal indicator is thus a proxy for the cluster of financial, legal and institutional capabilities on which sustainable development in cities depends. While there has been some expansion of the roles and responsibilities of sub-national government over the past two to three decades, their further involvement and empowerment will be essential to the overall success of implementing the SDGs. The overall institutional framework, and institutional capacities at each tier of government, is a vital but often neglected component of overall governance.

Disaggregation: The IMF Government Finance Statistics (GFS) framework distinguishes three levels of government: central, regional (regions, states or provinces) and local governments, although many countries may only have two tiers, typically national and local governments / municipalities. Where possible, this indicator should be disaggregated at all three levels.

Comments and limitations: The first important consideration, which will need further discussion and review, is an appropriate target range for this indicator. To track progress over time, either an

[158] UN Statistics Division, (2014).
[159] UN Secretary-General, (2014), *The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet*, Synthesis Report of the Secretary-General on the Post-2015 Agenda. Paragraph 94.

aspirational or basic basic minimum level of subnational revenue and expenditure, as a percentage of general government revenues and expenditures, will need to be estimated.

Standardization of the fiscal variables is the most important strength of the IMF's GFS. This standardization does, however, inevitably lead to a loss of detail and data richness, which will need to be addressed. The GFS covers 149 countries on a yearly basis and is the only data source with such comprehensive coverage, although the number of countries with sub-national data is reduced by about two thirds. GFS generally do not report non-financial public enterprises and public financial institutions, which can lead to misinterpretations if some governments have devolved significant authority to such entities while other governments have not.

Primary data source: International Monetary Fund's, Government Finance Statistics (GFS)

Potential lead agency or agencies: International Monetary Fund, World Bank, UN-HABITAT, OECD

## Complementary National indicators that countries may consider:

11.1. **Area of public space as a proportion of total city space.** This indicator measures the proportion of public space available to residents, as a proportion of the total space of the city.

11.2. **[Indicator on urban-rural economic linkages] - to be developed**. This indicator will measure the economic and social links between urban, peri-urban and rural areas.

11.3. **City biodiversity index (Singapore index).**

11.4. **[Indicator on supporting LDCs for sustainable and resilient buildings using local materials] - to be developed.**

11.5. **[Percentage of urban solid waste regularly collected and well managed] - to be developed**

11.6. **Percentage of cities with more than 100,000 inhabitants that are implementing risk reduction and resilience strategies informed by accepted international frameworks (such as forthcoming Hyogo-2 Framework)**

11.7. **Presence of a national urban and human settlements policy framework.**

# Goal 12. Ensure sustainable consumption and production patterns

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 73: [Publication of resource-based contracts] – to be developed

Rationale and definition: This indicator measures whether resource-based contracts between governments and business, including those related to extractive resource exploration and production, as well as agriculture and forestry operations, are published in a timely manner. Contract transparency is an essential precondition to ensuring that all parties benefit from large-scale resource investments. Secrecy can be a convenient way to hide power imbalances, incompetence, mismanagement, and corruption. Disclosure is a necessary precursor for the coordinated and effective management of the sector by government agencies. It also allows citizens to monitor contracts in areas such as environmental compliance and the fulfillment of social commitments. Contract transparency also provides incentives: government officials can be deterred from seeking their own interests over the population's and, over time, governments can also increase their bargaining power by gauging contracts from around the world.[160]

This indicator measures whether resource-based contracts between governments and business, including those related to extractive resource exploration and production as well as agriculture and forestry operations, are publicly published in a timely manner. Based on the rating system for the extractive industry by the Resource Governance Index,[161] the indicator would be constructed so that a government can receive one of four ratings:

- 100 = Yes, all valid or approved contracts are published in full
- 67 = Yes. The majority of contracts are published in full but there are some projects, contracts or licenses that have not been published
- 33 = Some contracts are published but there are no clear rules for publishing and this remains rare
- 0 = No. Contracts are not published.

We propose that available indicators for the extractives industries be expanded to also include large-scale investments in agriculture, forestry, fishing concessions, and other large natural resources contracts.

Disaggregation: This indicator can be disaggregated by industries and commodities.

Comments and limitations: We are refining a proposal to move this indicator down to goal 16 and merge it with indicator 91 to create a single indicator covering both publication of contracts and payments. In this case, "Adjusted Net Savings," which measures how countries balance the depletion of natural resources with the accumulation of equivalent and offsetting assets, would become the new indicator 73.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Administrative data.

[160] Collier, P and Antonio, P. et al., (2013), *Harnessing Natural Resources for Sustainable Development: Challenges and Solutions*, Paris, France and New York, USA: SDSN.
[161] See Resource Governance Index website: http://www.revenuewatch.org/rgi

Potential lead agency or agencies: UN Global Compact, EITI, and/or UNCTAD.

### Indicator 74: Global Food Loss Indicator [or other indicator to be developed to track the share of food lost or wasted in the value chain after harvest]

Rationale and definition: Food losses through inefficiencies in the food production chain and waste are widespread in all countries. At present, direct data on food losses and waste is sparse and difficult to compare internationally. This is partly explained by the high cost of directly measuring losses and waste for numerous categories of food products and across different stages from harvest to final consumption. In view of the importance of food losses and waste, a basic indicator is needed to track progress over time. FAO is currently developing the Global Food Loss Indicator, which is expected to be available by end of 2015 but remains to be validated. The index is based on a model using observed variables that conceivably influence food losses (e.g. road density, weather, pests) to estimate quantitative losses. Data on these variables are available from several sources, including country statistics, FAOSTAT, WFP's Logistics Capacity index, World Road Statistics, etc. In addition, depending on their priorities and monitoring systems, countries may adopt other indicators to more directly track food losses and/or waste for agricultural product categories of highest priority to their food and nutrition security.[162]

Disaggregation: Opportunities for disaggregation to be reviewed once the indicator has been defined.

Comments and limitations: Significant efforts will be necessary to create a baseline for food loss and waste. Staple crops that are often combined after harvest for processing will usually provide better data for food loss. Crops grown on a small scale and/or consumed directly by the household farm will be much more difficult to assess, yet they are the crops that tend to experience the highest food losses.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Administrative data.

Potential lead agency or agencies: FAO.

### Indicator 75: Consumption of ozone-depleting substances (MDG Indicator)

Rationale and definition: This indicator measures the consumption trends for ozone-depleting substances (ODS) controlled under the Montreal Protocol on Substances that Deplete the Ozone Layer, thereby allowing inference of the amounts of ODS being eliminated as a result of the protocol. It is expressed in ODP Tons, which is defined as the Metric Tons of ODSs weighted by their Ozone Depletion Potential (ODP).[163]

Disaggregation: To be reviewed.

Comments and limitations: The Montreal and the Vienna Convention for the Protection of the Ozone Layer target the complete phase-out of use of ODS.

[162] FAO, IFAD and WFP, (2014), *Food security, nutrition and sustainable agriculture in the post-2015 agenda: priority targets and indicators identified by FAO, IFAD and WFP*, Working group paper, FAO: Rome.
[163] For more information on emissions of ozone-depleting substances, see Rockström et al., (2009).

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: UNEP Ozone Secretariat.

### Indicator 76: Aerosol optical depth (AOD)

Rationale and definition: This indicator measures total aerosols (e.g. urban haze, smoke particles, desert dust, sea salt) distributed within a column of air from the Earth's surface to the top of the atmosphere.

Disaggregation: This indicator can be reported with a high degree of spatial disaggregation (including cities and neighborhood level).

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Remote sensing/satellite.

Potential lead agency or agencies: An agency such as UNEP could be responsible for collecting internationally comparable data across all countries.

### Indicator 77: [Share of companies valued at more than [$1 billion] that publish integrated reporting]— to be developed

Rationale and definition: Today, most companies report only on their financial results without regard to their social and environmental impacts. As a result their investor may not be aware of their full risk exposure. Likewise, society does not know a company's contribution to sustainable development. Several integrated reporting standards have been developed that track the social and environmental externalities of businesses. One prominent example is the International Integrated Reporting Council (IISC). We propose that an indicator be created to track the percentage of large companies (i.e. larger than [US$1 billion, measured in PPP]) that prepare integrated reports that are consistent with the SDGs and conform to standards that would need to be defined.

Disaggregation: This indicator can be disaggregated by sector of activity, ownership (listed vs. privately held or public companies), and other characteristics.

Comments and limitations: The standards and methodologies tracked by this indicator need to be defined. In particular, the indicator would need to specify standards for integrated reporting that can be applied in a wide range of jurisdictions.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: International reporting.

Potential lead agency or agencies: The Global Compact, Global Reporting Initiative (GRI), World Business Council for Sustainable Development (WBCSD), and/or the International Integrated Reporting Council (IIRC) could track such an indicator.

## Complementary National indicators that countries may consider:

12.1. **[Strategic environmental and social impact assessments required]— to be developed**. This indicator measures whether strategic environmental and social impact assessments are required for all resource-based projects.

12.2. **[Legislative branch oversight role regarding resource-based contracts and licenses]— to be developed**. This indicator measures the existence and enforcement of a legislative framework around natural resources.

12.3. **[Indicator on chemical pollution] - to be developed.** Chemical pollution is a critical dimension of global environmental change, but it is very difficult to measure on an internationally comparable basis. Several indicators exist for specific pollutants, but they are typically available only in a small subset of countries and measure only a small share of chemical pollution.

12.4. **$CO_2$ intensity of the building sector and of new buildings ($KgCO_2$/m2/year)**. The building sector (residential and commercial) accounts for a large share of greenhouse gas emissions around the world. This indicator is defined as the volume of $CO_2$ emissions (measured in kilograms) per unit of building surface (measured in square meter) and per year. The indicator is reported for the exiting building stock and new buildings added during the year.

12.5. **[Indicator on policies for sustainable tourism] - to be developed.** This indicator would measure policies on sustainable tourism.

# Goal 13. Take urgent action to combat climate change and its impacts

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 78: Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050

Rationale and definition: Keeping global warming within 2°C or less requires that countries prepare national deep decarbonization strategies to 2050, covering all sources of GHG emissions including from the energy, industry, agriculture, forest, transport, building, and other sectors. These strategies should be transparent and detail how countries intend to achieve deep emissions cuts (including for energy-related emissions), how to reduce energy consumption, decarbonize the power sector, and electrify energy uses (in particular in the transport and building sectors). They should include targets to reduce GHG emissions by 2020, 2030 and 2050. This indicator also proposes to measure the implementation of such a strategy.

Disaggregation: Opportunities for disaggregation to be reviewed.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: International reporting.

Potential lead agency or agencies: The proposed indicator tracks the existence such voluntary national strategies, which would be submitted to the UNFCCC.

### Indicator 79: $CO_2$ intensity of new power generation capacity installed ($gCO_2$ per kWh), and of new cars ($gCO_2$/pkm) and trucks ($gCO_2$/tkm)

Rationale and definition: The generation of electricity from the power sector and the consumption of fuel in the transport sector are responsible for a large share of total global GHG emissions. Ultimately, to achieve the levels of emissions reductions necessary to limit the global temperature increase to 2°C or below, the power and transport sectors need to dramatically reduce the emissions associated with the provision of these energy services. Tracking the evolution of the $CO_2$ intensity of new additions to these sectors is therefore important to assess how these sectors are evolving based on market conditions and policy frameworks in each country.

The proposed power sector indicator is defined as the amount (measured in grams) of $CO_2$ emissions per unit of generated electricity (measured in kilo Watt hour) from new capacities installed (between two dates of measurement of the indicator).

The proposed transport indicators are defined as the amount (measured in grams) of $CO_2$ emissions per passenger kilometer travelled (pkm) for new cars, and per ton kilometer travelled (tkm) for new trucks (between two dates of measurement of the indicator).

For the transport sector, changes in activity levels are key drivers of the increase in transport-related $CO_2$ emissions globally, but absolute levels of transport-related $CO_2$ emissions are linked to a

country's size, population, and level of economic activity. Measuring $CO_2$ intensity of new cars for passenger transport and new trucks for freight transport allows for more relevant historic and cross-country comparisons, by giving an understanding of how well countries are evolving their vehicle fleets to carry out the transport task, based on a physical performance parameter. It should also be noted that emissions from international air and maritime transport are important sources of global emissions, but these sources are not easily attributable to a particular country.

Disaggregation: Opportunities for disaggregation to be reviewed.

Comments and limitations: Transport activity is typically described by measuring vehicle kilometers (vkm) although such a measure does not allow for ready comparisons across modes or take into account varying load factors. It is also necessary to measure passenger kilometers (pkm) or ton kilometers (tkm) although these metrics require more detailed data collection.

Preliminary assessment of current data availability by Friends of the Chair: Power sector A /Transport sector B

Primary data source: Administrative data.

Potential lead agency or agencies: UNFCCC, IEA. [164]

### Indicator 80: Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector ($tCO_2e$)

Rationale and definition: This indicator is defined as total net greenhouse gas (GHG) emissions - tons of $CO_2$ equivalent ($tCO_2e$)- in the Agriculture, Forest and Other Land Use (AFOLU) sector, broken down by gas (including $CO_2$, $N_2O$ and $CH_4$) and by land used category (including forest lands, croplands, grasslands, wetlands, settlements and other lands), according to the Intergovernmental Panel on Climate Change (IPCC) 2006 guidelines for the national GHG inventory,[165]and the Good Practice Guidance for Land Use, Land Use Change and Forestry (GPG-LULUCF).[166]

Inventory methods need to be practical and operational. For the AFOLU Sector, anthropogenic GHG and removals by sinks are defined as all those occurring on "managed land". Managed land is land where human interventions and practices have been applied to perform production, ecological or social functions. Emissions/removals of greenhouse gases do not need to be reported for unmanaged land. However, it is good practice for countries to quantify and track over time the area of unmanaged land so that consistency in area accounting is maintained as land-use change occurs.

Disaggregation: By gas and land use category. In addition, they could also be expressed on a per ton of production basis because data on per unit land may lead to misleading conclusions.

Comments and limitations: As explained in the introduction of the IPCC 2006 guidelines for the national greenhouse gases inventory chapter 4 on AFOLU,[167] the AFOLU sector has some unique characteristics with respect to developing inventory methods. The factors governing emissions and removals can be both natural and anthropogenic (direct and indirect) and it can be difficult to clearly

[164] For example, see OECD, (2008), *Greenhouse Gas Reduction Strategies in the Transport Sector: Preliminary Report*.
[165] Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K., (eds.), 2006.
[166] See Good Practice Guidance for Land Use, Land-Use Change and Forestry: www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_contents.html
[167] See: http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_01_Ch1_Introduction.pdf

distinguish between causal factors. In addition, this indicator complements #12 Nitrogen use efficiency in food systems.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: The United Nations Framework Convention on Climate Change (UNFCCC) collects data on countries' national GHG inventories, including for the AFOLU sector, on a regular basis.

### Indicator 81: Official climate financing from developed countries that is incremental to ODA (in US$)

Rationale and definition: Developed countries have pledged under the Conference of Parties of the UNFCCC to provide some $100 billion per year in climate finance by 2020. This indicator will track official (i.e. public) climate finance provided by each developed country as a contribution towards the overall target of at least $100 billion per year.

Disaggregation: By destination, expenditure for mitigation vs. adaptation, public vs. private resources.

Comments and limitations: This finance commitment under the COP does not define official climate financing in a way that would allow for the creation of an unambiguous global indicator. Several bodies, including the OECD, are proposing standards and definitions. Additional work is required to arrive at internationally accepted coherent standards for reporting on official climate financing.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: International reporting.

Potential lead agency or agencies: OECD DAC, UNFCCC.

## Complementary National indicators that countries may consider:

13.1. **[Climate Change Action (CCA) Index]— to be developed**. Composite index that measures preparedness for climate change, including existence of a CCA plan, dedicated CCA authority, whether CCA is integrated into other city department plans, and availability of funding dedicated at the city level to mitigation and adaptation.

13.2. **GHG emissions intensity of areas under forest management ($GtCO_2e/ha$)**. This indicator measures the carbon benefits of improved forest management, through the implementation of reduced-impact logging techniques, which is important since carbon losses due to degradation could be of the same magnitude as those from deforestation.

# Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 82: [Ocean Health Index]

Rationale and definition: Two-thirds of the world's surface consists of oceans, and half of its surface consists of high seas. The health of oceans is critical for human wellbeing. No single variable is available to track the health of complex ocean and coastal systems, so the SDSN proposes the composite Ocean Health Index, which assesses the overall health of the world's oceans.

The Ocean Health Index measures 10 aspects of marine ecosystems and their use by humans: food provision, artisanal fishing opportunities, natural products, carbon storage, coastal protection, tourism and recreation, coastal livelihoods and economies, sense of place, clean waters, and biodiversity.[168] Each aspect is evaluated along four dimensions: present status, current trends, existing pressures, and resilience. These four dimensions take into consideration a wide range of factors such as ocean acidification and nutrient pollution (as pressures) and institutional factors such as marine protected areas (as contributing to resilience).[169] In this way the Ocean Health Index provides the best available shorthand index for the status of the world's oceans and coastal areas.

Disaggregation: We propose that the Ocean Health Index be compiled at national and regional levels and that raw data informing the indicator also be made available for independent evaluation. Countries should also disaggregate the index by key marine systems.

Comments and limitations: The Ocean Health Index is a composite index. As described throughout this report we generally recommend that no composite indices be included in an SDG monitoring framework. It is very difficult to describe complex ocean systems in a single variable. For this reason the Ocean Health Index has been developed. The index is calculated periodically by the Ocean Health Index Partnership, so its inclusion does not increase the statistical burden for NSOs. For this reason we include the index in this report. We welcome suggestions for alternative ways in which the complex issue of oceans can be tracked in a concise SDG indicator framework.

The Index can be calculated for each country and region. Each dimension of the Index is assessed by local expert communities who define the appropriate reference points, which define the objective that the country will aim for, and against which measurements of progress can be monitored annually.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: International reporting.

Potential lead agency or agencies: Ocean Health Index Partnership.

[168] Halpern, B. et al., (2012), An index to assess the health and benefits of the global ocean, *Nature* 488, 615–620. See : http://www.nature.com/nature/journal/v488/n7413/full/nature11397.html

[169] For detailed information on the methodology used to calculate the Index, see: www.oceanhealthindex.com

### Indicator 83: Proportion of fish stocks within safe biological limits (MDG Indicator)

Rationale and definition: The proportion of fish stocks within safe biological limits is defined as the percentage of fish stocks or species that are exploited within the level of maximum sustainable biological productivity. The indicator provides an important measure of the sustainable management of the world's fisheries. The stock assessment classifies fish stocks into 3 categories: non-fully exploited, fully exploited, and overexploited. The stocks within safe biological limits are those classified as non-fully exploited and fully exploited. [170]

Disaggregation: By region and global**.** Other opportunities for disaggregation to be reviewed
The FAO has divided the world oceans into 21 statistical areas and stock assessment is carried out based on these statistical areas. In total, 584 fish stocks and species have been monitored since 1974, with stock assessment information on 441 stock or species.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data from national production and international trade statistics.

Potential lead agency or agencies: FAO.

### Complementary National indicators that countries may consider:

14.1. **Area of coral reef ecosystems and percentage live cover.** This indicator measures the area of live coral reef ecosystem coverage within the national waters.

14.2. **[Indicator on the implementation of spatial planning strategies for coastal and marine areas]— to be developed.** Marine spatial planning is a strategy to distribute (spatially and temporally) human activities in coastal and marine areas in order to guarantee those ecological, social and economic objectives that are decided through a public and political process.[171]

14.3. **[Eutrophication of major estuaries] - to be developed**. The increased levels of nutrient runoff and untreated sewage resulting from human activities, are leading to eutrophication, harmful algal blooms (HAB)[172] and "dead zones". The levels of eutrophication need to be monitored in all major estuaries.

14.4. **Share of coastal and marine areas that are protected.**

14.5. **[Use of destructive fishing techniques] - to be developed**. This indicator tracks the use of destructive fishing techniques, such as trolley fishing.

14.6. **[Indicator on access to marine resources for small-scale artisanal fishers] - to be developed.**

14.7. **[Indicator on transferring marine technology] - to be developed.**

[170] See MDG Indicators website for consideration on "maximum sustainable biological productivity" and method of computation: http://mdgs.un.org/unsd/mi/wiki/7-4-Proportion-of-fish-stocks-within-safe-biological-limits.ashx
[171] For more information, see website of IOC UNESCO initiative on marine spatial planning: http://www.unesco-ioc-marinesp.be
[172] Naeem, S., Viana, V., Visbeck, M., (2014, forthcoming), *Forests, Oceans, Biodiversity and Ecosystem Services*, Draft report of the Thematic Group FOBES, SDSN. To be published by Sustainable Development Solutions Network.

# Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 84: Annual change in forest area and land under cultivation (modified MDG Indicator)

Rationale and definition: This indicator tracks the net change of forest area and the expansion of agriculture into natural ecosystems, as well as the loss of productive agricultural land to the growth of urban areas, industry, roads, and other uses, which may threaten a country's food security. It is measured as a percentage change per year and tracked by FAO. Success would be reducing the loss of agricultural land to other uses (industry, urban areas), while also halting the conversion of natural ecosystems to agriculture. Sustainable agroecological intensification would allow increased food production without converting natural ecosystems to agriculture.

Land under cultivation is defined by FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow (FAOSTAT, online).[173] Forest area is land under natural or planted stands of trees, excluding tree stands in agricultural production systems (e.g. plantations or agroforestry systems) and trees in urban parks and gardens.

Disaggregation: This indicator can be disaggregated spatially.

Comments and limitations: The indicator could be expanded to also include wetlands or other critical ecosystems.[174]
This indicator will likely be replaced by the Ecosystem Red List Index, which will be ready globally in a few years.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Remote sensing/satellite.

Potential lead agency or agencies: FAO, UNEP.

### Indicator 85: Area of forest under sustainable forest management as a percentage of forest area

Rationale and definition: The indicators on annual change in forest area and on protected areas overlay with biodiversity provide important information on the change in forest area and the protection of key forest regions. A third forest-related indicator is needed to track the sustainability of economic and other uses of forests. The Global Forest Resources Assessment 2010[175] has proposed this indicator measuring the percentage of forest under sustainable management.

[173] See FAOSTAT: http://faostat.fao.org/site/375/default.aspx
[174] See FAO Global Forest Resources Assessments: http://www.fao.org/forestry/fra/en
[175] FAO, (2010), *Global Forest Resources Assessment 2010*, Rome, Italy: FAO.

Disaggregation: Countries with strong forest management systems can disaggregate the indicator spatially.

Comments and limitations: A challenge for this indicator is to arrive at an internationally consistent definition of sustainable forest management practices.[176] An improved version of the indicator and underlying data will be provided in the 2015 assessment of Global Objectives on Forests.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: Administrative data.

Potential lead agency or agencies: FAO, UNEP.

### Indicator 86: Red List Index

Rationale and definition: The Red List Index (RLI), drawing on the IUCN Red List of Threatened Species, tracks the rate of extinction for marine and terrestrial species groups in the near future (i.e. 10-50 years) in the absence of any conservation action.[177] A downward trend in the index implies that the risk of a species' extinction is rising. The RLI is used to measure progress towards the Aichi target 12 of the Convention on Biological Diversity (CBD)[178] and the Millennium Development Goals.

The IUCN Red List is the most respected system to track the status of threatened species according to seven risk categories that range from "extinct" to "least concern"[179]. The criteria for determining the risk status of each species are scientifically rigorous and easy to understand for the general public. The Red List Index is applicable to different major species groups, transparent, and can track trends over time.[180] It has been developed for many major species groups, such as amphibians and birds, but important gaps remain, particularly among less well-studied major species groups, such as fungi. For species groups not yet covered by the RLI, a sampled approach can be used that is based on representative samples of species from taxonomic groups.[181]

Disaggregation: by country and major species group, and for Internationally Traded Species. The RLI can also be disaggregated to regional and national levels.[182] We recommend that national and global RLIs be reported by key species group. In the case of smaller countries that cover contiguous marine or terrestrial biomes, it may be more appropriate to report regional RLI by key species group.

We propose that the RLI also be applied to internationally traded terrestrial and marine species including those identified in appendices I and II of the Convention on Internationally Traded and Endangered Species (CITES).[183] The RLI for Internationally Traded Species will track the near-term extinction risk for species that are subject to international trade and whose survival is therefore heavily affected by non-host countries and cooperative international strategies.

[176] UN Statistics Division, (2014).
[177] Butchart SH, Resit Akçakaya H, Chanson J, Baillie JE, Collen B, et al., (2007), Improvements to the Red List Index, *PLoS ONE* 2(1): 140.
[178] See: http://www.bipindicators.net/indicators for indicators to measure progress towards the Aichi targets.
[179] For more information, see: http://www.iucnredlist.org/technical-documents/categories-and-criteria
[180] For an overview of the Red List, see: http://www.iucnredlist.org/about/red-list-overview
181 Baillie, J.E.M., Toward monitoring global biodiversity, *Conservation Letters* 1 (2008) 18–26.
[182] For more information on national and regional RLIs see:
http://www.bipindicators.net/LinkClick.aspx?fileticket=LxlQO8fYW-4%3D&tabid=72&mid=1895
[183] See CITES website: http://www.cites.org

Comments and limitations: The Red List Index is a composite index comprising a large number of underlying variables. At first sight it might therefore fall foul of a general preference against composite indices. However, the underlying data for the Red List Index is collected and analyzed by one organization and therefore does not impose any additional burden on NSOs. In view of this fact and the very widespread use of this index its inclusion in an SDG indicator framework strikes us as sensible.

Primary data source: International reporting.

Preliminary assessment of current data availability by Friends of the Chair: A

Potential lead agency or agencies: IUCN and Partner organizations, in particular BirdLife International and UNEP-WCMC.

### Indicator 87: Protected areas overlay with biodiversity

Rationale and definition: Terrestrial and marine protected areas are an important means of securing biodiversity and are therefore tracked under the Aichi targets. Yet, the global protected area system does not yet cover a representative sample of the world's biodiversity, nor is it effectively targeted at the most important sites for biodiversity. For this reason Aichi Biodiversity Target 11 of the Convention on Biological Diversity (CBD) places emphasis on the development of ecologically representative protected area systems and the protection of areas of particular importance for biodiversity and ecosystem services.[184] This indicator, developed by BirdLife International and IUCN for UNEP-WCMC (the world conservation monitoring center), measures progress towards these elements of Target 11.

The indicator is a composite of three sub indicators: (i) the degree of protection of terrestrial and marine ecoregions of the world; (ii) the degree of protection of Important Bird and Biodiversity Areas (IBAs); and (iii) the degree of protection of Alliance for Zero Extinction sites (AZEs). The sub indicators are calculated based on overlays of ecoregions, IBAs and AZEs with all designated protected areas recorded in the World Database on Protected Areas (WDPA) with a known size. The WDPA is the most comprehensive global spatial dataset on marine and terrestrial protected areas available. The methodology used to create a global protected areas layer from the WDPA follows the one used to calculate the protected area coverage indicator.

Disaggregation: Although mostly used at a global scale, the indicator can be calculated for regions, countries, or even biomes,[185] and we recommend that such national-level reporting become a priority under the post-2015 agenda. In the case of smaller countries covering contiguous ecoregions, a regional representation of this indicator may be more appropriate.

Comments and limitations: The indicator can be used to assess the status of protection and trends in protection over time. It can be widely applied at various scales to measure policy responses to biodiversity loss. UNEP-WCMC is working closely with the Alliance for Zero Extinction and BirdLife International to further improve the datasets and methodology used to calculate the IBA and AZE Protection Indices.[186]

[184] This and the following description of the indicator is drawn from Biodiversity Partnership Indicators; for more information see: http://www.bipindicators.net/paoverlays
[185] See Biodiversity Indicators Partnership, (2010).
[186] See Butchart, S.H.M. et al, (2012), *Protecting Important Sites for Biodiversity Contributes to Meeting Global Conservation Targets,* PLoS ONE 7(3): e32529. doi:10.1371/journal.pone.0032529

The indicator is more complex than the original MDG Indicator, but it provides much richer information on the state of biodiversity in countries. A simplified and non-composite indexfor the coverage of protected areas can be derived by focusing only on the first component. This Ecoregion Protection Indicator would represent a weighted average of the percentage attainment of the Aichi target of protecting 17% of terrestrial systems and inland waters, and protecting 10% of marine and coastal areas. Marine protected areas (MPA) are measured as the percentage of a country's exclusive economic zone (EEZ) that is under protection[187] and is reported under the Marine Protected Areas Database (WDPA).[188] Like the Aichi target, each component of the proposed index is measured separately and capped at 100% so that the greater protection of one terrestrial ecoregion will not compensate for the insufficient protection of another system.

While using the coverage of protected areas would simplify the task of countries regarding the collection of data, this indicator would fail to provide information on the effectiveness of the management of the protected area. Moreover, a percentage of protected area does not provide any insights on whether the area protected is critical for securing regional biodiversity.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: International reporting.

Potential lead agency or agencies: UNEP-WCMC.

## Complementary National indicators that countries may consider:

15.1. **Improved land ownership and governance of forests**. Percent of forest area with clear and secure land ownership.

15.2. **[Indicator on the conservation of mountain ecosystems] - to be developed**. This indicator would measure the sustainable conservation and management of mountain ecosystems

15.3. **Vitality Index of Traditional Environmental Knowledge (VITEK)**. This indicator tracks trends in the degree to which traditional knowledge and practices of indigenous and local communities are respected and integrated in the implementation of the Convention on Biological Diversity.[189]

15.4. **[Indicator on access to genetic resources] - to be developed.**

15.5. **Abundance of invasive alien species.** This indicator tracks the number of invasive alien species found in the country.

15.6. **[Indicator on financial resources for biodiversity and ecosystems] - to be developed.**

15.7. **[Indicator on financial resources for sustainable forest management] - to be developed.**

15.8. **[Indicator on global support to combat poaching and trafficking of protected species] - to be developed.**

[187] See United Nations Convention on the Law of the Sea website: http://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm
[188] See WDPA website: http://www.wdpa.org
[189] For more information see VITEK website: http://www.terralingua.org/vitek/

15.9. **Living Planet Index:** This indicator is a measure of the state of the world's biological diversity, based on species population trends. It is calculated using time-series data on more than 10,000 populations of over 3,000 species of mammals, birds, reptiles, amphibians and fish. The changes in the population of each species are aggregated and compared to the value in 1970.[190]

[190] For more information, see Biodiversity Indicators Partnership webpage: www.bipindicators.net/lpi

# Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 88: Violent injuries and deaths per 100,000 population

Rationale and definition: This statistic measures injuries and fatalities resulting directly from violence, including assaults (beatings, abuse, burnings) and armed violence but not accidents or self-inflicted injuries, expressed in terms of a unit per 100,000 population. We include injuries, as there are many forms of violence that do not result in death.

Disaggregation: This data is a reflection of the level of violence in a given country and should be disaggregated by sex (to distinguish violence against women), by age (to identify violence against children), by ethnicity (to track possible genocides), and by geography (to identify sub-national pockets of violence and to track urban crime). In addition, the intentional homicide rate should be reported separately from the deaths due to armed conflict.

Comments and limitations: Death rates can have just as much to do with access and quality of health care as it does with the level of violence. Tracking injuries helps overcome this limitation. The United Nations Office on Drugs and Crime (UNODC) gathers annual statistical data on intentional homicide[191] and WHO collects data on injuries. However, few countries actually report and the reliability of the national data may vary, especially for those countries afflicted with conflict. A real push for better data must be made. This effort can be supported and complemented by other non-profit and academic programs, such as the Uppsala Conflict Data Program (UCDP), which records data on organized violence.[192]

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data and civil registration and vital statistics.

Potential lead agency or agencies: Data should be compiled for all countries by UNODC, WHO and/or the UN Office for the Coordination of Humanitarian Affairs (UNOCHA). In addition, according to UNICEF, most countries have injury surveillance systems that can be strengthened and expanded.

### Indicator 89: Refugees and internal displacement caused by conflict and violence

Rationale and definition: This indicator tracks the number of people displaced as a result of conflict or violence, excluding migrants from natural disaster or other causes. The indicator covers people displaced across national borders as well as internally displaced persons (IDPs). It measures the refugee population by country or territory of origin, plus the number of a country's internally displaced people as a percentage of the country's total population. Exile and displacement due to conflict or violence undermine peacebuilding processes and the possibility of sustainable

[191] See UNODC database: http://www.unodc.org/unodc/en/data-and-analysis/statistics/index.html
[192] See UCDP database: http://www.pcr.uu.se/research/ucdp/database

development. They also increase the risk of regional instability when refugees are hosted in neighboring countries, resulting in part from tensions with local populations.

Disaggregation: By sex, age, religion, and national and ethnic origin, where possible.

Comments and limitations: It is difficult to get accurate figures as populations are constantly fluctuating and there is no uniform international definition of an IDP.

Preliminary assessment of current data availability by Friends of the Chair: B

Primary data source: International reporting.

Potential lead agency or agencies: Data is available from International Displacement Monitoring Centre,[193] the UN High Commissioner for Refugees, and OCHA.

### Indicator 90: Assets and liabilities of BIS reporting banks in international tax havens (as per OECD definition), by country (US$)

Rationale and definition: This indicator shows the geographical the extent of banks' assets and liabilities that are located in international tax havens. The Bank for International Settlements (BIS) reports this data quarterly, using principles that are consistent with balance of payments. The data are reported at the level of the banks' headquarter country rather than individual bank level.[194] BIS has persuaded a growing number of countries, including tax havens, to report data.

Disaggregation: By tax haven and type of financial assets.

Comments and limitations: This global data over time shows how the position of tax havens as financial centers has changed, though this information is not in itself an estimate of illegal behavior, it does illustrate the size of financial activity in tax havens.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: International reporting.

Potential lead agency or agencies: The list of relevant tax havens is reported by the OECD as the "Jurisdictions Committed to Improving Transparency and Establishing Effective Exchange of Information in Tax Matters", which is monitored and updated by the OECD Global Forum on Transparency and Exchange of Information for Tax Purposes.[195]

### Indicator 91: [Publication of all payments made to governments under resource contracts] – to be developed

Rationale and definition: Large-scale investments in natural resource projects, such as mines or land concessions, are often governed by complex fiscal rules that make it difficult for stakeholders to track the large associated rents and tax payments. This lack of transparency around taxes and rents paid to the government weakens public accountability and increases opportunities for corruption or

[193] See IDMC statistics http://www.internal-displacement.org/8025708F004CE90B/(httpPages)/22FB1D4E2B196DAA802570BB005E787C?OpenDocument
[194] See BIS website: http://www.bis.org/statistics/about_banking_stats.htm
[195] See OECD website: http://www.oecd.org/tax/transparency/

poor management of resource revenues. Transparency of payments made to host governments strengthens the opportunities for public oversight of resource investments and the transfer and use of the revenue flows. This indicator measures the publication of payments to host countries under resource contracts. These include taxes, royalties, dividends, bonuses, license fees, payments for infrastructure improvements, payments in kind, or any other significant payment and material benefit.[196]

This indicator would track the publication by host governments of revenue receipts from oil, gas, mining, land, agriculture and forestry projects, as well as the existence and implementation of home governments' requirements for domiciled companies to publish payments under the same categories of contracts. For host countries, data will include all published revenues, disaggregated by sector, company, and type of revenue. Under the index, host countries would be ranked as follows:

- 100: The government publishes all resource revenues disaggregated by company and category,
- 67: The government publishes all resource revenues by category, but not by company,
- 33: The government publishes some, but not all of the resource revenues,
- 0: The government does not publish resource revenues.

For home countries, the index will reveal whether all domiciled companies are required to systematically disclose payments to foreign governments for natural resource investments. It will be indicated whether requirement applies to all domiciled companies or companies listed on major stock exchanges; for which sector(s) the requirement applies; whether reporting is required on a country-by-country basis or project-by-project basis; whether payment types must be disaggregated; and whether there is a threshold level of payment that must be reported. For home countries, the index would be reported as follows:

- 100: The government requires all domiciled companies to disclose payments of natural resource investments by category on a project-by-project basis,
- 67: The government requires publicly listed companies to disclose payments for natural resource investments by category on a project-by project basis,
- 33: The government requires companies to disclose payments on a country, but not project-by-project basis,
- 0: The government does not require disclosure of payments by domiciled companies.

Disaggregation: This indicator can be disaggregated by industries and commodities.

Comments and limitations: We are refining a proposal to merge this with indicator 73 to create a single indicator covering both publication of contracts and payments. In this case, "Adjusted Net Savings," which measures how countries balance the depletion of natural resources with the accumulation of equivalent and offsetting assets, would become the new indicator 73 under goal 12.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: Administrative data.

Potential lead agency or agencies: UN Global Compact, EITI, and/or UNCTAD.

[196] Collier, P and Antonio, P. et al., (2013).

### Indicator 92: Percentage of children under age 5 whose birth is registered with a civil authority

Rationale and definition: In many developing countries, the births of a substantial share of children are unregistered. Registering births is important for ensuring the fulfillment of human rights. Free birth registration is the key starting point for the recognition and protection of every person's right to identity and existence. Failure to register births either due to insufficient administrative systems, discrimination, or isolation is a key cause of social exclusion. By ensuring registration of all births, countries will increase their population's opportunities to access services and opportunities and their ability to track health statistics (infant mortality rates, vaccination coverage, etc.).

Disaggregation: Data should be disaggregated by sex, ethnicity, religion, disability, indigenous status, geographic location (etc.) to identify and end discrimination within the population (see Annex 3 for the full list of stratification variables).

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: This indicator is measured through national civil registration and vital statistics, which are often complemented by household surveys.

Potential lead agency or agencies: UNICEF collects global data through the MICS questionnaire, which asks mothers (or primary caregivers) of children under five whether they have a birth certificate or are otherwise registered with civil authorities and their knowledge of how to register a child.[197]

### Indicator 93: Existence and implementation of a national law and/or constitutional guarantee on the right to information

Rationale and definition: This indicator helps assess whether a country has a legal or policy framework that protects and promotes access to information. Public access to information helps ensure institutional accountability and transparency. It is important to measure both the existence of such a framework and its implementation, as good laws may exist but they may not be enforced. This can be simply due to a lack of capacity, more systematic institutional resistance, or a culture of secrecy or corruption.[198] Furthermore, exceptions or contradictory laws, such as government secrecy regulations, can erode these guarantees.

Disaggregation: TBD.

Comments and limitations: TBD.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: International reporting.

Potential lead agency or agencies: UNESCO.

[197] UNICEF, (2013), *Every Child's Birth Right: Inequities and trends in birth registration*, New York, NY: UNICEF, 6.
[198] UNESCO, (2010), *ment Indicators: A framework for assessing media development.*

### Indicator 94: Perception of public sector corruption

Rationale and definition: Public sector corruption is a barrier to development and diverts resources away from poverty-eradication efforts and sustainable development. Corruption is difficult to measure since objective data tends to be highly incomplete and difficult to compare. Transparency International is a global civil society organization that works to fight corruption and has developed the Corruption Perceptions Index (CPI).[199] The CPI ranks countries based on how corrupt their public sector (administrative and political) is perceived to be. It is a composite perception-based index drawing on corruption-related data collected by a variety of reputable institutions. The CPI reflects the views of observers from around the world, including experts living and working in the countries and territories evaluated. Transparency International publishes annual reports covering 177 countries with some 20 years of historic data.

Disaggregation: Opportunities for disaggregation to be reviewed.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: C

Primary data source: International reporting.

Potential lead agency or agencies: Transparency International.

### Complementary National indicators that countries may consider:

The New Deal for Engagement in Fragile States process and the g7+ are working to identify relevant and context-specific indicators to measure progress in peacebuilding and statebuilding. In addition to those they will suggest, countries can consider the following:

16.1. **Percentage of women and men who report feeling safe walking alone at night in the city or area where they live.** It is important to understand citizens' experiences of personal security to adapt security and justice services. Gallup already conducts polling surveys on perceptions of safety in 135 countries.[200] This is of particular concern in urban areas, and disaggregation is encouraged by geography (urban/rural).

16.2. **Compliance with recommendations from the Universal Periodic Review and UN Treaties.** This new indicator assesses the extent to which states engage with the UN human rights mechanisms. The Universal Period Review (UPR) and the UN Human Rights Treaty Bodies issue recommendations, which can require states to make administrative, legislative, or judicial changes to enable the full realization of human rights. This indicator proposes to quantify these recommendations – they are easily accessible and can be collected and aggregated. The indicator would then measure the extent to which states have engaged and adopted the recommendations from both review processes.

16.3. **Number of children out of school in conflict- or disaster-affected countries.** This UNESCO indicator measures the number of school-aged children out of school in conflict- or disaster-affected countries.

[199] See TI's Corruption Perceptions Index website: http://www.transparency.org/research/cpi/overview
[200] See Crabtree, S., (2013), *Venezuelans, South Africans Least Likely to Feel Safe.* See http://www.gallup.com/poll/162341/venezuelans-south-africans-least-likely-feel-safe.aspx

16.4. **[Indicator on security sector reform]— to be developed.** Post-conflict security sector reform is essential to build lasting peace. An indicator should be developed to measure the extent to which security institutions are effective and accountable.

16.5. **Frequency of payment of salaries within security forces.** This indicator measures the frequency and regularity with which members of a police force and military receive their full salaries. It reflects government resources and capacity. Late and partial payment of salaries is a well-known factor of violence and conflict.

16.6. **[Compliance with OECD or other applicable Anti-Bribery Convention]- to be developed.**

16.7. **[Indicator on illicit financial flows] - to be developed**. This indicator will track illicit financial flows in and out of countries.

16.8. **[Indicator on international cooperation in preventing violence and combating terrorism and crime] – to be developed**. This indicator will track international cooperation for building capacities at all levels, in particular in developing countries, for preventing violence and combating terrorism and crime**.**

16.9. **Percent of UN Emergency Appeals delivered.** UN Emergency Appeals are requests for emergency humanitarian funds to support a rapid humanitarian response to conflict or disasters during the first three to six months of a crisis situation. The UN issues appeals for these funds to member states and other donors. This proposed indicator shows how far such appeals are funded for vulnerable states. It serves as a direct measure of international support for crisis situations in vulnerable states.

16.10. **Number of journalists and associated media personnel that are physically attacked, unlawfully detained or killed as a result of pursuing their legitimate activities.** This indicator measures the safety and fundamental freedom of journalists and associated media personnel to practice their profession. UNESCO tracks killing of journalists, and many NGOs partner with UNESCO to also track broader journalist safety.[201]

[201] See http://www.unesco.org/new/en/communication-and-information/freedom-of-expression/safety-of-journalists/unesco-partners-in-the-field-of-the-safety-of-journalists/

# Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

**Potential and Illustrative Global Reporting Indicators:**

### Indicator 95: Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), and World Trade Organization (WTO) [other organizations to be added] on the relationship between international rules and the SDGs and the implementation of relevant SDG targets

Rationale and definition: This indicator will track whether key international institutions deliver an official annual report assessing whether international rules are consistent with achieving the SDG. The reports should also outline options for improvement to make the rules consistent with achieving the goals. Institutions and reports covered by this indicator include:

- BIS: Report on international financial regulatory standards (i.e. Basel III and successors)
- IASB: Report on international accounting standards.
- IFRS: Report on international financial reporting standards
- IMF: Report on the international financial system.
- WIPO: Report on the international intellectual property regime.
- WTO: Report on the international trade system.

Other organizations can be added to this indicator.

Disaggregation: Reporting would be done by institution.

Comments and limitations: To be reviewed once the indicator has been constructed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: International reporting.

Potential lead agency or agencies: BIS, IASB, IFRS, IMF, WIPO, WIPO etc.

### Indicator 96: Official development assistance (ODA) and net private grants as percent of high-income country's GNI

Rationale and definition: This indicator measures official development assistance (ODA) plus net private grants as a share of high-income countries' GNI. The OECD Development Assistance Committee defines both variables.[202] The target value for ODA is the international commitment of 0.7% of GNI.

Disaggregation: By destination, sector, and other dimensions reported under the DAC databases.

Comments and limitations: The OECD-DAC is currently revising and improving indicators on ODA in order to, among others, better reflect provider effort for development, account for recipients'

[202] OECD, (2013), *Development Cooperation Report 2013: Ending Poverty*, Paris, France: OECD Publishing.

resource receipts, and address some of the weaknesses of current ODA measures. The new measures could also potentially allow for more comprehensive monitoring of external development for global objectives or public goods.[203]

Preliminary assessment of current data availability by Friends of the Chair: A

Primary data source: Administrative data.

Potential lead agency or agencies: Data for this indicator can be tracked by the OECD for all OECD countries and affiliated countries that submit data to the OECD (e.g. Saudi-Arabia). The IMF can provide data for other high-income countries.

### Indicator 97: Domestic revenues allocated to sustainable development as percent of GNI

Rationale and definition: This indicator tracks government resource mobilization for sustainable development as a share of GNI. The data can be collected on an internationally comparable basis by the IMF, which should define the government spending categories that support sustainable development (e.g. most military expenditure and some subsidies should be excluded). Once the relevant government spending categories have been defined, the indicator can be compiled for all countries.

In general, the richer a country, the higher government spending can be as a share of GNI. It seems reasonable that countries should aim to mobilize at least 15-20% of GNI as government spending.

Disaggregation: By sector.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data.

Potential lead agency or agencies: IMF.

### Indicator 98: Private net flows for sustainable development at market rates as share of high-income country GNI

Rationale and definition: International private finance is critical for financing sustainable development. In particular private finance can fund private sector development (including agriculture) and infrastructure. The proposed indicator will track international private flows at market rates using the OECD DAC definition, which includes: direct investment, international bank lending (maturity > one year), bond lending (maturity > 1 year), and other flows (mainly reported holdings of equities issued by firms in aid recipient countries).[204]

Disaggregation: By destination, type of private flows.

[203] More information on the OECD's work on External Financing for Development is available here: http://www.oecd.org/dac/Financing-Development.htm
[204] Ibid.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Administrative data.

Potential lead agency or agencies: This indicator can be reported for all high-income as well as middle-income countries. Data for this indicator can be collected by the OECD DAC and other agencies (TBD).

### Indicator 99: Share of SDG Indicators that are reported annually

Rationale and definition: To become an effective management tool and report card, the SDGs need to be underpinned by quality data that is reported annually. This will require significant investments to improve existing measurement instruments (for example to speed up reporting and enhance disaggregation), create new instruments, and build the capacity of NSOs, especially in LDCs, and international statistical agencies. We propose that a simple indicator be created that tracks the share of SDG indicators – possibly including Complementary National as well as Global Reporting Indicators – that are reported on an annual basis. Such an indicator will provide a good proxy for the effectiveness of national monitoring systems for the SDGs and investments made to strengthen them.

Disaggregation: TBD.

Comments and limitations: The indicator should only track indicators that can and should be tracked annually. This may, for example, exclude life expectancy at birth.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: TBD.

Potential lead agency or agencies: UNSD.

### Indicator 100: Evaluative Wellbeing and Positive Mood Affect

Rationale and definition: Measures of evaluative wellbeing capture a reflective assessment of an individual's overall satisfaction with life. One of the most widely used measures of evaluative wellbeing is the Cantril Self-Anchoring Striving Scale, which is included in Gallup's World Poll of more than 150 countries, representing more than 98% of the world's population. It asks respondents to imagine a ladder with steps numbered 0 (bottom) to 10 (top), with 10 representing the best possible life for you and 0 the worst. Respondents then respond with which step they feel they are currently on, and where they will be in 5 years.[205]

The Cantril Scale measures how individuals evaluate their own lives, and is complemented by the positive affect measure "Positive Mood", which measures the ups and downs of daily emotions. Positive affect specifically measures a range of recent positive emotions. Although short-term emotional reports carry much less information about life circumstances than do life evaluations,

[205] For more information see OECD Guidelines on measuring subjective wellbeing (2013), online at http://www.oecd.org/statistics/Guidelines%20on%20Measuring%20Subjective%20Well-being.pdf

they are very useful at revealing the nature and possible causes of changes in moods on an hour-by-hour or day-by-day basis.[206]

Disaggregation: By sex, age and geography (urban / rural).

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: TBD.

Primary data source: Household surveys.

Potential lead agency or agencies: In cooperation with polling organizations, such as Gallup International, the SDSN or the OECD could report the subjective wellbeing data.

### Complementary National indicators that countries may consider:

17.1. **Total Official Support for Development.** This is a new indicator being development by the OECD to measure all public efforts to support the broader development agenda.[207]

17.2. **[Indicator on debt sustainability] - to be developed**. This indicator tracks the sustainability of a country's debt.

17.3. **Gross domestic expenditure on R&D as share of GDP**. This indicator measures all expenditure on research and development carried out in the national territory.

17.4. [**Indicator on technology sharing and diffusion] - to be developed**. This indicator would measure technology diffusion across countries.

17.5. **[Indicator on the creation of / subscription to the Technology Bank and STI (Science, Technology and Innovation) Capacity Building Mechanism for LDCs by 2017] - to be developed.** This indicator would track progress towards operationalizing the Technology Bank and STI Capacity Building Mechanism for LDCs

17.6. **Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries (MDG Indicator).** This indicator tracks efforts made by developed countries to reduce or remove tariffs (customs duties that are financial barriers to imports) in three sectors that are particularly important for developing countries and LDCs.

17.7. **Value of LDC exports as a percentage of global exports.**

17.8. **[Indicator on investment promotion regimes for LDCs] - to be developed.**

17.9. **Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms.** This indicator tracks the share of aid and official climate finance that passes through the following multilateral pooling mechanisms: the Global Alliance for Vaccine Initiative (GAVI), the Global Environment Facility (GEF), the Global Fund to Fight HIV/AIDS, TB, and Malaria (GFATM), the Green Climate Fund, the International Development Association (IDA), the International Fund for Agricultural Development (IFAD), UNFPA, UNICEF, [others mechanisms to be added, e.g. for education, agriculture, technology transfer]. These pooled disbursement mechanisms offer lower transaction costs for recipients and donors. They can also ensure greater scalability of aid flows.

[206] For more details see SDSN, (2013b), *World Happiness Report*, http://unsdsn.org/happiness
[207] See OECD, (2014), *Modernising the DAC's development finance statistics,* Paris: OECD.

# Annex 2: Moving towards annual reporting

Timeliness is crucial for data to be a useful management and policy tool, so SDG reporting should operate on an annual cycle. However annual reporting on progress does not necessarily mean new data being produced every year. For a number of indicators this may be impossible or inadvisable.[208] In such cases it may be sufficient to produce data every two to three years and fill the gaps with robust projections, extrapolations or modeled estimates. In this way, almost all proposed Global Reporting Indicators can be reported on an annual basis.

To understand the feasibility and implications of annual reporting, we have analyzed the main types of data that need to be collected for Global Reporting Indicators. Additional details on the type of information required for each indicator are provided above in Annex 1. Data for monitoring the SDGs will come predominantly from administrative data, surveys (including household and labor force surveys), as well as direct reporting from organizations. Below we discuss the requirements for and feasibility of annual reporting for these three types of data.

### (i) Household surveys and other survey instruments

Nearly every country in the world runs household surveys. They are an important source of socio-economic data, particularly in countries where administrative data systems are underdeveloped or unreliable or when seeking to measure human behaviors and attitudinal change. Similarly, labor force, business, and other surveys provide vital socio-economic information.

In recent years, many countries have demonstrated how national statistical systems can produce high-quality annual survey data. At least 60 countries conduct annual official national household surveys with 28 developing countries reporting annually on extreme poverty.[209] Countries such as Brazil, Columbia, Ecuador, Indonesia, and the Philippines have become well known for their innovative and effective statistical systems. Ecuador and Indonesia report select poverty statistics every trimester and quarter, respectively. In a short period of time, the Philippines have integrated their data reporting and now provide highly disaggregated and cross-referenced annual statistics on key economic, social, and environmental variables, down to the district level.

An important caveat is capacity; in many countries lack of capacity and resources has made such frequent surveys impossible and/or has compromised their quality. Interim solutions often involve rotating modules and/or conducting more comprehensive and larger sample surveys intermittently, with the assistance of international programs such as Demographic and Health Surveys (DHS) or the Multiple Indicator Cluster Surveys (MICS).Furthermore, not every indicator compiled through household surveys requires year-on-year monitoring, as highlighted above. However biennially- or triennially-collected survey data, combined with careful projections between data points, provides an effective methodology for estimating annual progress.

International household survey programs are crucial for the collection of high-quality socio-economic data. The most important ones include Demographic and Health Surveys (DHS), Living Standard Measurement Surveys (LSMS), and the Multiple Indicator Cluster Surveys (MICS). The DHS

[208] Indicators unsuited to annual production are indicators that (i) exhibit year-on-year variation that is significantly smaller than the error margin, (ii) require a very large number of observations to be computed, (iii) may be affected or compromised by year on year monitoring, such as attitudinal and behavior change.[208] A preliminary assessment suggests that this applies to four of the Global Indicators featured in this report: life expectancy, maternal mortality rate, fertility rate, and prevalence of non-communicable diseases.

[209] Alkire, (2014).

and MICS programs also have the advantage of producing high-quality data that is based on common survey frames and harmonized contents, and are therefore comparable across data sets and countries. MICS, for example, provides data for over 100 indicators, including three-quarters of the data for the health-related MDG indicators, disaggregated by residence, gender, wealth, education, age, ethnicity and other stratifiers. Historically there have been long-lags between the collection, analysis and publication of international survey data, but greater collaboration between these survey programs and a shift towards harmonized methodologies is helping to minimizing the gaps between survey rounds. There have also been considerable improvements in the time between data production and reporting, which has reduced from up to a year, to just a few months.

Another innovative approach being used by several countries to increase the frequency of household surveys are continuous surveys.[210] Some national continuous household surveys, such as in Ecuador, Indonesia, and Brazil, collect a nationally representative sample size each year. However, to achieve the desired level of disaggregation for the SDGs, larger samples are likely to be required. The continuous DHS surveys in Peru and Senegal collect data on one fifth of the normal sample size each year, which can be used to provide annual reports.[211] Such annual data will have a higher margin of error than household survey data provided every five years. However, as the experience with the use of GDP data demonstrates, this should not be a problem: many countries issue quarterly and even monthly GDP data within a short period of time. Users demand such data, even though short-term GDP estimates are provisional and frequently subject to revisions before final annual GDP numbers are released. Just like users of GDP data have become accustomed to such revisions for a greater periodicity of reporting, users of socio-economic data from continuous household surveys will use provisional annual data, updated and verified as and when larger survey programs are run. In other cases such as Ecuador and Indonesia, national estimates are produced multiple times per year, and periods are combined to create subnational disaggregation each year. In still others, such as the World Bank Program for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean (MECOVI), national estimates are produced annually.

Other innovations of the DHS include the Key Indicator Survey (KIS), with shorter and simple questionnaires at a lower level of disaggregation, as well as an Interim DHS, which could both allow for annual or even higher than annual reporting frequency.[212] However, unlike continuous surveys, neither KIS nor the Interim DHS have had much uptake.[213].

Alongside more frequent survey data is the requirement of more timely data entry, cleaning, and analysis. Computer-assisted technologies and standardized indicator definitions and computations have the power to reduce this lag tremendously in a short period.

Finally, generating high-quality and high-frequency survey data on the SDGs should also take advantage of telecommunications and satellite imagery, with systematic georeferencing of all data, improved cross-referencing of survey frames, and tablet-based or mobile phone-based surveys. All of these innovations are available, but some are slow to reach scale, partly because there is not enough political attention and support devoted to them.

[210] See "Continuous Demographic and Health Survey" information sheet at http://dhsprogram.com/pubs/pdf/DM34/DM34.pdf

[211] On Brazil see Quintslr, M. and Hypólito, E. (2010), *Development of an Integrated System of Household Surveys: The Brazilian Experience*. Online at http://www.ibge.gov.br/home/estatistica/indicadores/sipd/Development.pdf; on other countries see Alkire (2014).

[212] See DHS KIS website for more information: http://dhsprogram.com/What-We-Do/Survey-Types/KIS.cfm

[213] Alkire, S, (2014).

In summary, examples for national and international survey programs that yield high-quality frequent data are plentiful. By using the full advantages of modern technologies, these programs can continue to provide cost-effective data. The SDGs will provide an important impetus to drive available innovations into all major survey programs, thereby filling a critical gap in today's MDG data.

**(ii) Administrative data, civil registration and vital statistics**

Data for many Global Reporting Indicators comes from administrative systems, usually collected by line ministries and then compiled by the NSO. Examples include school enrolment and completion rates, access to health facilities, data on agricultural production and input use, or spending on official development assistance. Similarly, civil registration systems and vital statistics are critical for recording births, deaths, and other data related to vital statistics.

To generate high-quality annual data, many countries will need to strengthen their systems for processing administrative data. Since administrative data is collected on a continuous basis there are no barriers to annual reporting of administrative data. Annual reporting is thus primarily a question of shortening processing and publication times and improving the quality and reliability of administrative data.

The quality of administrative data can be poor because the underlying data can be easily manipulated. For example, line ministries and local authorities may have an incentive to overstate progress and understate challenges in order to meet performance targets established by the central government. The only ways to improve the quality and reliability of administrative data is to strengthen the capacity of authorities to collect and cross-check data (often against household surveys), and to ensure public access to data along the full production chain. In this way discrepancies can be spotted early and addressed.

In some instances, administrative data needs to be collected specifically for reporting on a periodic basis. Examples are assessments of fish stocks or national forest inventories, which are expensive and time consuming (national forest inventories are run only once every 5-10 years).[214] In such cases, alternatives should be sought, such as remote sensing of forest coverage or other proxy indicators.

**(iii) International reporting**

Some 13 Global Reporting Indicators proposed in this report are reported directly through international organizations or mechanisms. Examples include the Corruption Perceptions Index (prepared by Transparency International) and the Ocean Health Index (prepared by the Ocean Health Index Partnership), which are both reported annually. For other indicators, modest efforts to increase reporting frequency are needed. For example, Indicator 60 on the fundamental ILO labor standards would be based on the country reports, which are currently mandatory only every two years.

Some of the indicators proposed in this report will require an agreed international arrangement to collect, process, and publish the data. Our analysis suggests that each of the proposed indicators that would be reported internationally can be published annually. The proposed lead organizations are described in Table 1 and throughout Annex 1.

[214] United Nations, (2003).

# Annex 3: Disaggregating Indicators for the SDGs

The inability to understand how people of different ages, capabilities or income levels have been faring under the MDGs has hampered the design and implementation of strategies to tackle discrimination and ensure achievement of the goals.[215] A number of studies have now demonstrated that progress has often been made amongst those groups that are easiest to reach or whose situations are the easiest to ameliorate, leaving many of the poorest and most vulnerable behind.[216] Others have pinpointed cases of perverse incentives where only the poorest benefitted most.[217] For this reason, it is very important that the Sustainable Development Goals, targets and indicators can be disaggregated.

The UN Secretary General's Synthesis Report, The Road to Dignity by 2030, and various reports before it have proposed that the SDGs should "leave no one behind" and that targets should only be considered achieved if they are have been met for all relevant groups. The principle has since been widely accepted and reiterated in numerous other global reports, albeit often using slightly different terminology.[218]

To ensure countries fulfill the commitment to leave no one behind, they will need to: (i) identify levels of disaggregation (stratification variables) for relevant SDG indicators, and (ii) identify a set of indicators that specifically reflect inequalities that are not captured by disaggregation of other indicators. With regards to the latter, the SDSN proposes to include indicators on relative poverty as well as the income share of the top decile (or a ratio of the top decile to the bottom 4 deciles) to measure income inequalities within countries. Similarly, a number of dedicated indicators have been proposed to capture gender inequality and other inequalities under Goals 5 and 10.

The identification of stratification variables can pose major analytical and operational challenges. For example, data collected through survey instruments or other tools must collect all stratification variables for each household. In practice, the number of questions that can be asked in one survey and the need to maintain confidentiality for the collection of sensitive data (e.g. on ethnicity) may constrain opportunities for stratifying socioeconomic and other data. Similar constraints may apply on the reporting side due to the limited capacities of many national statistical offices.

Given the importance of disaggregated data, the SDSN recommends that relevant SDG indicators be disaggregated according the following broad dimensions:

- Sex and gender,[219]
- Age,[220]

[215] See Melamed, C. and Samman, E., (2013), *Equity, inequality and human development in a Post-2015 Framework*, UNDP HDR Office: New York; Watkins, K., (2013), *Leaving no one behind: an equity agenda for the post-2015 goals*, London: ODI.
[216] See Save the Children, (2010), *A Fair Chance At Life: Why Equity Matters for Child Mortality*, London: Save the Children UK; Wirth, M.E. et al, (2006), 'Setting the stage for equity-sensitive monitoring of the maternal and child health MDGs,' *Bulletin of the World Health Organization*, 84 (7), p 519–27; and Borooah, V.K., (2004), 'Gender bias among children in India in their diet and immunisation against disease,' *Social Science & Medicine*, 58, 9, p 1719–31.
[217] In an OPHI study, in nine out of 34 countries, the poorest region reduced Multidimensional Poverty index the fastest; in eight countries, all subnational regions reduced poverty, and in Kenya, the poorest ethnic group reduced multidimensional poverty the fastest.
[218] See High Level Panel of Eminent Persons on the Post-2015 Development Agenda (2013) *A New Global Partnership: Eradicate Poverty and Transform Economies*; SDSN (2013) *Action Agenda for Sustainable Development*; UN Secretary General, (2013), *A life of dignity for all: accelerating progress towards the Millennium Development Goals and advancing the United Nations development agenda beyond 2015*.
[219] For a internationally accepted definition of the distinction between sex and gender, see www.who.int/gender/whatisgender/en/

- Income deciles,
- Disability,
- Religion,
- Race, ethnicity, familial descent or indigenous status,
- Economic activity,[221]
- Spatial disaggregation (e.g. by metropolitan areas, urban and rural, or districts),
- Migrant status.

Disaggregation according to these dimensions would be relevant for many of the 100 Global Reporting Indicators proposed by SDSN (approximately 40%), as follows:

| Goal | Proposed indicators which could be disaggregated |
|---|---|
| 1 | ALL |
| 2 | 7, 8, 9, 14 |
| 3 | 17-32 |
| 4 | ALL |
| 5 | 41-48 |
| 6 | 49-51 |
| 7 | 53, 54 |
| 8 | 57, 59 |
| 9 | 61, 62 |
| 10 | 67, 68 |
| 11 | (5), 69-71 |
| 12 | n/a |
| 13 | n/a |
| 14 | n/a |
| 15 | n/a |
| 16 | 88, 89, 92 |
| 17 | 100 |

Not all stratification variables would be relevant for every indicator highlighted here. For example, indicator 48 (Total Fertility Rate) is a measure of the average number of children born to a woman over her lifetime so disaggregation by sex is unnecessary. Similarly, many of the indicators under Goal 5 specifically relate to women and children.

In general terms, data on health, education and select aspects of wellbeing can already be disaggregated by gender, age, geographical region and income (by quintile) in most countries using international household surveys such as the Demographic Health Surveys (DHS), Multi-Indicator Cluster surveys (MICS), and Living Standards Measurement Study (LSMS). Information can also be gleaned from national census and vital registration information. However, data collection is patchy (DHS is only collected every 5.88 years[222]) and often data produced by these different surveys is non-comparable.

[220] We recommend that the disaggregation by age should at a minimum be by the following set of groups: 0-2 years (infants), 2-5 years (pre-school age), 5-14 years (school age), 15-49 years (childbearing age), 15-64 years (working ages) and 65 years and older (elderly persons).
[221] For example, water use should be accounted for by economic activity using ISIC Rev 4.
[222] According to Alkire, S. (2014), "DHS have been updated every 5.88 years across all countries that have ever updated them (across a total of 155 'gaps' between DHS surveys). Dropping all incidents where 10 or more years have passed between DHS surveys, that average falls only to 5.31 years."

Substantive investments in national statistical capacity will therefore be required to ensure standardized collection of data relating to all of the above-defined dimensions, including investments in geo-spatial data infrastructures. Meanwhile, internationally compiled household surveys need to bolster their collection of data relating to disability, religion, race, and ethnicity and to improve the quality and comparability of spatially disaggregated data.[223]

[223] UNSD advises that the "required disaggregation of statistical indicators by age, gender, geography, income, disability etc. is currently not available for many statistical areas. However, in many administrative data sources, such as vital registration, some of the parameters such as age and gender are part of the original microdata sets. Also location information may frequently be either part of the dataset or its metadata. On the other hand, such parameters can be easily included in surveys, although representativeness in respect to them will require increased sample sizes (thereby significantly increasing the costs). In particular the data collection for countries in special situations and countries affected by conflict will require strong efforts as the abovementioned data sources are frequently not available." See UNSD, (2014), footnote 3.

# Annex 4: Cross-cutting issues in the indicator framework

Much has been said about the importance of an integrated SDG framework. Indeed, many important issues, such as gender equality, health, sustainable consumption and production, or nutrition cut across different goals and are therefore tracked by indicators arranged under different goals. Similarly, the goals are interdependent and must be pursued together since progress in one area often depends on progress in other areas. As a result, an indicator framework needs to effectively track cross-cutting issues and support integrated, systems-based approaches to implementation.

Below we illustrate how some of the most commonly mentioned cross-cutting issues can be monitored by a combination of Global Reporting and Complementary National Indicators. Some issues have standalone goals, while others are integrated across the framework.

The presentation below is illustrative and incomplete. It focuses only on the indicators that measure explicit SDG outcomes, and does not endeavor to describe all cause-effect relationships.[224] Yet, even in this reduced form, a presentation of indicators by cross-cutting issues facilitates addressing the following critical questions: (i) Are all critical components of the issue addressed in the indicator framework and how can an appropriate balance be struck between input and outcome indicators? (ii) How can one indicator contribute towards more than one objective? (iii) How could a systems-based implementation strategy towards addressing the cross-cutting issues be organized? (iv) How could thematic reporting (section II.4) be organized using relevant Global Reporting Indicators?

Here, we consider the following cross-cutting issues (arranged in alphabetical order):

- Beyond GDP - new measures for development
- Climate change adaptation and mitigation; disaster risk reduction
- Food security and nutrition
- Gender equality
- Global partnership, including financing for sustainable development
- Governance
- Growth and Employment
- Health
- Inequalities
- Industrialization
- Peace and security, and support for vulnerable states
- Science, technology, and innovation
- Sustainable consumption and production
- Sustainable energy for all
- Sustainable land use, forests and terrestrial ecosystems
- Sustainable management of oceans and costal areas
- Water and sanitation

A second important tool for tracking cross-cutting issues is disaggregation. As explained in the report and Annex 3, the monitoring of indicators should be disaggregated as much as possible so that SDG outcomes can be tracked with a high degree of resolution.

[224] Such relationships are described in more detail in SDSN's *Action Agenda for Sustainable Development* and other reports.

## Beyond GDP - new measures for development

New measures for development that go beyond GDP are an important aspect of the SDGs. They do not have a dedicated Goal, but cut across several of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting issue |
|---|---|---|---|
| 8 | 58 | Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts | New measure for development |
| 12 | 77 | [Share of companies valued at more than [$1 billion] that publish integrated reporting] - to be developed | Business reporting |
| 17 | 95 | Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), World Trade Organization (WTO) [other organizations to be added] on relationship between international rules and the SDGs and the implementation of relevant SDG targets | International reporting |
| 17 | 100 | Evaluative Wellbeing and Positive Mood Affect | Happiness and subjective wellbeing |

## Climate change adaptation and mitigation; disaster risk reduction

Climate change adaptation and mitigation, and disaster risk reduction are important SDG priorities. Climate change is explicitly considered under goal 13, but also cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 6 | Losses from natural disasters, by climate and non-climate-related events, by urban/rural (in US$ and lives lost) | Measures economic losses and lives lost to extreme climatic events and other disasters |
| 7 | 55 | Implicit incentives for low-carbon energy in the electricity sector (measured as US$/MWh or US$ per ton avoided $CO_2$) | Reduce greenhouse gas emissions |
| 7 | 56 | Rate of primary energy intensity improvement | Tracks transition to cleaner energy |
| 9 | 66 | Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions ($tCO_2e$). | Reduce greenhouse gas emissions |
| 12 | 76 | Aerosol optical depth (AOD) | Aerosols contribute to climate change |
| 13 | 78 | Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050. | Part of goal 13 |
| 13 | 79 | $CO_2$ intensity of new power generation capacity installed ($gCO_2$ per kWh), and of new cars ($gCO_2$/pkm) and trucks ($gCO_2$/tkm) | Part of goal 13 |
| 13 | 80 | Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector ($tCO_2e$) | Part of goal 13 |
| 13 | 81 | Official climate financing from developed countries that is incremental to ODA (in US$) | Part of goal 13 |
| 15 | 84 | Annual change in forest area and land under cultivation (modified MDG Indicator) | Part of goal 13 |

### In addition, the following Complementary National indicators relate to climate change adaptation and mitigation and disaster risk reduction:

| Indicator number | Complementary National Indicator |
|---|---|
| 1.3 | [Disaster Risk Reduction Indicator] - to be developed |
| 7.1 | Primary energy by type |
| 7.2 | Fossil fuel subsidies ($ or %GNI) |
| 11.1 | Area of public space as a proportion of total city space |
| 11.3 | [Indicator on supporting LDCs for sustainable and resilient building using local materials] – to be developed |
| 11.6 | Percentage of cities with more than 100,000 inhabitants that are implementing risk reduction and resilience strategies informed by accepted international frameworks (such as the forthcoming Hyogo-2 framework) |
| 13.1 | [Climate Change Action Indicator] - to be developed |
| 13.2 | GHG emissions intensity of areas under forest management ($GtCO_2e$ / ha) |

## Food security and nutrition

Food security and nutrition is an important priority that has a dedicated goal (SDG 2), but also cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 3 | Multidimensional Poverty Index | Includes hunger measure |
| 2 | 7 | Proportion of population below minimum level of dietary energy consumption (MDG Indicator) | Part of hunger/nutrition goal |
| 2 | 8 | Prevalence of anemia in women of reproductive age (including pregnant) | Part of hunger/nutrition goal |
| 2 | 9 | Prevalence of stunting and wasting in children under [5] years of age | Part of hunger/nutrition goal |
| 2 | 10 | Crop yield gap (actual yield as % of attainable yield) | Part of hunger/nutrition goal |
| 2 | 11 | Number of agricultural extension workers per 1000 farmers [or share of farmers covered by agricultural extension programs and services] | Part of hunger/nutrition goal |
| 2 | 12 | [Nitrogen use efficiency in food systems] – to be developed | Part of hunger/nutrition goal |
| 2 | 13 | [Phosphorus use efficiency in food systems] - to be developed | Part of hunger/nutrition goal |
| 2 | 14 | [Access to drying, storage and processing facilities] - to be developed | Part of hunger/nutrition goal |
| 2 | 15 | Annual change in degraded or desertified arable land (% or ha) | Part of hunger/nutrition goal |
| 2 | 16 | [Crop water productivity (tons of harvested product per unit irrigation water)] – to be developed | Part of hunger/nutrition goal |
| 6 | 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | Access to clean water for drinking and cooking |
| 6 | 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | Access to sanitation improves nutritional status |
| 12 | 74 | Global Food Loss Indicator [or other indicator to be developed to track the share of food lost or wasted in the value chain after harvest] | Tracks food losses and waste |
| 14 | 83 | Proportion of fish stocks within safe biological limits (MDG Indicator) | Secure and sustainable fish stocks |
| 15 | 84 | Annual change in forest area and land under cultivation (modified MDG Indicator) | Expansion of agricultural land |

**In addition, the following Complementary National indicators relate to food security and nutrition:**

| Indicator number | Complementary National Indicator |
|---|---|
| 2.1. | Percentage of population with shortfalls of: iron, zinc, iodine, vitamin A, folate, vitamin B12, [and vitamin D] |
| 2.2. | Proportion of infants 6–23 months of age who receive a minimum acceptable diet |
| 2.3. | Cereal yield growth rate (% p.a.) |
| 2.4. | Livestock yield gap (actual yield as % of attainable yield). |
| 2.5. | Share of calories from non-staple crops |
| 2.6. | Percentage of total daily energy intake from protein in adults |
| 2.7. | [Indicator on genetic diversity in agriculture] - to be developed |
| 2.8. | [Indicator on irrigation access gap] - to be developed |
| 2.9. | [Farmers with nationally appropriate crop insurance (%)] - to be developed |
| 2.10. | Public and private R&D expenditure on agriculture and rural development (% of GNI) |
| 2.11. | [Indicator on food price volatility] - to be developed |
| 3.23 | Fraction of calories from added saturated fats and sugars |
| 3.24 | Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years |
| 3.25 | Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day |
| 3.26 | Percentage change in per capita [red] meat consumption relative to a 2015 baseline |
| 3.28 | Household Dietary Diversity Score |
| 6.1 | Percentage of population reporting practicing open defecation |
| 6.2 | Percentage of population with basic hand washing facilities in the home |
| 6.3 | Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters |
| 6.4 | Percentage of pupils enrolled in primary schools and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services. |
| 6.5 | Percentage of beneficiaries using hospitals, health centers and clinics providing basic drinking water, adequate sanitation, and adequate hygiene |
| 6.6 | Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters |
| 14.5 | [Use of destructive fishing techniques] - to be developed |
| 14.6 | [Indicator on access to marine resources for small-scale artisanal fishers] - to be developed |

## Gender equality:

Gender equality is an important SDG priority that has a dedicated goal (SDG 5), but also cuts across most of the SDGs. To the maximum extent possible, SDG indicators should therefore be disaggregated by gender (Annex 3). Many dedicated indicators track dimensions of gender equality:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 3 | Multidimensional Poverty Index | Disrupted or curtailed schooling usually affects girls |
| 1 | 5 | Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected | Equal access to land tenure |
| 3 | 31 | Contraceptive prevalence rate (MDG Indicator) | Sexual and Reproductive Health and Rights |
| 4 | 36 | Primary completion rates for girls and boys | Equal access to education |
| 4 | 38 | Secondary completion rates for girls and boys | Equal access to education |
| 4 | 40 | Tertiary enrollment rates for women and men | Equal access to education |
| 5 | 41 | Prevalence of women 15-49 who have experienced | Part of gender goal |

| | | | |
|---|---|---|---|
| | | physical or sexual violence by an intimate partner in the last 12 months | |
| 5 | 42 | Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced | Part of gender goal |
| 5 | 43 | Percentage of women aged 20-24 who were married or in a union before age 18 | Part of gender goal |
| 5 | 44 | Prevalence of harmful traditional practices, including female genital mutilation/cutting | Part of gender goal |
| 5 | 45 | Average number of hours spent on paid and unpaid work combined (total work burden), by sex | Part of gender goal |
| 5 | 46 | Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator) | Part of gender goal |
| 5 | 47 | Met demand for family planning (modified MDG Indicator) | Part of gender goal |
| 7 | 53 | Share of the population with access to modern cooking solutions, by urban/rural | Access to safer, modern cooking |
| 7 | 54 | Share of the population with access to reliable electricity, by urban/rural | Access to safe, reliable electricity |
| 8 | 60 | Ratification and implementation of fundamental ILO labor standards and compliance in law and practice | Ending discrimination |
| 11 | 5 | Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented or recognized rights to housing, and (ii) percentage who perceive their rights to housing are recognized and protected | Equal access to land tenure |
| 16 | 92 | Percentage of children under age 5 whose birth is registered with a civil authority | Access to legal identity |

**In addition, the following Complementary National indicators relate to gender equality:**

| Indicator number | Complementary National Indicator |
|---|---|
| 3.1 | Percentage of births attended by skilled health personnel (MDG Indicator) |
| 3.4 | Coverage of iron-folic acid supplements for pregnant women (%) |
| 3.9 | Percent HIV+ pregnant women receiving PMTCT |
| 3.10 | Condom use at last high-risk sex (MDG Indicator) |
| 3.16 | Percentage of pregnant women receiving malaria IPT (in endemic areas) |
| 3.19 | Percentage of women with cervical cancer screening |
| 4.1 | [Percentage of girls and boys who acquire skills and values needed for global citizenship and sustainable development (national benchmarks to be developed) by the end of lower secondary] – to be developed |
| 4.2 | Percentage of children under 5 experiencing responsive, stimulating parenting in safe environments |
| 4.3 | [Percentage of adolescents (15-19 years) with access to school-to-work programs] - to be developed |
| 4.4 | Literacy rate of 15-24 year-olds, women and men (MDG indicator) |
| 5.1 | Gender gap in wages, by sector of economic activity |
| 5.2 | Share of women on corporate boards of multi-national corporations (MNCs) |
| 5.3 | Percentage of women without incomes of their own |
| 5.4 | Mean age of mother at birth of first child |
| 5.5 | Percentage of young people receiving comprehensive sexuality education |
| 16.1 | Percentage of women and men who report feeling safe walking alone at night in the city or area where they live |

## Global partnership including financing for sustainable development

Global partnership, including financing for sustainable development, is an important SDG priority that cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 8 | 58 | Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts | International reporting on SD |
| 9 | 62 | Mobile broadband subscriptions per 100 inhabitants, by urban/rural | Private sector roll out of broadband coverage |
| 9 | 63 | [Index on ICT maturity] - to be developed | Private sector roll out of ICT |
| 11 | 72 | [Sub-national government revenues and expenditures as a percentage of general government revenues and expenditures] – indicator to be developed | Financing for development |
| 13 | 81 | Official climate financing from developed countries that is incremental to ODA (in US$) | Financing for development |
| 17 | 95 | Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), World Trade Organization (WTO) [other organizations to be added] on relationship between international rules and the SDGs and the implementation of relevant SDG targets | Tracking international organizations' compliance with and support for SDGs |
| 17 | 96 | Official development assistance (ODA) and net private grants as percent of high-income country's GNI | Financing for development |
| 17 | 97 | Domestic revenues allocated to sustainable development as percent of GNI | Financing for development, domestic resource mobilization |
| 17 | 98 | Private net flows for sustainable development at market rates as share of high-income country GNI | Financing for development |

### In addition, the following Complementary National indicators relate to global partnership and financing:

| Indicator number | Complementary National Indicator |
|---|---|
| 2.10 | Public and private R&D expenditure on agriculture and rural development (% of GNI) |
| 3.33 | Public and private R&D expenditure on health (% GNP) |
| 4.7 | [Indicator on scholarships for students from developing countries] - to be developed |
| 6.9 | [Indicator on international cooperation and capacity building in water and sanitation-related activities] - to be developed |
| 11.4 | [Indicator on supporting LDCs for sustainable and resilient buildings using local materials] - to be developed |
| 15.6 | [Indicator on financial resources for biodiversity and ecosystems] - to be developed |
| 15.7 | [Indicator on financial resources for sustainable forest management] - to be developed |
| 15.8 | [Indicator on global support to combat poaching and trafficking of protected species] - to be developed |
| 16.6 | [Compliance with OECD or other applicable Anti-Bribery Convention] - to be developed |
| 16.8 | [Indicator on international cooperation in preventing violence and combating terrorism and crime] – to be developed |
| 16.9 | Percent of UN Emergency Appeals delivered |
| 17.1. | Total Official Support for Development |
| 17.2. | [Indicator on debt sustainability] - to be developed |
| 17.3. | Gross domestic expenditure on R&D as share of GDP |

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|---|---|
| 17.4. | [Indicator on technology sharing and diffusion] - to be developed |
| 17.5. | [Indicator on the creation of / subscription to the Technology Bank and STI (Science, Technology and Innovation) Capacity Building Mechanism for LDCs by 2017] - to be developed |
| 17.6. | Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries (MDG Indicator) |
| 17.7. | Value of LDC exports as a percentage of global exports |
| 17.8. | [Indicator on investment promotion regimes for LDCs] - to be developed |
| 17.9. | Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms |

## Governance

The importance of governance to the SDG agenda is signified by a dedicated goal (SDG 16), but it also cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 5 | 42 | Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced | Rule of law and access to justice |
| 5 | 46 | Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator) | Ending discrimination, ensuring access to political life, representative institutions |
| 12 | 73 | [Publication of resource-based contracts]- to be developed | Transparent and accountable institutions |
| 16 | 90 | Assets and liabilities of BIS reporting banks in international tax havens (as per OECD definition), by country (US$) | Part of goal 16 |
| 16 | 91 | [Publication of all payments made to governments under resource contracts]- to be developed | Part of goal 16 |
| 16 | 92 | Percentage of children under age 5 whose birth is registered with a civil authority | Part of goal 16 |
| 16 | 93 | Existence and implementation of a national law and/or constitutional guarantee on the right to information | Part of goal 16 |
| 16 | 94 | Perception of public sector corruption | Part of goal 16 |

### In addition, the following Complementary National indicators relate to governance:

| Indicator number | Complementary National Indicator |
|---|---|
| 12.2 | [Legislative branch oversight role regarding resource-based contracts and licenses]- to be developed |
| 16.1. | Percentage of women and men who report feeling safe walking alone at night in the city or area where they live |
| 16.2. | Compliance with recommendations from the Universal Periodic Review and UN Treaties |
| 16.3. | Number of children out of school in conflict- or disaster-affected countries |
| 16.4. | [Indicator on security sector reform] - to be developed |
| 16.5. | Frequency of payment of salaries within security forces |
| 16.6. | [Compliance with OECD or other applicable Anti-Bribery Convention] - to be developed |
| 16.7. | [Indicator on illicit financial flows] - to be developed |
| 16.8. | [Indicator on international cooperation in preventing violence and combating terrorism and crime] – to be developed |
| 16.9. | Percent of UN Emergency Appeals delivered |
| 16.10. | Number of journalists and associated media personnel that are physically attacked, unlawfully detained or killed as a result of pursuing their legitimate activities. |

## Growth and employment

Growth and employment are important SDG priorities, articulated in a dedicated goal (SDG 8), but they also cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 1 | Proportion of population below $1.25 (PPP) per day (MDG Indicator) | Growth and employment reduce extreme poverty |
| 8 | 57 | GNI per capita (PPP, current US$ Atlas method) | Part of growth and employment goal |
| 8 | 58 | Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts | Part of growth and employment goal |
| 8 | 59 | Youth employment rate, by formal and informal sector | Part of growth and employment goal |
| 8 | 60 | Ratification and implementation of fundamental ILO labor standards and compliance in law and practice | Part of growth and employment goal |
| 4 | 38 | Secondary completion rates for girls and boys | Education promotes growth and employment |
| 4 | 40 | Tertiary enrollment rates for women and men | Education promotes growth and employment |
| 9 | 64 | Manufacturing value added (MVA) as percent of GDP | Manufacturing creates employment |
| 9 | 65 | Researchers and technicians in R&D (per million people) | Research helps promote growth and employment |

### In addition, the following Complementary National indicators relate to growth and employment:

| Indicator number | Complementary National Indicator |
|---|---|
| 4.4 | Literacy rate of 15-24 year-olds, women and men (MDG indicator) |
| 4.5 | Percentage of young adults (18-24 years) with access to a learning program. |
| 5.1 | Gender gap in wages, by sector of economic activity |
| 8.1. | Growth rate of GDP per person employed (MDG indicator) |
| 8.2. | Working poverty rate measured at $2 PPP per capita per day |
| 8.3. | [Indicator of decent work] - to be developed |
| 8.4. | Household income, including in-kind services (PPP, current US$) |
| 8.5. | Employment to population ratio (EPR) by gender and age group (15–64) |
| 8.6. | Share of informal employment in total employment |
| 8.7. | Percentage of own-account and contributing family workers in total employment |
| 8.8. | Percentage of young people not in education, employment or training (NEET) |
| 8.9. | [Indicator on implementation of 10-year framework of programs on sustainable consumption and production] - to be developed |
| 17.3 | Gross domestic expenditure on R&D as share of GDP |

## Health

In addition to the Global Reporting Indicators under the dedicated health goal (SDG 3), several other indicators capture determinants and manifestations of good health:

| Goal | Indicator number | Global Reporting Indicator | Link to health |
|---|---|---|---|
| 1 | 3 | Multidimensional Poverty Index | Includes child mortality |
| 1 | 4 | Percentage of population covered by social protection programs | Social protection can determine access to healthcare |
| 2 | 7 | Proportion of population below minimum level of dietary energy consumption (MDG Indicator) | Good nutrition is central to good health |
| 2 | 8 | Prevalence of anemia in women of reproductive age (including pregnant) | Good nutrition is central to good health |
| 2 | 9 | Prevalence of stunting and wasting in children under [5] years of age | Good nutrition is central to good health |
| 3 | 17 | Maternal mortality ratio | Part of health goal |

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| 3 | 18 | Neonatal, infant, and under-five mortality rates (modified MDG Indicator) | Part of health goal |
| 3 | 19 | HIV incidence, treatment rate, and mortality (modified MDG Indicator) | Part of health goal |
| 3 | 20 | Incidence, prevalence, and death rates associated with TB (MDG Indicator) | Part of health goal |
| 3 | 21 | Incidence and death rates associated with malaria (MDG Indicator) | Part of health goal |
| 3 | 22 | Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease | Part of health goal |
| 3 | 23 | Current use of any tobacco product (age-standardized rate) | Part of health goal |
| 3 | 24 | Harmful use of alcohol | Part of health goal |
| 3 | 25 | Percent of population overweight and obese | Part of health goal |
| 3 | 26 | [Functioning programs of multisectoral mental health promotion and prevention in existence - Indicator] - to be developed | Part of health goal |
| 3 | 27 | Road traffic deaths per 100,000 population | Part of health goal |
| 3 | 28 | [Consultations with a licensed provider in a health facility or the community per person, per year] - to be developed | Part of health goal |
| 3 | 29 | [Percentage of population without effective financial protection for health care] - to be developed | Part of health goal |
| 3 | 30 | Percent of children receiving full immunization (as recommended by WHO) | Part of health goal |
| 3 | 31 | Contraceptive prevalence rate (MDG Indicator) | Part of health goal |
| 3 | 32 | Healthy life expectancy at birth | Part of health goal |
| 3 | 33 | Mean urban air pollution of particulate matter (PM10 and PM2.5) | Part of health goal |
| 5 | 41 | Prevalence of women 15-49 who have experienced physical or sexual violence by an intimate partner in the last 12 months | Violence causes physical and psychological health problems |
| 5 | 43 | Percentage of women aged 20-24 who were married or in a union before age 18 | Early marriage can lead to many early, high-risk, pregnancies |
| 5 | 44 | Prevalence of harmful traditional practices, including female genital mutilation/cutting | FGM can cause physical and psychological health problems |
| 5 | 47 | Met demand for family planning | SRHR |
| 6 | 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | Access to clean sufficient water, and protection from water borne illnesses |
| 6 | 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | Access to sanitation and protection from related illnesses |
| 6 | 51 | [Percentage of wastewater flows treated to national standards, by municipal and industrial source] – to be developed | Protection from pollution and illnesses related to wastewater |
| 7 | 53 | Share of the population with access to modern cooking solutions, by urban/rural | Improvements in indoor air quality can help reduce lower respiratory infections |
| 7 | 54 | Share of the population with access to reliable electricity, by urban/rural | Improvements in indoor air quality, can help reduce lower respiratory infections |
| 16 | 88 | Violent injuries and deaths per 100,000 population | Conflict leads to health emergencies |
| 16 | 89 | Refugees and internal displacement caused by conflict and violence | Precarious situations which can lead to pandemics |

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|---|---|---|---|
| 16 | 92 | Percentage of children under age 5 whose birth is registered with a civil authority | Access to identity and health services |
| 17 | 100 | Evaluative Wellbeing and Positive Mood Affect | Mental health |

**In addition, the following Complementary National indicators relate to health:**

| Indicator number | Complementary National Indicator |
|---|---|
| 2.1 | Percentage of population with shortfalls of: iron, zinc, iodine, vitamin A, folate, vitamin B12, [and vitamin D] |
| 2.2 | Proportion of infants 6–23 months of age who receive a minimum acceptable diet |
| 3.1. | Percentage of births attended by skilled health personnel (MDG Indicator) |
| 3.2. | Antenatal care coverage (at least one visit and at least four visits) (MDG Indicator) |
| 3.3. | Post-natal care coverage (one visit) |
| 3.4. | Coverage of iron-folic acid supplements for pregnant women (%) |
| 3.5. | Incidence rate of diarrheal disease in children under five years |
| 3.6. | Percentage of exclusive breastfeeding for the first 6 months of life |
| 3.7. | Percentage children born with low birth weight |
| 3.8. | Percentage of 1 year-old children immunized against measles (MDG Indicator) |
| 3.9. | Percent HIV+ pregnant women receiving PMTCT |
| 3.10. | Condom use at last high-risk sex (MDG Indicator) |
| 3.11. | Percentage of tuberculosis cases detected and cured under directly observed treatment short course (MDG Indicator) |
| 3.12. | Percentage of children under 5 with fever who are treated with appropriate anti-malarial drugs (MDG Indicator) |
| 3.13. | Percentage of people in malaria-endemic areas sleeping under insecticide-treated bed nets (modified MDG Indicator) |
| 3.14. | Percentage of confirmed malaria cases that receive first-line antimalarial therapy according to national policy |
| 3.15. | Percentage of suspected malaria cases that receive a parasitological test |
| 3.16. | Percentage of pregnant women receiving malaria IPT (in endemic areas) |
| 3.17. | Neglected Tropical Disease (NTD) cure rate |
| 3.18. | Incidence and death rates associated with hepatitis |
| 3.19. | Percentage of women with cervical cancer screening |
| 3.20. | Percentage with hypertension diagnosed & receiving treatment |
| 3.21. | Waiting time for elective surgery |
| 3.22. | Prevalence of insufficient physical activity |
| 3.23. | Fraction of calories from added saturated fats and sugars |
| 3.24. | Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years |
| 3.25. | Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day |
| 3.26. | Percentage change in per capita [red] meat consumption relative to a 2015 baseline |
| 3.27. | Age-standardized (to world population age distribution) prevalence of diabetes (preferably based on HbA1c), hypertension, cardiovascular disease, and chronic respiratory disease. |
| 3.28. | Household Dietary Diversity Score |
| 3.29. | [Mortality from indoor air pollution] - to be developed |
| 3.30. | Percent of fully and consistently equipped and supplied service delivery points to provide basic package of services |
| 3.31. | Percentage of population with access to affordable essential drugs and commodities on a sustainable basis |
| 3.32. | Percentage of new health care facilities built in compliance with building codes and standards |
| 3.33. | Public and private R&D expenditure on health (% GNP) |
| 3.34. | Ratio of health professionals to population (MDs, nurse midwives, nurses, community health workers, EmOC caregivers) |
| 5.5 | Percentage of young people receiving comprehensive sexuality education |
| 6.1 | Percentage of population reporting practicing open defecation |
| 6.2 | Percentage of population with basic hand washing facilities in the home |

| | |
|---|---|
| 6.3 | Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters |
| 6.4 | Percentage of pupils enrolled in primary schools and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services. |
| 6.5 | Percentage of beneficiaries using hospitals, health centers and clinics providing basic drinking water, adequate sanitation, and adequate hygiene |
| 11.5 | [Percentage of urban solid waste regularly collected and well managed] – to be developed |

## Inequalities

Inequalities are an important SDG priority, with a dedicated goal (SDG 11), but they also cut across most of the SDGs. SDG indicators should be disaggregated by all the key dimensions (Annex 3) to the maximum extent possible, to track progress between different groups and ensure we minimize inequalities. Many dedicated indicators track dimensions of inequality:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 4 | Percentage of population covered by social protection programs | Ending discrimination, equal access to social protection |
| 1 | 5 | Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected | Ending discrimination, equal access to land tenure |
| 5 | 46 | Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator) | Ending discrimination, equal access to economic and political life |
| 8 | 60 | Ratification and implementation of fundamental ILO labor standards and compliance in law and practice | Ending discrimination, protecting vulnerable groups |
| 4 | 36 | Primary completion rates for girls and boys | Universal access to education to reduce inequalities |
| 4 | 38 | Secondary completion rates for girls and boys | Universal access to education to reduce inequalities |
| 4 | 40 | Tertiary enrollment rates for women and men | Universal access to education to reduce inequalities |
| 6 | 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | Universal access to services |
| 6 | 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | Universal access to services |
| 10 | 67 | [Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio] | Part of equality goal |
| 10 | 68 | Percentage of households with incomes below 50% of median income ("relative poverty") | Part of equality goal |
| 16 | 92 | Percentage of children under age 5 whose birth is registered with a civil authority | Universal access to legal identity |

### In addition, the following Complementary National indicators relate to inequalities:

| Indicator number | Complementary National Indicator |
|---|---|
| 5.1 | Gender gap in wages, by sector of economic activity |
| 5.2 | Share of women on corporate boards of multi-national corporations (MNCs) |
| 10.1. | Gini Coefficient |
| 10.2. | Income/wage persistence (intergenerational socioeconomic mobility) |
| 10.3. | [Indicator on migration] - to be developed |
| 10.4. | ODA as a percentage of vulnerable countries' GNI |

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|---|---|
| 10.5. | Net ODA to the LDCs as percentage of high-income countries' GNI (modified from MDG Indicator) |
| 10.6. | Indicator on share of LDCs / LIC representatives on boards of IMF / WB (and other institutions of governance) |
| 10.7. | Average remittance cost |

## Industrialization

Industrialization is an important SDG priority, and has a dedicated goal (SDG 9), which also includes infrastructure. It also cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 4 | 38 | Secondary completion rates for girls and boys | Enhancing math and science skills |
| 4 | 39 | [Percentage of girls and boys who achieve proficiency across a broad range of learning outcomes, including in reading and in mathematics by end of the secondary schooling cycle (based on credibly established national benchmarks)] – to be developed | Enhancing math and science skills |
| 4 | 40 | Tertiary enrollment rates for women and men | Enhancing math and science skills |
| 6 | 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | Universal access to infrastructure and extension services |
| 6 | 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | Universal access to infrastructure and extension services |
| 6 | 51 | [Percentage of wastewater flows treated to national standards, by municipal and industrial source] – to be developed | Universal access to infrastructure and extension services |
| 7 | 54 | Share of the population with access to reliable electricity, by urban/rural | Access to electricity |
| 9 | 61 | Access to all-weather road (% access within [x] km distance to road) | Part of goal 9 |
| 9 | 62 | Mobile broadband subscriptions per 100 inhabitants, by urban/rural | Part of goal 9 |
| 9 | 63 | [Index on ICT maturity] - to be developed | Part of goal 9 |
| 9 | 64 | Manufacturing value added (MVA) as percent of GDP | Part of goal 9 |
| 9 | 65 | Researchers and technicians in R&D (per million people) | Part of goal 9 |
| 9 | 66 | Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions ($tCO_2e$). | Part of goal 9 |
| 12 | 75 | Consumption of ozone-depleting substances (MDG Indicator) | Environmentally safe industrial processes |
| 12 | 76 | Aerosol optical depth (AOD) | Environmentally safe industrial processes |
| 13 | 78 | Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050. | Transition to energy-efficient industrial processes |

### In addition, the following Complementary National indicators relate to industrialization:

| Indicator number | Complementary National Indicator |
|---|---|
| 4.3 | [Percentage of adolescents (15-19 years) with access to school-to-work programs] - to be developed |
| 4.5 | Percentage of young adults (18-24 years) with access to a learning program. |
| 4.7 | [Indicator on scholarships for students from developing countries] - to be developed |
| 7.1 | Primary energy by type |
| 7.2 | Fossil fuel subsidies ($ or %GNI) |
| 9.1 | Percentage of households with Internet, by type of service by urban/rural areas |

| | |
|---|---|
| 9.2 | Employment in industry (% of total employment) |

## Peace and security; support for vulnerable states

Peace and security and support for vulnerable states are important SDG priorities that fall mostly under SDG 16, but also cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 2 | Proportion of population living below national poverty line, differentiated by urban and rural (modified MDG indicator) | Addressing poverty and inequalities |
| 1 | 5 | Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected | Secure land tenure |
| 5 | 42 | Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced | Rule of law, access to justice |
| 5 | 46 | Percentage of seats held by women and minorities in national parliament and/or sub-national elected office according to their respective share of the population (modified MDG Indicator) | Women's and minorities' roles in decision-making, thereby addressing inequalities |
| 8 | 59 | Youth employment rate, by formal and informal sector | Youth dissatisfaction and alienation |
| 8 | 60 | Ratification and implementation of fundamental ILO labor standards and compliance in law and practice | Ending discrimination, protecting vulnerable groups |
| 10 | 67 | [Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio] | Addressing inequalities |
| 10 | 68 | Percentage of households with incomes below 50% of median income ("relative poverty") | Addressing inequalities |
| 12 | 73 | [Publication of resource-based contracts]-to be developed | Good governance and transparency |
| 16 | 88 | Violent injuries and deaths per 100,000 population | Part of goal 16 |
| 16 | 89 | Refugees and internal displacement caused by conflict and violence | Part of goal 16 |
| 16 | 91 | [Publication of all payments made to governments under resource contracts]- to be developed | Part of goal 16 |
| 16 | 93 | Existence and implementation of a national law and/or constitutional guarantee on the right to information | Part of goal 16 |
| 16 | 94 | Perception of public sector corruption | Part of goal 16 |

### In addition, the following Complementary National indicators relate to peace and security; support for vulnerable states:

| Indicator number | Complementary National Indicator |
|---|---|
| 10.1 | Gini Coefficient |
| 10.3 | [Indicator on migration] - to be developed |
| 10.4 | ODA as a percentage of vulnerable countries' GNI |
| 10.5 | Net ODA to the LDCs as percentage of high-income countries' GNI (modified from MDG Indicator) |
| 10.6 | Indicator on share of LDCs / LIC representatives on boards of IMF / WB (and other institutions of governance) |
| 16.1. | Percentage of women and men who report feeling safe walking alone at night in the city or area where they live |
| 16.2. | Compliance with recommendations from the Universal Periodic Review and UN Treaties |
| 16.3. | Number of children out of school in conflict- or disaster-affected countries |
| 16.4. | [Indicator on security sector reform] - to be developed |

| | |
|---|---|
| 16.5. | Frequency of payment of salaries within security forces |
| 16.6. | [Compliance with OECD or other applicable Anti-Bribery Convention] - to be developed |
| 16.7. | [Indicator on illicit financial flows] - to be developed |
| 16.8. | [Indicator on international cooperation in preventing violence and combating terrorism and crime] – to be developed |
| 16.9. | Percent of UN Emergency Appeals delivered |
| 16.10. | Number of journalists and associated media personnel that are physically attacked, unlawfully detained or killed as a result of pursuing their legitimate activities. |
| 17.1 | Total Official Support for Development |
| 17.2 | [Indicator on debt sustainability] - to be developed |

## Science, technology, and innovation

Science, technology, and innovation are important SDG priorities that do not have a dedicated goal, but cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 4 | 40 | Tertiary enrollment rates for women and men | Competencies in math |
| 9 | 62 | Mobile broadband subscriptions per 100 inhabitants, by urban/rural | Broadband access |
| 9 | 63 | [Index on ICT maturity] - to be developed | Quality broadband access |
| 9 | 64 | Manufacturing value added (MVA) as percent of GDP | Skilled workers |
| 9 | 65 | Researchers and technicians in R&D (per million people) | Skilled workers |
| 13 | 78 | Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050. | Innovation required to make DDPP possible |

### In addition, the following Complementary National indicators relate to science, technology, and innovation:

| Indicator number | Complementary National Indicator |
|---|---|
| 2.10 | Public and private R&D expenditure on agriculture and rural development (% of GNI) |
| 3.33 | Public and private R&D expenditure on health (% GNP) |
| 6.10 | [Indicator on participation of local communities for improving water and sanitation management] - to be developed |
| 8.8 | Percentage of young people not in education, employment or training (NEET) |
| 9.1 | Percentage of households with Internet, by type of service by urban/rural areas |
| 14.2 | [Indicator on the implementation of spatial planning strategies for coastal and marine areas]— to be developed |
| 14.7 | [Indicator on transferring marine technology] - to be developed |
| 15.4 | [Indicator on access to genetic resources] - to be developed |
| 17.4 | Indicator on technology sharing and diffusion] - to be developed |
| 17.5 | [Indicator on the creation of / subscription to the Technology Bank and STI (Science, Technology and Innovation) Capacity Building Mechanism for LDCs by 2017] - to be developed |

## Sustainable consumption and production

Sustainable consumption and production are important SDG priorities that have a dedicated goal (SDG 12), but also cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 2 | 12 | [Nitrogen use efficiency in food systems] | Efficiency in agricultural inputs |
| 3 | 23 | Current use of any tobacco product (age-standardized rate) | Healthy behaviors |

| | | | |
|---|---|---|---|
| 3 | 24 | Harmful use of alcohol | Healthy behaviors |
| 3 | 25 | Percent of population overweight and obese | Healthy behaviors |
| 6 | 52 | Proportion of total water resources used (MDG Indicator) | Efficiency in water usage |
| 8 | 58 | Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts | SEEA reporting |
| 11 | 70 | [Ratio of land consumption rate to population growth rate, at comparable scale] – to be developed | Efficiency in land and resource usage |
| 12 | 73 | [Publication of resource-based contracts]-to be developed | Part of goal 12 |
| 12 | 74 | Global Food Loss Indicator [or other indicator to be developed to track the share of food lost or wasted in the value chain after harvest] | Part of goal 12 |
| 12 | 75 | Consumption of ozone-depleting substances (MDG Indicator) | Part of goal 12 |
| 12 | 76 | Aerosol optical depth (AOD) | Part of goal 12 |
| 12 | 77 | [Share of companies valued at more than [$1 billion] that publish integrated reporting] - to be developed | Part of goal 12 |
| 14 | 83 | Proportion of fish stocks within safe biological limits (MDG Indicator) | Part of goal 12 |

### In addition, the following Complementary National indicators relate to sustainable consumption and production:

| Indicator number | Complementary National Indicator |
|---|---|
| 6.6 | Proportion of the flows of treated municipal wastewater that are directly and safely reused |
| 11.5 | [Percentage of urban solid waste regularly collected and well managed] to be developed |
| 12.1 | [Strategic environmental and social impact assessments required] - to be developed |
| 12.2 | [Does the legislative branch have any oversight role regarding contracts and licenses in the oil, gas and mining sector? (Existence and enforcement of legislative framework)] -to be developed |
| 12.3 | [Indicator on chemical pollution] - to be developed |
| 12.4 | [$CO_2$ intensity of the building sector and of new buildings ($KgCO_2$/m2/year)] |
| 12.5 | [Indicator on policies for sustainable tourism] - to be developed |

## Sustainable energy for all

Sustainable energy for all is an important SDG priority that has a dedicated goal (SDG 7), a strong link to goal 13, and that cuts across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 3 | Multidimensional Poverty Index | Access to clean cooking fuel and reliable electricity included |
| 7 | 53 | Share of the population with access to modern cooking solutions, by urban/rural | Part of goal 7 |
| 7 | 54 | Share of the population with access to reliable electricity, by urban/rural | Part of goal 7 |
| 7 | 55 | Implicit incentives for low-carbon energy in the electricity sector (measured as US$/MWh or US$ per ton avoided $CO_2$) | Part of goal 7 |
| 7 | 56 | Rate of primary energy intensity improvement | Part of goal 7 |
| 9 | 66 | Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions ($tCO_2e$). | GHG emissions |
| 9 | 62 | Mobile broadband subscriptions per 100 inhabitants, by urban/rural | Access to reliable broadband |
| 13 | 79 | $CO_2$ intensity of new power generation capacity | Transition to low-carbon energy |

| | | | |
|---|---|---|---|
| | | installed ($gCO_2$ per kWh), and of new cars ($gCO_2$/pkm) and trucks ($gCO_2$/tkm) | |

**In addition, the following Complementary National indicators relate to sustainable energy for all:**

| Indicator number | Complementary National Indicator |
|---|---|
| 9.1 | Percentage of households with Internet, by type of service by urban/rural areas |
| 7.1 | Primary energy by type |
| 7.2 | Fossil fuel subsidies ($ or %GNI) |

## Sustainable land use, forests and other terrestrial ecosystems

Sustainable land use, forests and other terrestrial ecosystems are important SDG priorities that have a dedicated goal (SDG 15), but cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 5 | Percentage of population in rural areas with secure rights to land, measured by (i) percentage with documented or recognized evidence of tenure, and (ii) percentage who perceive their rights to land are recognized and protected | Access to land, land tenure protected |
| 2 | 15 | Annual change in degraded or desertified arable land (% or ha) | Land degradation and desertification |
| 13 | 80 | Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector ($tCO_2e$) | GHG emissions from forest and other land use |
| 15 | 84 | Annual change in forest area and land under cultivation (modified MDG Indicator) | Part of goal 15 |
| 15 | 85 | Area of forest under sustainable forest management as a percent of forest area | Part of goal 15 |
| 15 | 86 | Red List Index | Part of goal 15 |
| 15 | 87 | Protected areas overlay with biodiversity | Part of goal 15 |

**In addition, the following Complementary National indicators relate to sustainable land use, forests and other terrestrial ecosystems:**

| Indicator number | Complementary National Indicator |
|---|---|
| 11.3 | City biodiversity index (Singapore index) |
| 12.1 | Strategic environmental and social impact assessments required] - to be developed |
| 12.5 | [Indicator on policies for sustainable tourism] - to be developed |
| 13.2 | GHG emissions intensity of areas under forest management ($GtCO_2e$ / ha) |
| 15.1. | Improved land ownership and governance of forests |
| 15.2. | [Indicator on the conservation of mountain ecosystems] - to be developed |
| 15.3. | Vitality Index of Traditional Environmental Knowledge |
| 15.4. | [Indicator on access to genetic resources] - to be developed |
| 15.5. | Abundance of invasive alien species |
| 15.6. | [Indicator on financial resources for biodiversity and ecosystems] - to be developed |
| 15.7. | [Indicator on financial resources for sustainable forest management] - to be developed |
| 15.8. | [Indicator on global support to combat poaching and trafficking of protected species] - to be developed |
| 15.9. | Living Planet Index |

## Sustainable management of oceans and coastal areas

Sustainable management of oceans and coastal areas are important SDG priorities that have a dedicated goal (SDG 14), but cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 2 | 12 | [Nitrogen use efficiency in food systems] | Efficiency in agricultural inputs |

| | | | |
|---|---|---|---|
| 6 | 51 | [Percentage of wastewater flows treated to national standards, by municipal and industrial source] – to be developed | Water pollution |
| 6 | 52 | Proportion of total water resources used (MDG Indicator) | Sustainable water use |
| 14 | 82 | [Ocean Health Index] | Part of goal 14 |
| 14 | 83 | Proportion of fish stocks within safe biological limits (MDG Indicator) | Part of goal 14 |

**In addition, the following Complementary National indicators relate to sustainable management of oceans and coastal areas:**

| Indicator number | Complementary National Indicator |
|---|---|
| 6.3 | Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters |
| 6.7 | [Reporting of international river shed authorities on transboundary river-shed management] - to be developed |
| 6.8 | [Indicator on Integrated Water Resources Management (IWRM)] - to be developed |
| 14.1. | Area of coral reef ecosystems and percentage live cover |
| 14.2. | [Indicator on the implementation of spatial planning strategies for coastal and marine areas]— to be developed |
| 14.3. | [Eutrophication of major estuaries] - to be developed |
| 14.4. | Share of coastal and marine areas that are protected |
| 14.5. | [Use of destructive fishing techniques] - to be developed |
| 14.6. | [Indicator on access to marine resources for small-scale artisanal fishers] - to be developed |
| 14.7. | [Indicator on transferring marine technology] - to be developed |

## Water and sanitation

Water and sanitation are important SDG priorities that have a dedicated goal (SDG 6), but cut across many of the SDGs:

| Goal | Indicator number | Global Reporting Indicator | Link to cross-cutting |
|---|---|---|---|
| 1 | 3 | Multidimensional Poverty Index | Includes access to safe drinking water and sanitation |
| 6 | 49 | Percentage of population with access to safely managed water services, by urban/rural (modified MDG Indicator) | Part of goal 6 |
| 6 | 50 | Percentage of population using safely managed sanitation services, by urban/rural (modified MDG Indicator) | Part of goal 6 |
| 6 | 51 | [Percentage of wastewater flows treated to national standards, by municipal and industrial source] – to be developed | Part of goal 6 |
| 11 | 69 | Percentage of urban population living in slums or informal settlements (MDG Indicator) | Includes access to safe drinking water and sanitation |

**In addition, the following Complementary National indicators relate to water and sanitation:**

| Indicator number | Complementary National Indicator |
|---|---|
| 6.1. | Percentage of population reporting practicing open defecation |
| 6.2. | Percentage of population with basic hand washing facilities in the home |
| 6.3. | Proportion of the population connected to collective sewers or with on-site storage of all domestic wastewaters |
| 6.4. | Percentage of pupils enrolled in primary schools and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services. |

| | |
|---|---|
| 6.5. | Percentage of beneficiaries using hospitals, health centers and clinics providing basic drinking water, adequate sanitation, and adequate hygiene |
| 6.6. | Proportion of the flows of treated municipal wastewater that are directly and safely reused |
| 6.9 | [Indicator on international cooperation and capacity building in water and sanitation-related activities] - to be developed |
| 6.10 | [Indicator on participation of local communities for improving water and sanitation management] - to be developed |

# Annex 5: Frequently Asked Questions on Goals, Targets, and Indicators

Below we highlight and answer questions that are asked frequently in relation to indicators for the post-2015 agenda and this report. This Annex complements the FAQs provided in the SDSN *Action Agenda for Sustainable Development.*[225]



### Question 1: What is the purpose of indicators for Sustainable Development Goals?

The indicators serve two purposes: management (to stay on course), and accountability (to hold all stakeholders to the SDGs). For management purposes, the indicators need to be accurate and frequent, reported at least once per year.

### Question 2: Where do the proposed Goals come from? Have they changed since they were first presented by the SDSN in June 2013?

The Goals listed in this revised draft report were proposed by the Open Working Group for Sustainable Development Goals. Earlier drafts of this report were organized around the goals and targets proposed by the Leadership Council of the SDSN in June 2013, following extensive internal and public consultations. Principles for setting Goals, Targets, and Indicators are available on SDSN's website.

[225] SDSN, (2013a).

### Question 3: Who are the indicators for? Can businesses use them?

The indicators are designed to track the SDGs at local, national, regional, and global levels. They would apply to all stakeholders, particularly local and national governments. Civil society can use them for operational, monitoring, and advocacy purposes. Businesses will find them useful to understand and promote their contributions to sustainable development, but most business will require different types of metrics. The World Business Council on Sustainable Development, the Global Reporting Initiative, and the Global Compact are exploring how existing business metrics might be adapted to be consistent with the proposed SDG indicator framework.

### Question 4: What are the main lessons from the MDG Indicators and monitoring of the MDGs?

Many MDG Indicators, such as those for extreme income poverty, are reported with very long lags of 3-5 years, and data coverage remains patchy. Many national statistical systems lack the capacity to generate comprehensive high-quality data. As a result, available data on MDG Indicators cannot serve real-time implementation, management, and progress review. Moreover, it took a very long time for the MDG data collection system to emerge and to improve following the adoption of the MDGs.

The SDGs need annual data collection with higher quality data. We support the call for a "data revolution" made by the High-Level Panel of Eminent Persons on the Post-2015 Agenda. This report lays out how an indicator framework might be constructed.

### Question 5: What can be done differently this time? How can SDG monitoring be better than monitoring of the MDGs?

To enable comprehensive annual reporting on all SDG indicators, the following conditions must be met: First, the indicators need to be well defined and compatible with low-cost but reliable data collection systems. Second, for each indicator one or more organizations from inside or outside the UN system must be made responsible for ensuring annual data collection. Third, governments and the international community must find the resources to fund effective data collection systems at national and international levels. Private companies should make their know-how and services available to support this important effort. Fourth, where it is impossible or inadvisable to collect annual data for an indicator, projections can be used to fill gaps (Annex 3).

### Question 6: What is the relation between the proposed SDG Indicators and existing MDG Indicators?

Where possible, we recommend that existing MDG Indicators be retained for a post-2015 monitoring framework, with improved quality and frequency. Such indicators are marked "MDG Indicator" in the list of proposed indicators. Many new indicators have been added either to cover issues that were not included under the MDGs or to improve and deepen the monitoring of themes covered under the MDGs.

### Question 7: What are "Global Reporting Indicators" and "Complementary National Indicator"?

We propose that each goal be tracked by a small number of global "Global Reporting Indicators" that will be monitored systematically for all countries. Some Global Reporting Indicators apply only to some countries (e.g. malaria indicators), but the vast majority of Global Reporting Indicators have been designed to apply to every country. We recommend that the number of Global Reporting Indicators be kept to no more than 100 indicators – the maximum number of indicators we believe the international system can report and communicate on effectively.

In addition to the Global Reporting Indicators that will, to the extent applicable, be monitored and reported for all countries, we propose additional Complementary National Indicators that individual countries may consider for their monitoring systems. These Complementary National Indicators may relate to issues affecting only a subset of countries, such as neglected tropical diseases (NTDs), or they may relate to issues that a subset of countries may wish to emphasize in their national strategies and reporting. Naturally, countries may consider as many Complementary National Indicators as they like, including indicators not listed in this report or other global lists.

### Question 8: Why do some indicators focus on outcome whereas others focus on inputs or means?

Where possible, the SDGs and their indicators should focus on outcomes, such as ending extreme poverty. Yet, the distinction between outcomes, outputs, and inputs needs to be handled pragmatically, and the design of goals, targets, and indicators should be guided by approaches that are best suited to mobilize action and ensure accountability. In some cases, input metrics can play a critical role in driving and tracking the changes needed for sustainable development. For example, access to health services is a vital component of Universal Health Coverage. Similarly, ODA is difficult to mobilize but critical for achieving the SDGs. Dedicated indicators are needed to track both inputs. Similar considerations apply to several environmental metrics where outcomes might only materialize after long periods of time.

### Question 9: How can a country tell whether it has achieved a target? What are the target ranges for indicators?

Quantitative ranges for the indicators help us determine whether targets have been reached. In some cases the target explicitly defines the indicator range. In the Open Working Group proposal target ranges are highlighted with an "x", signifying that a quantitative target will be determined.[226] In a few cases target ranges need to be defined, either internationally or individually at the country level. For example, in applying Indicator 45 (Percent of population overweight and obese) the WHO or other bodies may propose target ranges that countries could aim for.

Many targets call for "universal access" (e.g. to infrastructure) or "zero" deprivation (e.g. end to extreme poverty or hunger). For each such target, the technical communities and member states will need to define the precise quantitative standard for their commitment to "universal access" or "zero" deprivation. We hope that in most cases these standards (or the "target ranges" for the indicators) will indeed be 100 percent or 0 percent, respectively, but there may be areas where it is technically impossible to achieve 100 percent access or 0 percent deprivation. In such cases countries should aim to get as close as possible to 100 percent or 0 percent, respectively.

### Question 10: Why are some indicators in square brackets?

In some areas available and commonly measured indicators strike us as insufficient to guide the implementation of strategies for achieving the SDGs. If new indicators are needed or if available indicators need to be modified then we present them in square brackets. The SDSN proposes to work with international institutions during 2015 to discuss the relevance, accuracy, appropriateness and realism of the recommended indicators. In a few cases what we are suggesting will turn out not be possible to implement in a timely and accurate manner.

[226] https://sustainabledevelopment.un.org/focussdgs.html

### Question 11: How can the indicators be disaggregated?

Data for the post-2015 agenda should be disaggregated to determine whether population groups are disadvantaged, which might in turn require targeted policies and programs. The descriptions of the proposed SDG indicators outline how these indicators can be disaggregated (see also Annex 3). These suggestions should by no means be seen an exhaustive list – instead we call on countries and international agencies to find creative and effective ways for disaggregating data by (i) characteristics of the individual or household (e.g. sex, age, income, disability, religion, race, or ethnicity); (ii) economic activity;[227] and (iii) spatial disaggregation (e.g. by metropolitan areas, urban and rural, or districts). For disaggregation by age, countries should at a minimum disaggregate by the following set of groups: 0-2 years (infants), 2-5 years (pre-school age), 5-14 years (school age), 15-49 years (childbearing age), 15-64 years (working ages) and 65 years and older (elderly persons). For more details, please see Annex 3.

### Question 12: Why are some composite indices included in this report?

Composite indices like the Human Development Index (HDI) derive an overall numerical score by combining a number of different measures. In general, we do not rely on composite indices, which may obscure rather than clarify. Yet in some cases a composite index can be very useful. This seems to be the case, for example, in capturing multi-dimensional poverty and species extinction. In Annex 1 we discuss the merits of each composite index considered in this report.

### Question 13: Can the post-2015 indicator framework include subjective or perception-based indicators?

As a general approach, we recommend direct, objective measures and experiential metrics from household and other forms of surveys. We nevertheless recommend three perception-based Global Reporting Indicators:

- Evaluative Happiness Wellbeing and Positive Mood Affect (100): this indicator for subjective wellbeing (or happiness) requires perception-based indicators, such as asking people how satisfied they were with their lives in the past year.
- Perception of public sector corruption (93): no broad-based direct measures are available for corruption that could be collected at national scale and compared internationally. The perception-based corruption indicators compiled by Transparency International have become an internationally recognized reference. They are collected in some 177 countries and are used by governments, civil society organizations, businesses, and international organizations on a daily basis. We believe they can make an important contribution to the post-2015 monitoring framework.
- Secure rights to land/urban tenure security (5): documentation alone is often not sufficient to gauge true tenure security, so the perception component of this indicator provides valuable complementary information. In addition, the perception measure may facilitate more useful comparisons across countries.

We also recommend a Complementary National Indicator on people's perceptions of security.

[227] For example, water use should be accounted for by economic activity using International Standard Industrial Classification of All Economic Activities ISIC.

### Question 14: Why are multiple variables combined?

In some cases, multiple variables appear in the same indicator, for instance incidence and death rates for certain diseases. This is consistent with the MDG indicators and should not present any additional burden on statistical systems.

### Question 15: How will we measure baselines for all the new variables?

Historic baselines exist for many of the proposed indicators. In some cases, baselines do not exist and may be difficult to establish. Yet this should not serve as a reason not to create new indicators that are urgently needed. As recommended by the IEAG on the Data Revolution, we should harness the richness of traditional and new data, and work with 'think-tanks, academics and NGOs as well as the whole UN family in analysing, producing, verifying and auditing data, providing a place for experimentation with methods for integrating different data sources, including qualitative data, perceptions data and citizen-generated data, and eventually produce a 'people's baseline' for new goals.[228]'

### Question 16: How do the indicators address the global rules and standards for trade, investment, intellectual property rights, and other areas?

Sound global rules for trade, investment, intellectual property, and many other areas are critical for achieving the SDGs. A large number of intergovernmental and international processes are responsible for setting and enforcing these international rules and standards. For example, trade rules are set through the World Trade Organization (WTO), numerous regional trade bodies, and a rapidly growing number of bilateral agreements. Through its TRIPS provisions, the WTO in conjunction with the World Intellectual Property Organization (WIPO) set international standards for intellectual property rights. The Bank for International Settlements (BIS) coordinates regulatory regimes for the regulation of the finance and insurance industries, and the International Accounting Standards Body (IASB) does the same for international business accounting standards.

The international rules and standards are highly technical and context specific. They also evolve over time. As a result, it may not be possible to specify universal targets for international rules to be achieved by 2030 as part of the SDGs. For this reason, the SDSN proposes that indicator 95 require that the international bodies setting rules and standards provide an annual report on the relationship between the international rules and the SDGs. Such "coherence checks" would highlight inconsistencies between the rules and the global goals, which would then be addressed by member states and other stakeholders. They will also ensure that each standard-setting body takes into consideration the full implications of its rules and standards on the three dimensions of sustainable development.

[228] IEAG on the Data Revolution (2014) *A World That Counts: A Data Revolution for Sustainable Development.*

# Annex 6: Acknowledgments

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1,000 Days Partnership | A38 | A4ID | AbleChildAfrica | Aboriginal Rights Coalition Australia | Action Against AIDS Germany | Action Against Hunger | Action for Global Health | Active Remedy Ltd | Addis Ababa University | African Medical and Research Foundation | Agirre Lehendakaria Center for Social and Political Studies, Basque Country University | AGRECO | AIG | American Public Health Association (APHA) | American Red Cross | Amnesty International | Anheuser-Busch InBev | AquaFed | Asian Development Bank | Asian Pacific Resource and Research Center for Women | Association pour la Formation et l' Insertion de l'Adolescent et de la Femme | Aviva | Badan Pusat Statistik Indonesia | Beer Canada | Belgian Development Cooperation | Beyond Copenhagen Coalition | Bioversity International | Bokma Multilink | Brazilian Society for Ecological Economics | Bridging Agriculture and Conservation Initiative (BACI) | Bundesvereinigung Lebenshilfe | Business Innovation Research Development (BIRD) | Cambodian Child's Dream Organization | Caribbean Policy Development Centre | Caritas Austria | Caritas Germany | CBM | Center for Sustainable Development, Bangalore | Center for Sustainable Development, Udayana University | Centre for Communication and Development Studies | Centre for Community Economics and Development Consultants Society | Centre for Development, Environment and Policy, SOAS (University of London) | Centre for Global Mental Health, King's College London | Center for International Earth Science Information Network (CIESIN), Columbia University | Centre for Poverty Analysis (CEPA) | Centre for Public Mental Health, Department of Psychiatry and Mental Health, University of Cape Town | Centre for Sustainable Community Development, Simon Fraser University | Centre for Sustainable Food Systems, Wilfrid Laurier University | CGIAR Consortium of International Agricultural Research Centers | Change Planet Partners Climate Innovation Foundation - CPPCIF | ChildFund Alliance | Children of the Earth | Children's Investment Fund Foundation | Christ is calling you (Cristo te llama) | Chung-hua Institution for Economic Research | Citizens United to Promote Peace & Democracy in Liberia | Civil Society Working Group on HIV | Columbia University | Commons Action for the UN | Commonwealth Youth Council | Commonwealth Youth Programme | Community Peacebuilding and Cultural Sustainability (CPCS) | Consumers India | Corporación Globalización Ciudadana CGC | Countdown 2015 Europe | Counterfactual Consulting and Advocacy | D. Mendeleev University of Chemical Technology of Russia | Demographic and Health Survey (DHS) Program | Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) | Deutsche Stiftung Weltbevoelkerung | Developmental Media Inc | Dignitas International | Disability & Development Cooperation (bezev) | Earth Institute | Education International | End Water Poverty | ENERTEC-SARL | Environment Research Center - University of Technology, Baghdad-Iraq | Ericsson | Ethical Markets Media | EuroNGOs | European Federation of Older Persons | Eurostat | Family Care International | Federal Ministry of Labour, Social Affairs and Consumer Protection | FIA Foundation | Fondazione Achille Sclavo | Fondazione Eni Enrico Mattei (FEEM) | Food and Agriculture Organization (FAO) | Forest Stewardship Council | French Water Partnership | Friends of the Chair Group on Broader Measures of Progress | Friends of Franbarnie International (FOFI) | Gallup | Gender and Water Programme Bangladesh | GenderInSITE | German NGO Forum on Environment and Development | Gerontology Centre Belgrade, Serbia | Girls Not Brides | Global Alcohol Producers Group | Global Alliance on Armed Violence (GAAV) | Global Alliance to Prevent Prematurity and Stillbirth (GAPPS) | Global Campaign for Education (GCE) | Global Crop Diversity Trust | Global Ecovillage Network | Global Forum for Media Development | Global Health Technologies Coalition | Global Initiative to End All Corporal Punishment of Children | Global Network for Disaster Reduction | Global Network for Neglected Tropical Diseases/Sabin Vaccine Institute | Global Public-Private Partnership for Handwashing with Soap (PPPHW) | Global Soap Project | Global Water Partnership | GSK | Handicap International | Harvard University | HelpAge International | Hertie School of Governance | HNB Garhwal Central University | Horizon International, Yale University | Human Rights Defenders Alert | ICCA Consortium | IDEAS For Us | Institut pour un Développement Durable | Institute of Applied Manpower Research, Planning Commission | institute of Noahide | Instituto Politécnico Nacional-México | Inter-American Development Bank | Interessenvertretung Selbstbestimmt Leben in Deutschland | International Center for Alcohol Policies | International Collaboration for Essential Surgery (ICES) | International Council on Social Welfare | International Disability Alliance (IDA) | International Disability and Development Consortium (IDDC) | International Federation for Family Development | International Federation of Freight Forwarders Association | International Federation of Surgical Colleges (IFSC) | International Fertilizer Industry Association (IFA) | International Forum for Volunteering in Development | International Labour Organisation (ILO) | International Movement ATD Fourth World | International Organisation for Migration (IOM) | International Pediatric Association (IPA) | International Plant Nutrition Institute (IPNI) | International Service | International Union for Conservation of Nature (IUCN) | IPPF EN | IREX | Islamic Relief | Islands and Small States Institute, University of Malta | Istituto per lo Sviluppo della Formazione Professionale dei Lavoratori (ISFOL) | Japan International Cooperation Agency (JICA) | JSD and co Consulting | Kalpavriksh | Kiel Institute for the World Economy | Kindernothilfe | King's College London | Kinga Africa | KPMG International | Kwame Nkrumah University of

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