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
November 25 ~~July,~~ 2014

About this draft report

~~This revised draft report aligns the indicator framework developed by the Sustainable Development Solutions Network (SDSN)~~

Indicators and a Monitoring Framework for the SDGs was first released by the Sustainable Development Solutions Network (SDSN) in February 2014. It underwent a 1.5 month-long public consultation, during which time hundreds of organizations (see below) 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 next 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 on the Sustainable Development Goals. ~~Overall, the OWG priorities match closely the priorities identified by the SDSN, so only nine new Core Indicators were added. Since the number of targets proposed by the Open Working Group is very large and since these targets will likely be consolidated further,~~ This version ~~of the report assigns indicators to goals only.~~

~~The report~~ also ~~includes~~reflected key outcomes from ~~several recent~~ 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. Once the results from this survey are available, we will issue a revised version of this indicator report.

~~An earlier version of the report underwent a 1.5 month-long public consultation. Hundreds of organizations (see below) submitted detailed comments, which have been incorporated into the revised working draft, which is available on the . The comments and additional information on the public consultation are available on the same page. A summary of the comments received is available here.~~

This latest iteration of the report (November 2014) provides more details on annual reporting, aims to reflect emerging consensus amongst expert communities on specific indicators, and the conclusions of the Independent Expert Advisory Group on the Data Revolution~~The SDSN will engage with experts and statistical institutions to strengthen the indicator framework and fill some of the gaps highlighted in this draft report. We will periodically issue revised working versions of the report and align the indicator framework with the emerging goals and targets to be adopted by the General Assembly in September 2015.~~. The report will remain a working draft until early 2015, at which point it will be submitted to the UN Statistical Commission, and any other multi-stakeholder body nominated to guide the SDG indicator process.

We welcome comments on the ideas outlined in this working draft. They should be sent to info@unsdsn.org. To stay abreast of changes to the report and other activities of the SDSN, please sign up for our newsletter.

The 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.

The writing of this report was led by Jeffrey D. Sachs and Guido Schmidt-Traub, and coordinated by Eve de la Mothe Karoubi with support from the Secretariat of the SDSN, including Chandrika Bahadur, Lauren Barredo, Megan Cassidy, María Cortés-Puch, Jessica Espey, Emmanuel Guerin, Carl Mas, Bonnie Scarborough, and Kathy Zhang.

The SDSN is grateful to the following institutions and individuals who have submitted detailed written comments ~~on earlier drafts.~~ Any remaining errors or omissions are the sole responsibility of the authors.

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 |

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The Society for Upliftment of Masses (SUM) | The Sustainability Report | To Love Children Educational Foundation International Inc. | Tsere lamba | UK Health Forum | UN Economic Commission for Europe - Population Unit, Statistical Division | UN Foundation | UN ~~NGO Rep | UN~~ Peacebuilding Support Office | UN Secretary-General's Advisory Board on Water and Sanitation | UN-Habitat | UN/CSD Education Caucus | UNAIDS | UNECE - Working Group on Ageing | UNEP | UNESCO | UNESCO Technical Advisory Group for post-2015 education indicators | UNF Global Alliance for Clean Cookstoves | UNFPA | UNICEF | United Nations Foundation | United Nations Statistics Division | Universidad Iberoamericana Ciudad de México | Universidade Federal do Ceará | Universitat de València | University College London | University of California, Berkeley | University of Edinburgh | University of Hawai'i | University of Hong Kong | University of Siena | University of the Witwatersrand | University of Washington | University Research Company | USAID Office of Population and Reproductive Health | UNSG Advisory Board on Water and Sanitation | Verband Entwicklungspolitik deutsche Nichtregierungsorganisationen (VENRO) | Volvo Group | Walmart | WaterAid | Women in Alternative Action | Women NGOs Secretariat of Liberia (WONGOSOL) | World Association of Girl Guides and Girl Scouts | World Bank | World Food Programme | World Society for the Protection of Animals (WSPA) | World Values Survey | World Vision International | Wuppertal Institute Climate, Energy and Environment | YouAct | Youth Network for Good Leadership in Nigeria | Zoological Society of London |

Table of contents

Designing Indicators and a Monitoring Framework for the Sustainable Development Goals

The Open Working Group (OWG) on the Sustainable Development Goals (SDGs) ~~has just~~ released a set of 17 recommended goals and 169 targets~~17 recommended goals and 169 targets,~~ of which 40 focus on means of implementation. The proposed goals cover an agenda that is very similar to the goals and targets proposed by the Sustainable Development Solutions Network (SDSN) in its 2013 report *An Action Agenda for Sustainable Development*. ~~Yet, 17 goals and 169 targets do not meet the Rio+20 requirement that the goals and targets be "concise, easy to communicate, [and] limited in number." Over the coming months, governments will therefore need to refine and consolidate the goals and targets before they are adopted.~~

Towards a Data Revolution for the SDGs

Governments will adopt the Sustainable Development Goals (SDGs) SDGs in September 2015, and the Millennium Development Goals (MDGs) will expire at the end of that year. So the world must be ready to start implementing the SDGs on 1 January 2016. ~~By then,~~In preparation, SDG indicators and ~~accompanying metrics~~a monitoring framework must be ~~available~~defined, adequate monitoring protocols and data collection modalities agreed, and sufficient resources mobilized to implement the goals. Of course, both existing and new data systems will require continuous strengthening over coming decades, ~~but~~and many ideas outlined in this report can only be implemented over several years. Yet, governments and other stakeholders must be ready to act in 2016.

Getting ready to monitor the SDGs will require a 'data revolution,' as called for by the High-Level Panel on the Post-2015 Development Agenda[1] and many others. The term 'data revolution' has different meanings to different people – some emphasize citizen accountability, others new forms of social and geophysical data, new ways of sharing data, and many other facets. Yet, any data revolution for sustainable development would be meaningless if it did not also address the essential nuts and bolts of monitoring the SDGs in every country. As recognized in the OWG document (para. 17), there is a critical need to strengthen data collection capacity, as well as data quality. In September 2014, UN Secretary-General Ban Ki-moon launched the Independent Experts Advisory Group on the Data Revolution (IEAG) to advise on how the data revolution can be implemented. Their report – *A World That Counts* – was released in November 2014.[2] It emphasizes the crucial role of data for decision-making and monitoring progress, as well as the urgent improvements required to data coverage and quality.

The purposes of this report are threefold: we (i) propose an SDG indicator framework ~~for discussion and improvement; (ii) outline~~ and principles for effective SDG monitoring~~;~~ that are for discussion and ~~(iii~~improvement; (ii) identify gaps that need to be filled ~~by 2016~~ so ~~that~~ the world ~~is well prepared to implement~~has a clear roadmap for monitoring the SDGs from their first day; and (iii) outline other ways to promote the data revolution. We hope the findings of this report will help operationalize the data revolution for the SDGs. Comments and suggestions on this working draft are welcome and should be addressed to info@unsdsn.org.

The report is organized as follows: the main report outlines the rationale and criteria for indicators, including suggestions for how the data might be ~~collected.~~reported upon annually. A first table summarizes the proposed '~~Core~~Global Reporting Indicators' and the suggested '~~Tier 2~~Complementary National Indicators.' Annex 1 outlines suggested principles for setting goals, targets, and indicators, which is also available as a

[1] High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, (2013), *A New Global Partnership: Eradicate Poverty And Transform Economies Through Sustainable Development*, United Nations Publishing, 21.
[2] Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG), (2014), *A World That Counts: Mobilising The Data Revolution for Sustainable Development*.

stand-alone document. Annex 2 describes each ~~Core~~Global Reporting Indicator in detail and defines suggested ~~Tier 2~~Complementary National Indicators. Annex 3 explains how indicators might be disaggregated, and Annex 4 ~~describes how the indicators map against the goals and targets proposed by the SDSN. Annex 5 illustrates how cross-cutting issues can be captured in an integrated indicator framework, and – finally – Annex 6~~ lists frequently asked questions that complement the FAQ in the *Action Agenda* and on our website.

Before turning to the specifics of indicators and the monitoring framework for the SDGs, it is useful to make a few overarching points:

1. **Preliminary analysis:** In spite of an extensive public consultation and many discussions with expert communities, the suggestions in this report remain ~~in an early stage.~~preliminary. We are looking for comments and creativity to improve and complete them. The SDSN is not recommending detailed technical definitions of the indicators at this stage. ~~That would be premature.~~ We recommend a broad public discussion, and further dialogue with international agencies and national statistical offices that will be responsible for indicator collection and reporting. In such a process, we fully expect that other indicators may be considered and technical specifications be determined.

~~2.~~ **Need to limit Global Reporting Indicators to no more than 100:** We underscore the importance of limiting the overall number of ~~SDG~~Global Reporting Indicators to no more than 100 ~~Core Indicators~~. Comments received during the public consultation on an earlier version of the report confirm that 100 ~~Core~~Global Reporting Indicators is the upper limit of what national statistical offices can report on and the international system can ~~report on under~~compile, as part of the ~~SDGs.~~annual SDG monitoring cycle. Of course, governments and specialist agencies collect vastly more ~~variables~~indicators than this, ~~and such~~some of which respond to specific local challenges or thematic priorities. Moreover, a global SDG indicator framework cannot and must not replace the much more detailed reporting in key areas (e.g. biodiversity under the Aichi targets, malaria control programs, education indicators under EFA).

~~3.~~2. ~~In shifting the organization of the Core Indicators from the 10 SDGs proposed by the SDSN to the 17 goals identified by the OWG, nine additional indicators had to be added to the framework, bringing the total to 109 indicators. Since it remains to be seen how the OWG goals and targets will be consolidated to a more manageable number, we present 109 Core Indicators in this report, with the intention to reduce this number to 100 or below as soon as possible.~~For these reasons we propose a set of Complementary National Indicators that countries and regions are encouraged to track. For purely practical reasons these more detailed or context specific indicators may not be reported on internationally, but together the Global and Complementary National Indicators can track all the goals and targets proposed by the OWG.

~~4.~~3. **Importance of developing new indicators:** In many cases, new indicators will have to be developed, together with information gathering systems, to cover new priorities. ~~This~~Such new indicators and preliminary suggestions are presented in square brackets in this report. Developing new indicators will require major investments in national and international capacity to collect and analyze data. The SDSN ~~proposes to work~~is working with interested international institutions and other organizations during 2014 and early 2015 to discuss the development, relevance, accuracy, appropriateness~~,~~ and realism of the recommended indicators. In some cases, what we are suggesting will not be possible to implement in a timely and accurate manner. In other cases, additional indicators may need to be considered. Decisions on what can actually be measured should be ~~advised~~guided by the relevant expert communities, with the advice and leadership of the global institutions charged with oversight, measurement, standards, and implementation of programs. Working together, they should agree upon a roadmap to establish a baseline for the indicator and to move towards timely data collection.

5.4. **Need for additional metrics that are not covered in this report:** This report focuses on indicators that are already or can become part of official national and international data and reporting systems. Indicators provide an important scorecard, but they cover only a part of the world's data needs. Governments, local authorities, businesses, civil society organizations, and other stakeholders will also require management data, geospatially disaggregated information, (e.g. on government facilities or water points), real-time data, performance metrics, and other data, which is not provided by a set of 100 global indicators. Some preliminary suggestions are included among the Tier 2 indicators. in this report among the Complementary National Indicators. Others are described further below (priority 4). Additionally, the SDSN Thematic Groups are exploring with partners how these important components of a data revolution could become part of an expanded post-2015 monitoring framework. Similarly, the SDSN is working with business organizations to explore how available business metrics might be adapted to support a global SDG indicator framework.

6.5. **Urgency to prepare an SDG monitoring framework:** Initiation and implementation of any new information system will take time. Lead agencies should start preparing their information gathering systems as soon as possible, in anticipation of the goals and indicatorstargets that will be adopted in September 2015. The 46th Session of the UN Statistical Commission starting in early 2015 will provide an important forum for discussing draft SDG indicator frameworks, and the July 2015 Financing for Development Conference must mobilize the means. The first SDG review (and accompanying report) can thereby commence in the Economic and Social Council (ECOSOC) or other suitable fora in the summer of 2016. By 2018 at the latest, we would hope that the international system, and notably the UN organizations and partner institutions (including the OECD, World Bank, World Trade Organization and others), would 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 Importance of Metrics and Indicators – Lessons from the MDGs

The purpose of SDG indicators is twofold. First, an indicator should be a **management tool** to help countries develop implementation and monitoring strategies for achieving the SDGs and to monitor progress. Second, an indicator is a **report card** to measure progress towards achieving a target and ensure the accountability of governments and other stakeholders for achieving the SDGs. Often multiple indicators are used for each target. Where possible, we propose objective quantitative metrics. These are complemented with experiential metrics from household and other formstypes of surveys, as well as subjective or perception-based indicators founded on expert judgments or people's perceptions.

While there have been great improvements in data gathering, the MDG indicators have not fully fulfilled their dual purpose because the data come with too great a time lag to be useful in management and accountability. Often the MDG data arrive with a lag of three or more years, which is not useful for real-time management. and accountability. Moreover, data from national statistical systems and household surveys is too often incomplete and sometimes of poor quality. Much greater investmentinvestments in building national statistical capacities and strengthening quality and standards will be required for the SDG indicators to fulfill both key functionsserve as management tools and a report card.

International agencies rely in large part on primary data produced by each country's statistical system. Involvement and cooperation between international agencies and NSOs was largely missed by the MDG process and must be strengthened for the SDGs. SimilarlyHowever, the capacities of NSOs were not strengthened adequately to ensure effective real-time monitoring of the MDGs. Cooperation and support to NSOs was limited during the MDG era and must be strengthened for the SDGs. All of this will require:

- Investing in NSOs, household and national measurement instruments (e.g. vital statistics, censuses, surveys, remote sensing and national accounts, administrative records, Big Data;);
- Identifying areas where statistical standards are currently lacking and asking the statistical community to develop them in the future;

- ~~Identifying the measurement instruments that each country should have in place (e.g. vital statistics, censuses, surveys, national accounts, administrative records, Big Data); and~~
- Specifying the quality requirements (e.g. frequency of data-collection, timeliness of releases, geographical detail, and a common set of variables available for cross-classification purposes).

In addition to national-level reporting of SDG indicators, data should also be collected and reported sub-nationally (e.g. for cities and states/provinces). ~~Geospatial data need to complement the headline indicators identified in this report.~~ Ideally, the schedule for sub-national reporting would track the international schedule for harmonized country reporting. Moreover, great investments are needed in mobilizing new forms of data. We describe some of these opportunities for launching the data revolution below.

Criteria for SDG Indicators

Since a very large number of indicators would be required to comprehensively track progress towards all 169 targets proposed by the working group, we ~~propose~~recommend that countries consider two sets of indicators. ~~The first set consists of Core~~Global Reporting Indicators ~~that~~, which would be reported on by every country on an annual basis and collated by the international community, and Complementary National Indicators. These would be applicable to ~~every country and would track the most essential dimensions of the targets. The second set consists of 'Tier 2' indicators that would track issues that may be applicable to~~ some countries only, such as indicators for neglected tropical diseases (NTDs~~), or that may~~); would give countries greater scope in applying complex concepts, such as inequality, to their specific needs~~. The Tier 2~~; and/or allow for greater specificity on issues of national concern. The Complementary National Indicators represent a menu of options for countries to choose from, though the list we include is far from exhaustive.

~~Criteria for SDG Indicators~~

~~Building upon the criteria proposed in the United Nations Development Group (UNDG) handbook,~~ Together, the Global Reporting Indicators and Complementary National Indicators would track the goals and targets adopted by member states in September 2015. The indicators proposed in this report were chosen to track the full set of goals and targets proposed by the Open Working Group. As underscored above, we fully expect that some of the new indicators and placeholders may not be feasible or that other indicators be added at a later stage.

We propose that robust SDG indicators should be, to the greatest extent possible:

1. **Clear and straightforward:** Indicators need to be simple to compile and interpret. For this reason, composite indicators should be avoided where possible since they require more complex data collection methods, often rely on imputation for missing variables, and arbitrary weighting. Perhaps most importantly, composite indicators to not lend themselves easily to policy recommendations.

2. **Consensus based~~,~~ in line with international standards:** ~~Core~~Global Reporting Indicators, in particular, 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.

3. **Broadly consistent with systems-based information**: To ensure coherence indicators should be broadly consistent with systems of national accounts, systems of environmental-economic accounting, and other systems-based information.

4. **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.

5. **Disaggregated**: Preference should be given to indicators that lend themselves to disaggregation ~~by~~according to (i) characteristics of the individual or household (e.g. gender, age, income, disability, religion, race, or ethnicity~~)~~[3]~~,~~); (ii) economic activity; and (iii) spatial ~~disaggregation~~dimensions (e.g. by metropolitan areas, urban and rural, or districts). As the High-Level Panel of Eminent Persons on the Post-2015 Agenda report recommends, targets can only be considered 'achieved' if they are met for all relevant groups.[i]

6. **Universal:** The set of SDG indicators as a whole needs to track a universal agenda. Many (though not all) ~~Core~~Global Monitoring Indicators should therefore be applicable in developed as well as developing countries.

7. **Outcome-focused, but only if possible:** As with the definition of targets it is generally preferable for indicators to track outcomes. 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, ODA is difficult to mobilize but critical for achieving the SDGs. Dedicated indicators are needed to track both.

~~7.~~8. **Managed by a designated organization:** Each ~~Core~~Global Reporting Indicator should be managed by one or more designated lead organization(s) that will be responsible for annual,

[3] 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).

high-quality national reporting of the indicator with due consideration to cost effectiveness, lean reporting processes, and national monitoring methods.

We ~~recognize that in many cases, countries will augment~~underscore the ~~global list~~importance of ~~indicators with their own~~Complementary National Indicators and other national ~~indicators.~~metrics, which will track local priorities. We strongly encourage this kind of "localization" or contextualization of the indicators~~, especially since many SDGs are inherently local in orientation~~ to ensure that the universal SDG agenda can be implemented in every country and region.

Four Priorities for Developing an SDG Monitoring Framework by 2016

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 tools and report card~~, starting on~~. To the extent possible, this should start from 1 January 2016. To this end, four priority challenges need to be addressed with urgency:

Priority 1: Fill indicator gaps

Many indicators, especially relating to poverty and economic development, are already collected~~,~~ (e.g. as part of the MDG process~~,~~), but important gaps remain. ~~Table 1 at the end of this section highlights key gaps where indicators are either unavailable or where the data is not collected on a routine, harmonized, and comparable basis.~~ For ease of reference we summarize ~~some 19 priority~~10 Global indicators that will need to be developed or refined:

- ~~6: [Percentage of population in extreme multidimensional poverty] - to be developed~~
- ~~8: [Percentage of population with shortfalls of any one of the following essential micronutrients: iron, zinc, iodine, vitamin A, folate, and vitamin B12] - to be developed~~
- 12: [Crop nitrogen use efficiency (%)] - to be developed
- 13: [Excessive loss of reactive nitrogen [and phosphorus] to the environment (kg/ha)] - to be developed
- 14: [Access to drying, storage and processing facilities] - to be developed
- 16: [Crop water productivity (tons of harvested product per unit irrigation water)] – to be developed
- 26: [Functioning programs of multisectoral mental health promotion and prevention in existence - Indicator] - to be developed
- 28: [Consultations with a licensed provider in a health facility or the community per person, per year~~] -~~]— to be developed
- 29: [Percentage of population without effective financial protection for health care] ~~- indicator.~~ – to be developed
- ~~54: [Reporting~~51: [Percentage of ~~international river shed authorities on transboundary river-shed management] -~~ wastewater flows treated to national standards, by domestic and industrial source] – to be developed
- ~~62: [Placeholder for index of decent work]~~
- ~~66~~63: [Index on ICT infrastructure performance] - to be developed
- ~~68: [Researchers and technicians in R&D (per million people)]~~
- ~~70~~67: [Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio]
- ~~75~~72: [Indicator on the deployment of a sustainable development strategy for each urban agglomeration above [250,000]] - to be developed
- ~~81~~77: [Share of companies valued at more than [$1 billion] that publish integrated reporting] - to be developed
- ~~92: [Protected areas overlay with biodiversity]~~
- ~~99: [Indicator on freedom of expression, peaceful assembly, association] — to be developed~~

- ~~108: [Indicator on investments in data and monitoring] — to be developed~~

For each gap, as well as those indicators requiring methodological refinement, the competent specialized agencies of the UN System and other international statistical organizations, such as the OECD or Eurostat, should launch a technical process for identifying and reviewing available indicator options. By mid-2015 these organizations – working with national statistical offices and other stakeholders (e.g. academia, business, and civil society) – should propose new indicators for inclusion in the SDG monitoring framework.

In many cases, sound indicators exist, but ~~they are~~data is not systematically collected on a ~~systematic~~routine, harmonized, and comparable basis– particularly in low-income countries. As highlighted in ~~an~~three SDSN Briefing ~~Paper~~Papers on household survey and indicator coverage, ~~major~~important gaps exist, particularly for key social and environmental metrics.[4] National statistical offices and the international organizations should study these data coverage gaps carefully over the next year and identify practical strategies for filling them. In some cases, this will require increased investments in national statistical systems.

In addition to the ~~Core~~Global Reporting Indicator gaps identified above, countries may also choose to strengthen ~~Tier 2~~Complementary National Indicators. A preliminary selection of ~~Tier 2~~Complementary National Indicators is provided in Table ~~1~~2. Of these, some ~~30~~42 are currently ~~in square brackets,~~marked as "to be developed," as they require further work.

Priority 2: Move towards annual reporting

Timeliness is crucial for data to be a useful management and policy tool. ~~Annual reporting is therefore essential. Not every issue needs to be measured annually, and in some cases the year-on-year change is smaller than the measurement error. Yet, the vast majority of SDG indicators can and should be available on an annual basis, with short lags between data collection and dissemination~~To align with national planning and budgetary processes, SDG monitoring should operate on an annual cycle. The MDGs were also reported on annually, but data featured in annual reports was often 2 to 3 years out of date, rendering it useless for management and monitoring purposes. To overcome this, the SDGs will require much more frequent data collection and/or the use of robust estimation methodologies. These figures would then be reported upon annually, within an internationally harmonized national reporting cycle.

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.[5] 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 need a step change in the way we do business.

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

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

[5] 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.[5] 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.

International institutions also have made the effort to generate annual estimates. The Inter-Agency Group for Child Mortality estimation, for example, ~~Indonesia and Columbia~~already reports annual child mortality figures using multiple data points to develop robust projections of year on year change. Such approaches could be applied to other SDG indicators to enable timely, annual monitoring of progress.[6] Similarly, the World Bank committed in 2013 to report annually on poverty and boosting shared prosperity.[7]

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 in Annex 2. 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 surveyswith 28 developing countries reporting annually on extreme poverty~~ – sometimes as the district level~~.[8] 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.

~~Many countries will need to strengthen their systems for collecting and processing administrative data. The collection of census data has improved tremendously, particularly in Africa, but more investments are needed in ensuring regular high-quality censuses and strengthening vital registration systems.~~

~~A major change will need to happen in the handling of data generated through household surveys, such as the DHS, LSMS, and MICS, as well as other surveys (e.g. labor force surveys, business surveys). Such surveys are often carried out once every five years, and data is published with long lags. Some countries have not run labor force or other surveys for long periods of time. Fortunately, the world can do much better. Peru and other countries have pioneered continuous DHS surveys that collect one fifth of the sample size over a five year period. Such surveys strengthen national capacities by ensuring that enumerators work continuously on a survey as opposed to once every five years. They also produce annual data that can be used to provide annual reporting.~~

~~Other important innovations in national and international household survey programs can help us achieve the aim of high-quality annual data. These include improved ex-ante coordination of questionnaires, systematic geo-referencing~~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

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

[7] 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

[8] Alkire, (2014).

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 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.[9] 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.[10] 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.[11] However, unlike continuous surveys, neither KIS nor the Interim DHS have had much uptake.[12].

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.

[9] See "Continuous Demographic and Health Survey" information sheet at http://dhsprogram.com/pubs/pdf/DM34/DM34.pdf
[10] 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).
[11] See DHS KIS website for more information: http://dhsprogram.com/What-We-Do/Survey-Types/KIS.cfm
[12] Alkire, S, (2014).

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.

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 crosscheck 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).[13] 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 2 and throughout Annex 2.

[13] United Nations, (2003).

An international process for annual reporting

Given the technical and operational feasibility of annual reporting for the three main types of data, the next question is how the annual reporting might be organized to ensure global SDG reporting on an annual basis. Many observers and member states currently propose that the High-Level Political Forum (HLPF) should convene in the middle of each calendar year to review progress towards the SDGs. Alternatively, this role can be assumed by the ECOSOC ministerial meetings, which typically convenes in July.

The ~~Annual reporting on the SDGs could follow this indicative schedule:~~advantage of annual reporting in the middle of a calendar year is that the outcomes might still affect the annual budget cycle for the following calendar 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 show that such a reporting date would make it impossible to consider data from the previous year, which would undermine the SDGs role as a real-time scorecard and management tools. 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.

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

(1) ~~At~~During the ~~start~~first half of each calendar year, ~~one~~ the NSO and/or ~~more~~ specialized agencies gather the national data to complete the national ~~accounts~~reports on that indicator, no later than [~~April 15~~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 ~~June~~September], for a final review, and a cover statement.

(4) The preliminary report would be prepared for publication by [~~end-June~~September] to be available to ~~the~~HLPF or ECOSOC ~~ministerial~~ meetings in [~~July-August~~October-November].

(5) In [~~September-October~~December] the report will be finalized with corrected and updated data, and the final report 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."[14] 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.

Priority 3: Determine financing needs and mechanisms; mobilize resources

[14] 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*, paragraph 1.8. Available here: http://sustainabledevelopment.un.org/content/documents/3647Compendium%20of%20statistical%20notes.pdf

As emphasized throughout this report, sound SDG monitoring systems will require additional resources. Over the coming months, the international community and countries need to undertake 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 Official Development Assistance (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. The SDSN ~~will work~~is working with interested organizations, including the Center for Global Development, the Gates Foundation, Open Data Watch, PARIS21, Simon Fraser University, the UN Statistics Division, UNICEF, the World Bank, and others, to help consolidate available data on financing needs. We hope to be able to share initial findings towards ~~the end of 2014~~in early 2015 in time for the 2015 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 be used most effectively to ensure maximum results. Experience in other areas suggests that dedicated funds or other financing windows 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.[15] Recommendations on pooled funding mechanisms for SDG data will require careful deliberation. ~~Possible options include a dedicated window in the World Bank's International Development Association (IDA), a potential trust fund managed by PARIS21, or regional windows overseen by the Regional Development Banks.~~

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.

Priority 4: ~~Identify~~Promote georeferenced data and integrate complementary unofficial metrics ~~and ensure coherence with~~into SDG framework

Monitoring the SDGs requires many different types of data that 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 performance metrics, including business data and metrics, polling, ~~local geo-referenced surveys, etc.~~georeferenced information on government facilities, etc.

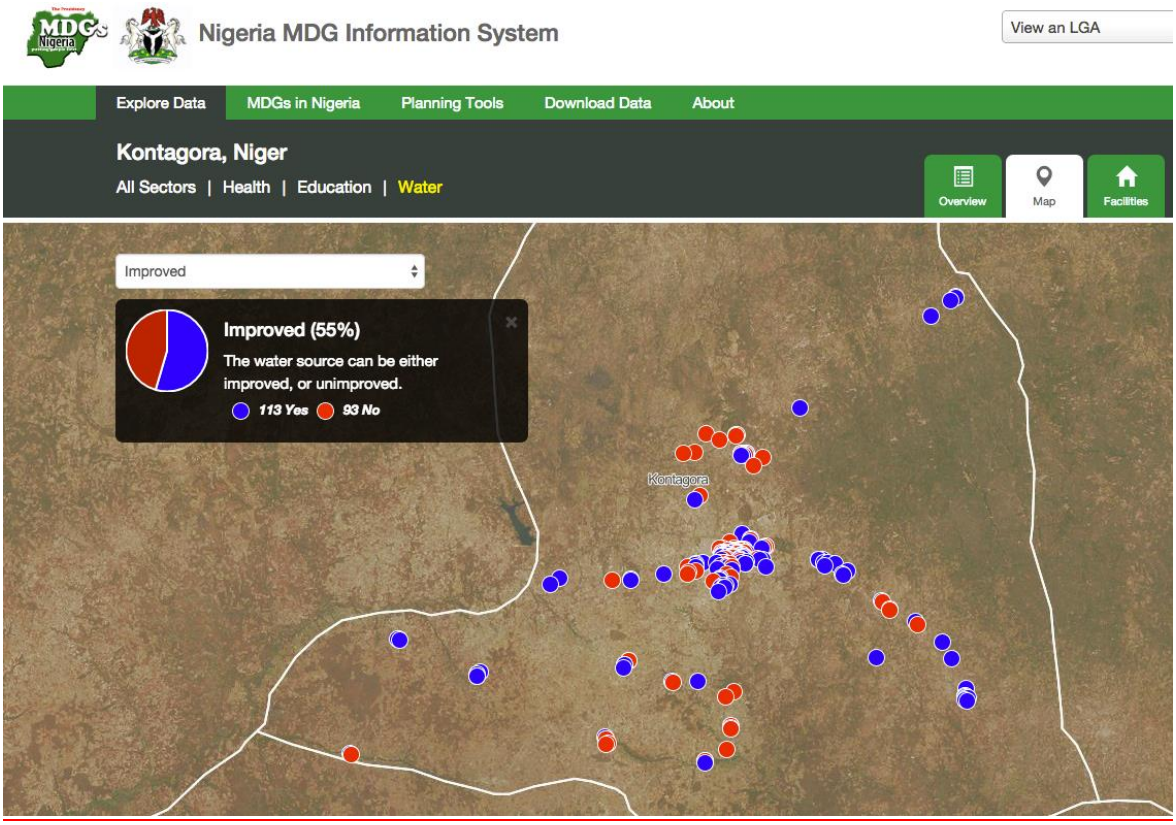
This report and the findings from the consultation suggest that official data, including international household survey data, will play a critical role for the foreseeable time in tracking the SDGs and shaping governments programs. But the revolution in information and communication technologies and 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 (e.g. forest fire, illegal logging, water pollution). As one impressive example, the Nigerian Special Advisor to the

[15] 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.

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.[16] 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

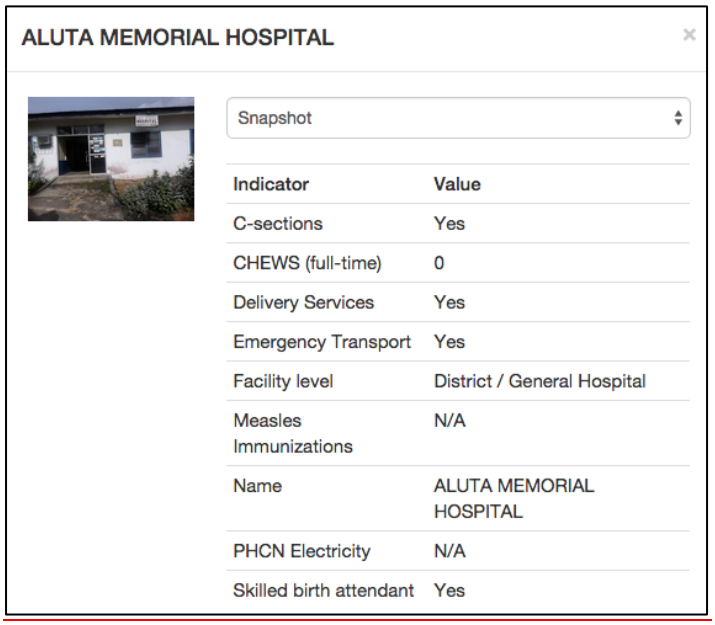


Source: http://nmis.mdgs.gov.ng/

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).

[16] See Nigeria MDG Information System website: http://nmis.mdgs.gov.ng/

Figure 2~~As a first step,~~: 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 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 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 ~~identify~~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.

~~Moreover, every organization – national and local governments, international organizations, civil society organizations, and businesses – will need to ensure that their day-to-day operations and performance metrics are consistent with achieving the SDGs. To this end and, as one example, the World Business Council on Sustainable Development, the Global Compact, and the Global Reporting Initiative (GRI) are investigating how the GRI business metrics and reporting frameworks can be aligned with the draft SDG indicator framework outlined in this SDSN report. Business metrics that are fully aligned with the SDGs and their indicators will be a powerful tool for ensuring coherence between the goals of businesses and governments.~~

Making it Happen

Well-crafted Sustainable Development Goals can mobilize governments, businesses, and civil society organizations around a shared set of goals to end extreme poverty in all its forms and 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 ~~identified.~~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 is 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 a monitoring framework for the SDGs will include:

- Lead international agencies should work with NSOs and other stakeholders to prepare their information gathering systems in anticipation of the goals and indicators that will be adopted in September 2015.
- The 46th Session of the UN Statistical Commission starting in early 2015 should discuss key components of an SDG monitoring framework.
- The July 2015 Financing for Development Conference must mobilize the means for SDG monitoring and other components of the data revolution.
- The first SDG review (and accompanying report) can commence in the Economic and Social Council (ECOSOC) or other suitable fora in ~~the summer of~~ 2016.
- By 2018 at the latest, the international system, and notably the UN organizations and partner institutions (including the OECD, World Bank, World Trade Organization and others) should have in place an accurate and meaningful annual reporting system.

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 therefore convinced that these practical steps can be taken in a timely fashion. The SDSN and its Thematic Groups will work with interested partners to help make the data revolution a reality.

Table ~~1~~2: 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	Percentage of population below $1.25 (PPP) per day (MDG Indicator)	World Bank	8
2	Percentage of population living below national poverty line, differentiated by urban and rural (modified MDG indicator)	World Bank, UN-DESA	11
3	Multidimensional Poverty Index	World Bank, UN Statistics Division, UNICEF, UNDP	2, 3, 4, 8
4	Percentage of population covered by social protection programs	ILO	8, 10
5	Percentage of women and men with secure rights to land, measured by (i) percentage with documented rights to land, and (ii) percentage who do not fear arbitrary dispossession of land	FAO, UNDP	2, 5, 10
6	Losses from natural disasters, by climate and non-climate-related events, by urban/rural (in US$ and lives lost)	UNISDR, FAO, WHO	2, 6, 11, 13
	Complementary National Indicators: 1.1. Poverty gap ratio (MDG Indicator) 1.2. Percentage of population with access to banking services (including mobile banking) 1.3. [Disaster Risk Reduction Index] - to be developed		
Goal 2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture			
7	Percentage of population below minimum level of dietary energy consumption (MDG Indicator)	FAO, WHO	3
8	Percentage of population with shortfalls of any one of the following essential micronutrients: iron, zinc, iodine, vitamin A, folate, and vitamin B12	FAO, WHO	3
9	Percent of children under [5] years of age exhibiting stunting and wasting	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	[Crop nitrogen use efficiency (%)] – to be developed	FAO, International Fertilizer Industry Association (IFA)	
13	[Excessive loss of reactive nitrogen [and phosphorus] to the environment (kg/ha)] - 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: 2.1. Prevalence of anemia in non-pregnant women of reproductive age (%) 2.2. Cereal yield growth rate (% p.a.) 2.3. Livestock yield gap (actual yield as % of attainable yield). 2.4. Share of calories from non-staple crops 2.5. [Indicator on genetic diversity in agriculture] - to be developed 2.6. [Indicator on irrigation access gap] - to be developed 2.7. [Farmers with nationally appropriate crop insurance (%)] - to be developed 2.8. Public and private R&D expenditure on agriculture and rural development (% of GNI) 2.9. [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 prevalence, 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	
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 - Indicator] - 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	
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: 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 of 1 year-old children immunized against measles (MDG Indicator) 3.8. Percent HIV+ pregnant women receiving PMTCT 3.9. Percentage of population with advanced HIV infection with access to antiretroviral drugs (MDG Indicator) 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)		
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)	UNICEF	
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)	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 reading and in mathematics by end of the secondary schooling cycle (based on credibly established national benchmarks)	UNESCO	5
40	Tertiary enrollment rates for women and men	UNESCO	5, 8
	Complementary National Indicators: 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 age 14 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. Proportion of young adults (18-24 years) who are literate 4.5. Percentage of young adults (18-24 years) with access to a learning program. 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		
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, UN Statistics Division	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	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
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: 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		
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, 5, 9, 11
50	Percentage of population using safely managed sanitation	WHO/UNICEF	1, 2, 3, 5, 9,

	services, by urban/rural (modified MDG Indicator)	Joint Monitoring Programme (JMP)	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
52	Percentage of total water resources used (MDG Indicator)	FAO, UNEP	2, 9, 12
	Complementary National Indicators: 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 6.7. [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 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			
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	13
56	Rate of primary energy intensity improvement	Sustainable Energy for All, IEA	13
	Complementary National Indicators: 7.1. Primary energy by type 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, UN Statistics Division	11
58	Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts	UN Statistics Division	12, 17
59	Youth employment rate, by formal and informal sector	ILO	3, 11
60	Ratification and implementation of fundamental ILO labor standards and compliance in law and practice	ILO	5, 9, 10, 17

	Complementary National Indicators: 8.1. Growth rate of GDP per person employed (MDG indicator) 8.2. Working poverty rate measured at $2 PPP per capita per day 8.3. [Index of decent work] - to be developed 8.4. Household income, including in-kind services (PPP, current US$) 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		
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, 5, 11, 17
63	[Index on ICT maturity] - to be developed	ITU	17
64	Manufacturing value added (MVA) as percent of GDP	World Bank, OECD	8
65	Researchers and technicians in R&D (per million people)	OECD, UNESCO	17
66	Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions (tCO_2e).	UNFCCC, OECD	7, 11, 13
	Complementary National Indicators: 9.1. Percentage of households with Internet, by type of service by urban/rural areas 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]	UN Statistics Division, World Bank, OECD	1, 8
68	Percentage of households with incomes below 50% of median income ("relative poverty")	UN Statistics Division, World Bank, OECD	1, 8
	Complementary National Indicators: 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 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		
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
5	Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented rights to housing, and (ii) percentage who do not fear arbitrary eviction	UN-Habitat, UNDP	1, 5

70	Percentage of urban households with regular solid waste collection [and recycling] - to be developed	UN-Habitat	3, 12
71	Percentage of people within [0.5]km of public transit running at least every [20] minutes	UN-Habitat	9
72	[Indicator on the deployment of a sustainable development strategy for each urban agglomeration above [250,000]] - to be developed	World Bank, UN-Habitat	17
	Complementary National Indicators: 11.1. Urban green space per capita 11.2. [Indicator on urban-rural economic linkages] - to be developed 11.3. City Biodiversity Index (Singapore Index) 11.4. [Indicator on supporting LDCs for sustainable and resilient buildings using local materials] - to be developed		
Goal 12. Ensure sustainable consumption and production patterns			
73	Publication of resource-based contracts	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
75	Consumption of ozone-depleting substances (MDG Indicator)	UNEP Ozone Secretariat	9
76	Aerosol optical depth (AOD)	UNEP	9
77	[Share of companies valued at more than [$1 billion] that publish integrated reporting] - to be developed	Global Compact, World Business Council for Sustainable Development, International Integrated Reporting Council (IIRC)	8, 17
	Complementary National Indicators: 12.1. [Strategic environmental and social impact assessments required] - to be developed 12.2. [Does the legislative branch have any oversight role regarding contracts and licenses in the oil, gas and mining sector? (Existence and enforcement of legislative framework)] -to be developed 12.3. [Indicator on chemical pollution] - to be developed 12.4. [CO_2 intensity of the building sector and of new buildings ($KgCO_2$/m2/year)] [Indicator on policies for sustainable tourism] - to be developed		
Goal 13. Take urgent action to combat climate change and its impacts			
78	Availability and implementation of a transparent and detailed deep decarbonization strategy, consistent with the 2°C - or below - global carbon budget, and with GHG emission targets for 2020, 2030 and 2050.	UNFCCC	9, 12, 17
79	CO_2 intensity of new power generation capacity installed (gCO_2 per kWh), and of new cars (gCO_2/pkm) and trucks (gCO_2/tkm)	UNFCCC, IEA	7, 8, 9
80	Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector (tCO_2e)	UNFCCC	2, 15
81	Official climate financing from developed countries that is incremental to ODA (in US$)	OECD DAC, UNFCCC, IEA	17

	Complementary National Indicators: 13.1. [Climate Change Action Index] - to be developed 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	Percentage of fish stocks within safe biological limits (MDG Indicator)	FAO	2, 12
	Complementary National Indicators: 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		
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
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: 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		
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
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	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 or constitutional guarantee on the right to information	UNESCO	10

94	Perception of public sector corruption	Transparency International	
	Complementary National Indicators: 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.		
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	WTO, IMF, WIPO	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
100	Evaluative Wellbeing and Positive Mood Affect	SDSN, OECD	3
	Complementary National Indicators: 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 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 Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms		

Annex 1: ~~Principles for~~ Framing Sustainable Development Goals, Targets, and Indicators

This annex briefly summarizes some suggested considerations for framing Sustainable Development Goals (SDGs) as well as their Targets and Indicators. These principles are derived from two reports prepared by the Leadership Council of the Sustainable Development Solutions Network (SDSN): The *Action Agenda for Sustainable Development* and *Draft Indicators for Sustainable Development Goals*. ~~In these reports the SDSN proposes an integrated framework of 10 goals, 30 targets, and 100 indicators, taking into account as comprehensively as possible the set of principles described below. The SDSN is committed to supporting the various processes underway to design and adopt the SDGs by 2015.~~The principles outlined in this annex have been revised following the release of the recommendations by the Open Working Group.

Why Sustainable Development Goals are Important

As described in the SDSN's *Action Agenda for Sustainable Development*[17] The SDGs will be complementary to the tools of international law, such as legally binding global treaties and conventions, by providing a shared normative framework that fosters collaboration across countries, mobilizes all stakeholders~~,~~ and inspires action. Indeed, as has been demonstrated by the MDGs, well-crafted goals will:

- **Unite the global community and inspire coherent public and private action at local, national, regional, and global levels.** Sustainable development must be pursued at all levels of government (local, national, regional) and by public and private stakeholders, including business, civil society, academia, and research. Well-crafted, outcome-focused goals will foster a unity of purpose across public and private actors. Such goals can be applied at local, national, and regional scales, and will shift the focus of debate from "what?" to "how?"

- **Provide a coherent narrative of sustainable development** and help guide the public's understanding of complex challenges, including neglected ones. The MDGs explain extreme poverty in all its forms and have familiarized decision makers with maternal mortality and other neglected development challenges. Similarly, the SDGs will explain sustainable development ~~by laying out an agreed list of~~and articulate the priority challenges. The goals will educate heads of government, mayors, business leaders, scientists, and other stakeholders about the complex issues that must be addressed in combination. Children everywhere should learn the SDGs to help them understand the challenges that they will confront as young adults.

- **Promote integrated thinking** and put to rest the futile debates that pit one dimension of sustainable development against another. The challenges addressed by the SDGs are inherently integrated, so sustainable development will require that the goals be pursued in combination, rather than individually or one at a time. As a result, SDGs cannot be ordered by priority. All are equally important and work in harmony with the others. Each goal should be analyzed and pursued with full regard to the three dimensions of sustainable development (economic, social, and environmental).

- **Support long-term approaches towards sustainable development.** The goals, targets and indicators will allow public and private actors to chart out long-term pathways to sustainable development, which can be shielded from day-to-day politics, short electoral cycles~~,~~ and short-term business imperatives.

- **Define responsibilities and foster accountability.** The SDGs will also mobilize governments, businesses, civil society, and the international system to strengthen measurement and monitoring

[17] SDSN, (2013a).

for sustainable development. In particular, the goals can empower civil society to ask governments and the private sector how they are working towards every one of the new goals. The new set of goals for sustainable development must also be bolstered by a 'data revolution', i.e. significant improvements in local, national~~,~~ and global data collection ~~and,~~ processing and dissemination, using new tools ~~(GIS, remote sensing, social networking, etc.)~~ as well as existing ones.

- **Inspire active problem solving by all sectors of society.** Just like the MDGs have spurred problem solving, particularly in health and agriculture, the ~~post-2015 goals~~SDGs can promote active problem solving by governments, the private sector~~,~~ and civil society on the challenges of ending poverty, promoting economic growth, strengthening social inclusion and trust, maintaining environmental sustainability~~,~~ and improving governance.

Setting the Goals, Targets, and Indicators

The post-2015 goals should explain sustainable development and highlight the priorities for which a global effort and global solidarity adds value. They can draw attention to neglected issues. The MDGs, for example, have helped galvanize action on child mortality. Today, half as many children die before the age of 5, as in 1990. The targets will set out operational objectives that will be quantified to the maximum extent possible. Indicators in turn provide a set of variables to measure progress at local, national, regional, and global scales. Below we present and then describe criteria for setting goals, targets, and indicators.

<table>
<tr><th colspan="2">Principles for setting SDG goals, targets and indicators</th></tr>
<tr><td rowspan="2">Goals

1. One set of goals with a coherent narrative
2. Universal application
3. Set normative standards
4. Concise and motivation
5. Operational and applicable to all stakeholders
6. Integrated or 'systems-based'
7. Coherent with other intergovernmental processes
8. Dynamic
9. Underpinned by high quality and consistent measuring</td><td>Targets

"SMART" targets that are also;
1. Applicable to all relevant stakeholders
2. Consistent with existing international frameworks
3. Universal but adaptable
4. Action-oriented
5. Clear on their definition of "zero" deprivation</td></tr>
<tr><td>Indicators

1. Clear and straightforward
2. Consensus based
3. Broadly consistent with systems-based information
4. Constructed from well-established data sources
5. Disaggregated
6. Universal
7. Outcome focused, if possible
8. Managed by a designated organization</td></tr>
</table>

The Goals

~~We concur wholeheartedly with the statement in~~ The Rio+20 outcome document mandates that the ~~post-2015 goals~~SDGs should be:

> *"…action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national policies and priorities*."[ii]

Based on this decision and the experience from the MDGs, we suggest ~~10~~9 principles for the ~~post-2015 goals:~~SDGs:

1. **One set of goals that provides a coherent generation-long narrative:** In addition to setting quantitative objectives for sustainable development and providing an indicator framework for ~~accountability and~~ management and monitoring purposes, the SDGs will explain to the world what sustainable development is. Every child should learn them in school as guideposts for the world's most important challenges. The statement of the goals is like the setting of a global compass and narrative: to help guide thinking and action for the next generation. Therefore, the OWG did well to mention priority challenges~~,~~ (including ~~crosscutting~~cross-cutting ones like gender equality or climate change~~, need to be mentioned~~) explicitly in the goals for all to see. Cross-referencing and integration of such ~~crosscutting~~cross-cutting challenges into the targets is important, but priority issues belong in the goals and cannot be "mainstreamed" at the levels of targets alone.

2. **Universal application:** As agreed at Rio+20, the ~~post-2015 goals~~SDGs should challenge and inspire all countries to act, including the high-income countries and emerging economies. This does not mean that every goal must be a "stretch goal" for every country. Many high-income countries will have met the economic goals, but not the social and environmental goals. Poor countries that cannot meet the goals out of their own domestic resources should receive international financial support to do so. The package of goals must map out a balanced universal agenda, allowing for individual goals to apply more to some countries than others.

3. **Set normative standards:** The SDGs must set clear normative standards around which international cooperation for sustainable development can be organized. The ~~SDSN proposes to anchor~~OWG has rightly anchored the fight against extreme poverty as a global norm, together with a right to economic development for all countries that respects environmental constraints ~~(planetary boundaries). We also support the rights-based approach to development~~.

~~1. **Small number of concise goals**: Like the eight MDGs, the post-2015 goals should be few in numbers and easy to learn. We believe that there should be no more than 8-10 concise goals and thirty targets. A good test of conciseness is whether the goals fit easily on the back of a business card.~~

4. ~~**Motivational and easily understandable**: The goals must be~~**Concise and motivational:** As stipulated in the Rio+20 outcome document, the SDGs must be "concise and easy to communicate." As with the MDGs, the goals must be simple to understand and remember, and worded so that they mobilize key communities of stakeholders and the general public. Just like a health goal is needed to mobilize the health community, ~~a~~the goal on cities is needed to mobilize mayors and local authorities ~~that~~who would not rally around a set of sectoral goals. To this end, the goals need to employ direct and simple language that avoids jargon, "negotiators' speak", or excessive scientific precision. ~~For example, the term "cities" is not uniformly defined across the world, but it is well understood by all stakeholders and preferable to more lengthy but precise alternatives.~~ Yet, in some places the SDGs may need to include scientific concepts like biodiversity to educate decision makers and the general public.

5. **Operational and applicable to all stakeholders:** The goals should be framed in such a way that they can be defined and applied in every country, and ideally at sub-national levels as well (e.g. at the city-level). Businesses and civil society organizations should be called upon to share responsibility with governments in achieving the goals. Likewise, giving the poor and marginalized a voice will be a critical part of operationalizing sustainable development. Any process for implementing the sustainable development challenges will need to ensure the participation and voice of all people, particularly the poor and marginalized, in decision-making.

6. **Integrated or "systems-based" goals:** Actions to achieve economic, social, and environmental sustainability are interdependent ~~and~~, so the goals should emphasize the need for integrated approaches that tackle synergies and trade-offs. In many areas systems approaches are needed to devise sustainable strategies. For example, sustainable food production will require agronomic interventions to boost yields, investments in rural infrastructure, action to curb land conversion for agricultural products, greater efficiency in water use, and many other actions. Similarly complex challenges are urban development, biodiversity protection, or decarbonizing energy systems. Carefully crafted goals can promote system-wide approaches to these complex challenges. ~~Examples are the SDSN draft goals 6 (rural prosperity), 7 (cities), 8 (climate change), and 9 (ecosystem management).~~

7. **Coherent with other intergovernmental processes:** In some cases the SDGs are precisely the forum to adopt new quantitative targets, such as an end to extreme income poverty or preventable child stunting. But in many other areas, including biodiversity and climate change, formal intergovernmental processes already exist for agreeing on targets and for monitoring their implementation. Clearly, the SDGs cannot and should not create parallel negotiations and should not include quantitative goals in areas where no international consensus exists today. New climate and biodiversity goals should be agreed under the UNFCCC and the CBD, respectively. Due to their importance for sustainable development, climate change and biodiversity ~~need~~the OWG did well to ~~be included~~include them as headline priorities in the SDGs and the accompanying narrative~~, yet without aiming to supplant or supersede existing agreements between all member states, or new agreements that will be reached. The SDGs should emphasize that country-level actions are to be achieved within the framework of the international treaties~~.

8. **Dynamic goals:** The MDGs were expanded after their initial adoption to include targets on sanitation and reproductive health. The ~~post-2015 goals~~SDGs should be similarly dynamic to incorporate new and more ambitious international agreements reached at a later stage (e.g. on biodiversity or climate change) and to account for new scientific evidence and technological breakthroughs. Such a periodic updating of the ~~post-2015 goals~~SDGs could be part of 5-year review summits.

9. **High-quality and consistent measurement:** The MDGs have suffered from a massive time lag in reporting and patchy data. The ~~post-2015 goals~~SDGs should – to the extent possible – be based on easy-to-measure indicators and should require annual reporting on progress~~. Where possible, indicators should be obtained from integrated data systems, such as systems of national accounts and system of environmental-economic accounts, in order to analyze synergies and trade-offs using international statistical standards~~.

The SDGs should help countries, businesses, the research community~~,~~ and civil society address the sustainable development priorities, which in turn requires a pragmatic approach to designing the goals. ~~Some proposed goals are thematic and focus on outcomes (e.g. health and education). Other~~Some proposed goals are place-based to deal with the need for integration across a broad range of dimensions (e.g. the urban goal) and others are issue-based (e.g. the health and education goals). Finally, some goals highlight crosscutting issues (e.g. gender equality, ~~human rights,~~ water ~~resources management~~and sanitation, climate

change) that affect every goal but require high-level commitment, which can be fostered by a dedicated goal.

The Targets

In comparison to the goals, targets need to be more specific and operational. They should include – where possible – quantitative measures. Targets should also be few in numbers ~~(we propose no more than 30, i.e. three per goal),~~ but their wording can be longer and perhaps more technical. It is widely accepted that to the extent possible targets should be "SMART", i.e. specific, measurable (though some targets may need to be quantified at the national or sub-national level), attainable (though some will be "stretch" goals that can be attained only with considerable effort), relevant, and time bound to 2030 or earlier.

In order to ensure global relevance, we propose five additional principles for SDG Targets:

1. **Applicable to all relevant stakeholders:** Targets need to speak to all relevant stakeholders, including sub-national governments, business, and civil society. For this reason the SDSN avoids referring to governments or countries in the wording of the targets, although some targets proposed by the SDSN refer explicitly to business.

2. **Consistent with existing international targets:** Targets should also be consistent with existing thematic and sectoral target frameworks, such as the Aichi Targets for biodiversity, the Hyogo Framework for disaster risk reduction, or targets adopted by the World Health Assembly. Yet, since the number of existing intergovernmental targets is vast, the SDGs cannot encompass all of them. For this reason a careful balance needs to be struck to ensure consistency with available target frameworks without replicating them fully.

3. **Universal but adaptable to local contexts:** The SDSN recommends that targets be quantified at the global level so that they can effectively galvanize action around the world. However, there are three instances where targets cannot be defined globally in a meaningful way: (i) starting points may differ too much across countries to allow for a single meaningful quantitative standard at the global level; (ii) some targets are highly site-specific, or may be relevant only in subsets of countries ~~(e.g. those that refer to specific ecosystems like Targets 9a and 9b);;~~ and (iii) in some cases no global consensus exists today on quantitative country-level targets, as is the case with greenhouse gas emission reduction targets that need to be negotiated under the UNFCCC. If one of these three conditions is met then the corresponding targets may need to focus on broad principles and ask countries/regions to adopt their own context-appropriate quantitative targets. ~~Such targets are marked with an asterisk by the SDSN in the *Action Agenda for Sustainable Development*.~~

4. **Action-oriented:** Where possible, targets should focus on outcomes, such as ending extreme income poverty. The distinction between outcomes, outputs, and inputs needs to be handled pragmatically, however, and as per the design of goals, target-setting should be guided by approaches that are best suited to mobilize action and ensure accountability. For example, ensuring universal ~~health care~~healthcare coverage or high-quality early childhood development (ECD) are important commitments for every government. Goals and targets that focus on these outputs will ensure operational focus and accountability. Similarly, we support the OWG's proposal to include "input targets" on development finance.

   In some instances it also makes sense to target inputs. For example, official development assistance (ODA) from high-income countries is critical for ensuring many SDGs. Since mobilizing resources for sustainable development is difficult, a dedicated indicator is needed. Subsuming ODA as an implicit input into every target would make it harder to hold governments to account on their ODA commitments. Similar considerations may apply, for example, to ~~the~~a proposed target on integrated

reporting by governments and businesses on their contributions to the SDGs ~~(Target 10a),~~ or the need to impose a price on greenhouse gas emissions ~~(Target 8c).~~.

~~4.~~5. **Clear on their definition of "zero" deprivation:** Most post-2015 targets, including those proposed by the SDSN, the High-Level Panel of Eminent Persons, and the UN Global Compact call for "universal access" (e.g. to infrastructure) or "zero" deprivation (e.g. extreme poverty, 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 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, for example on child mortality. In such cases quantitative standards should be considered for "zero" deprivation. In the case of child mortality, the SDSN and many others recommend an upper threshold of 20 deaths per 1000 live births that can be deemed preventable.[iii]

The Indicators

The purpose of SDG indicators is twofold. First and foremost, an indicator should be a *management tool*, to help countries develop evidence-based implementation ~~and monitoring~~ strategies for achieving the SDGs ~~and to monitor progress.~~. Second, an indicator is a ~~*report card*~~*monitoring tool*, to measure progress towards achieving a target and ensure ~~the~~ accountability to the broad range of ~~governments and other~~ stakeholders ~~for achieving the SDGs. Often multiple indicators are used for each target. These are complemented with experiential metrics from household and other forms of surveys, as well as subjective or perception-based indicators based on expert judgments or people's perceptions.~~.

While there have been great improvements in data gathering, the MDG indicators have not fulfilled their dual purpose because the data comes with too great a time lag to be useful ~~in management and accountability. Often the MDG Indicators arrive with a lag of three or more years, which is not useful~~ for real-time management~~.~~ and for monitoring. Poverty data, for example, is commonly three or more years out of date by the time it is published, compromising the utility of this data for planning and budgetary processes. Data from national statistical systems and household surveys is often incomplete ~~and~~or of poor quality. Much greater investment in building national statistical capacities, strengthening quality and standards will be required for the SDG indicators to fulfill both key functions.

Since a very large number of indicators would be required to comprehensively track progress towards all targets identified by the OWG, we propose that countries consider two sets of indicators. A first set of "~~Core~~Global Reporting Indicators" would ~~be applicable to every country and~~ track ~~the most~~ essential dimensions of the targets~~.~~ and be reviewed by the international community. A second set of "~~Tier 2" indicators~~Complementary National Indicators" would track issues that may be applicable to some countries only, such as indicators for neglected tropical diseases (NTDs), or that may give countries greater scope in applying complex concepts, such as inequality, to their specific needs. The ~~Tier 2~~Complementary National Indicators represent a menu of options for countries to choose from~~, though the~~. Of course countries would be free and even encouraged to consider additional indicators that are not included in a list ~~we include is far from exhaustive.~~of Complementary National Indicators.

Building upon the ~~criteria~~standards proposed in the United Nations Development Group (UNDG) handbook,[iv] we propose ~~that~~ eight criteria for robust SDG indicators (defined below). We have stopped short of stipulating that objective quantitative metrics should ~~to the greatest extent possible~~ always be~~;~~ used, because subjective and perception-based indicators will likely play a role for some goals.

Criteria for SDG indicators:

1. **Clear and straightforward:** Indicators need to be simple to compile and interpret. For this reason, composite indicators should be avoided where possible since they require more complex data collection methods, often rely on imputation for missing variables, and arbitrary weighting. Perhaps most importantly, composite indicators to not lend themselves easily to policy recommendations.

2. **Consensus based~~,~~ in line with international standards:** ~~Core~~Global Reporting Indicators, in particular, 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.

3. **Broadly consistent with systems-based information**: To ensure coherence indicators should be broadly consistent with systems of national accounts, systems of environmental-economic accounting, and other systems-based information.

4. **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.

5. **Disaggregated**: Preference should be given to indicators that lend themselves to disaggregation ~~by~~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 ~~disaggregation~~dimensions (e.g. by metropolitan areas, urban and rural, or districts). As the High-Level Panel of Eminent Persons on the Post-2015 Agenda report recommends, targets can only be considered 'achieved' if they are met for all relevant groups.[v]

6. **Universal:** The set of SDG indicators as a whole needs to track a universal agenda. Many (though not all) ~~Core~~Global Monitoring Indicators should therefore be applicable in developed as well as developing countries.

7. **Outcome-focused, but only if possible:** As with the definition of targets it is generally preferable for indicators to track outcomes. 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, ODA is difficult to mobilize but critical for achieving the SDGs. Dedicated indicators are needed to track both.

~~7.~~8. **Managed by a designated organization:** Each ~~Core~~Global Reporting Indicator should be managed by one or more designated lead organization(s) that will be responsible for annual, high-quality national reporting of the indicator with due consideration to cost effectiveness, lean reporting processes, and national monitoring methods.

Annex 2: Detailed Description of Proposed Indicators and Reporting Framework

~~Annex 2~~This annex provides a ~~detailed explanation~~description of ~~each of~~all the Indicators listed in Table ~~1.~~2. For each Global Reporting Indicator, we provide the rationale and definition, suggest potential levels of disaggregation, ~~a brief discussion~~and discuss some of the limitations ~~and~~ or other remarks. 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.[18] 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. Assessments should be reviewed alongside the Compendium of Statistical Notes, prepared by the Friends of the Chair Group and submitted to the Open Working Group.[19] 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.

The Complementary National Indicators have brief definitions. We will work to develop more detailed descriptions of these indicators in a later revision of this report.

[18] 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

[19] UN Statistics Division, (2014).

Goal 1. End poverty in all its forms everywhere

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator 1: Percentage 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.[20]

Disaggregation: By sex, age, urban/rural, and other qualifiers. Of particular importance is to identify the sex of the head of the household since households headed by women may be more likely to experience extreme poverty.

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: Percentage of population living below national poverty line (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, and other qualifiers. Of particular importance is to identify the sex of the head of the household since households headed by women may be more likely to experience poverty.

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

[20] United Nations, (2003).

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: Multi-dimensional 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, starting with each household's deprivation profile.

Several international multi-dimensional poverty tools exist, including Europe's 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 Multi-dimensional 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).[21] 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.[22] 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 multi-dimensional 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

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[23]); farm assets and a household's vulnerability to economic shocks and those posed by natural hazards (see MPAT's dimensions[24]) and/or quality of work; and

[21] UNDP, (2013), *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*, New York, NY: UNDP.
[22] 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
[23] 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/
[24] See IFAD website: www.ifad.org/mpat/

empowerment or psychological wellbeing (see OPHI's Publications[25]).

Although it might seem preferable to determine multi-dimensional 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.[26] We therefore propose using the Alkire and Foster method of calculation[27], and setting a threshold of multiple deprivations,[28] 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.[29]

Disaggregation: An MPI based on the Alkire and Foster method has the potential to be disaggregated by both regions and groups.[30] 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.[31]

Comments and limitations: A multi-dimensional poverty measure is dependent on high-quality household survey data. 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, as explained on page 13. Furthermore, many of the data for developed 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.

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.[32] 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,

[25] See OPHI website: http://www.ophi.org.uk/research/missing-dimensions/
[26] Alkire, S. and G. Robles (2014). "Identifying the multidimensionally poor: some considerations"
[27] 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.
[28] Alternative cutoffs will be reported, as UNDP's HDRs do for MPI, and the World Bank does for $1.25.
[29] See examples of national level application here: See also CEPAL's Regional MPI for Latin America (forthcoming).
[30] Alkire, S. and A. Sumner, (2013).
[31] 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.
[32] UN Research Institute For Social Development, (2010), *Combating Poverty and Inequality: Structural Change, Social Policy and Politics*, Geneva, Switzerland: UNRISD. http://www.unrisd.org/

employment injury, and general protection against poverty and social exclusion.[33] 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: To be determined.

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

Potential lead agency or agencies: ILO.

Indicator ~~4~~5: Percentage of women and men in rural areas with secure rights to land, measured by (i) percentage with documented rights to land, and (ii) percentage who do not fear arbitrary dispossession of land

Rationale and definition: Whether the rural poor can secure tenure over the land and 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 have placed land rights and the issue of responsible agricultural investment firmly on the global development agenda.

This proposed new indicator comprises two components: (i) percentage with documented rights to land and (ii) percentage who do not fear arbitrary dispossession of land. 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 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: Opportunities for disaggregation to be reviewed.

Comments and limitations: The urban component is under target 7b.

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 ~~5~~6: Losses from disasters, by climate and non-climate-related events, by urban/rural (in US$ and in lives lost)

[33] See ILO Social protection website: http://www.ilo.org/global/topics/social-security

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,[34] 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).[35] 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."

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.[36]

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.[37]

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 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

[34] 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.

[35] 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

[36] 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).

[37] See DaLA Methodology, at the Global Facility for Disaster Reduction and Recovery, available here: https://www.gfdrr.org/Track-III-TA-Tools

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.[38]

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.[39]

~~Indicator 6: [Percentage of population in extreme multi-dimensional poverty] — Indicator to be developed~~

~~Rationale and definition: Multi-dimensional 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 multi-dimensional poverty indices exist, including IFAD's Multidimensional Poverty Assessment Tool (MPAT) and the more widely known Multi-Dimensional Poverty Index (MPI) prepared by the UNDP's Human Development Report Office. The MPI tracks deprivation across three dimensions: health (child mortality, nutrition), education (years of schooling, enrollment), and living standards (cooking fuel, toilet, water, electricity, floor, assets).[40] It measures the households that suffer deprivation across one of the above dimensions by aggregating the measure for that dimension.~~

~~This measure has been critiqued for clustering and weighting the sub-indicators under three very broad dimensions. The result of which is that even an individual who lacks access to water may not be considered poor, if they have some level of education and adequate nutrition. To overcome this limitation and to ensure our conceptualization of multi-dimensional poverty is firmly rooted in the Millennium Declaration and the MDGs, we support the creation of a slightly revised indicator. At a minimum this 'MPI2015' would track extreme deprivation in nutrition, education, health care, water, sanitation, access to modern cooking solutions and reliable electricity, to show continuity with MDG priorities. More specifically it would estimate the share of households that suffer from the following:~~

~~5.~~10. ~~Adult or child malnourishment~~
~~6.~~11. ~~Disrupted or curtailed schooling (a minimum of years 1-8)~~
~~7. Child mortality within the family~~
~~8. Lack of access to clean drinking water~~
~~9.~~12. ~~Lack of access to basic sanitation services~~
~~10. Lack of access to modern cooking solutions~~
~~11. Deprived of basic modern assets (radio, TV, telephone, bike, motorbike, car etc.)~~
~~12.~~13. ~~Lack of access to reliable electricity~~

~~Possible additional indicators include farm assets and a household's vulnerability to shock, including economic shocks and those posed by natural hazards (see MPAT's dimensions[41]) and/or q, and agency, physical safety and exposure to violence, social connectedness, social isolation, shame and psychological~~

[38] 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.
[39] 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.
[40] UNDP, (2013), *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*, New York, NY: UNDP.
[41] See IFAD website: http://www.ifad.org/mpat/

wellbeing (see OPHI's Working Paper Series[42]).

Although it would be preferable to determine multi-dimensional poverty based on deprivation in any one of these areas, previous MPIs have found considerable abnormalities in using only one deprivation, partly because of irregularities brought about by cultural norms and partly because the scale of these deprivations is so widespread. Determining poverty levels in a country like India, on the basis of any one of the deprivations, would result in poverty rates above 90%, potentially overshadowing the considerable progress that has been made in one or more areas and disincentivizing political action. We therefore propose using the Alkire and Foster method of calculation[43], and setting a threshold of two or more deprivations, to determine who is or is not considered poor. Establishing these thresholds will require participatory discussions as well as expert consultation. Alternative thresholds could also be tailored to specific national contexts, as Mexico, Columbia and Bhutan have done.[44]

Disaggregation: An MPI based on the Alkire and Foster method has the potential to be disaggregated by both region and groups.[45] Of particular importance is to identify the sex of the head of the household since households headed by women may be more likely to experience multi-dimensional extreme poverty. It can also assess inequality, amongst three groups: those who are vulnerable to poverty, those in acute poverty and those in severe poverty. However, using household level survey data does present problems for assessing gendered and children's experiences of poverty, as it is not possible to accurately disaggregate within the household. Additional modules on gendered and children experiences of poverty will be required.

Comments and limitations: A multi-dimensional poverty measure is dependent on high-quality household survey data. 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, internationally comparable household survey data for developing countries comes from three main sources; Demographic Health Survey (DHS), Living Standards Measurement Survey (LSMS) and the Multi-Indicator Cluster Survey (MICs), however each have slightly different methodologies and report only semi-regularly. For example, the 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). Developed country data comes from surveys such as the EU's Statistics on Income and Living Conditions (available for 29 countries) but survey methodologies seldom allow for international comparison, particularly with data from developing countries.

To increase the frequency of household surveys and to promote consistency between international agencies, SDSN endorses the proposal of the OPHI Multi-dimensional Poverty Peer Network, for a rapid multi-topic household survey methodology to be adopted by the United Nations, and collected bi-annually.[46] This would complement more detailed, rigorous surveys, such as DHS and provide more timely and universal household data.

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

Potential lead agency or agencies: To create and track a robust multi-dimensional poverty indicator, the frequency of household surveys would need to be expanded to an annual rate, and targeted to measure indicators of extreme poverty. We believe that the World Bank in conjunction with the UN Statistics Division

[42] See OPHI website: http://www.ophi.org.uk/research/missing-dimensions/
[43] Alkire, S. and J. Foster, (2011), Understanding and misunderstandings of multidimensional poverty measurement, *The Journal of Economic Inequality*, June 2911, Volume 9, Issue 2, pp 289-314; and Alkire, S. and A. Sumner, (2013), *Multidimensional Poverty and the Post-2015 MDGs*, OPHI Briefing Note.
[44] See examples of national level application here: http://www.ophi.org.uk/policy/national-policy/
[45] Alkire, S. and A. Sumner, (2013).
[46] Alkire, S., (2014), *A New Household Survey to Catalyse the Data Revolution*, Post2015.org: http://post2015.org/2013/11/21/a-new-household-survey-to-catalyse-the-data-revolution/

~~and other UN agencies should plan to carry out and analyze such an annual household survey, drawing on the expert inputs of the Oxford Poverty and Human Development Initiative (OPHI) amongst others.~~

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

1.1. ~~**[Disaster Risk Reduction (DRR) Index] — Indicator to be developed**. Composite indicator that measures reduction of disaster risk, including existence of DRR management plan, DRR authority, early warning systems, and availability of DRR funding.~~
1.2. **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.
1.3. **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.).
1.4. **[Disaster Risk Reduction (DRR) Index]— Indicator to be developed**. Composite indicator 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 ~~Core~~Global Reporting Indicators:

Indicator 7: Percentage 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.[47]

Comments and limitations: To be reviewed.

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 and WHO.

Indicator 8: ~~[~~Percentage of population with shortfalls of any one of the following essential micronutrients: iron, zinc, iodine, vitamin A, folate, and vitamin B12~~] — to be developed~~

Rationale and definition: Micronutrients are essential for good health, however shortfalls[48] of one or more micronutrients are common in some regions~~, with~~ due to diet ~~and,~~ poverty ~~being driving factors~~, and/or illness. Micronutrient deficiencies are especially devastating to pregnant women and children, as deficiencies during the first 1000 days can have lifelong affects~~. Many measures~~ on physical, mental, and ~~mappings exist for shortfalls of the six most commonly deficient micronutrients: the minerals~~ emotional development. The WHO tracks iron, ~~zinc, and~~ iodine, and folate deficiencies globally. Dozens of countries track deficiencies in zinc and the vitamins A~~, B12,~~ and ~~folate. An indicator that tracks these~~B12.[49] All six deficiencies should be tracked on a global, comparable scale ~~needs to be developed~~.

[47] United Nations, (2003).

[48] 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.

[49] WHO and FAO, (2006), *Guidelines on food fortification with micronutrients,* edited by Lindsay Allen, Bruno de Benoist, Omar Dary, and Richard Hurrell, available at http://www.who.int/nutrition/publications/guide_food_fortification_micronutrients.pdf.

~~The structure and composition of the~~ This indicator ~~would need to be developed on the basis~~will track the percentage of the population with shortfalls in each of ~~a thorough review of available data on~~the 6 micronutrients ~~and opportunities for scaling up data collection under the SDGs~~listed above. The goal would be to capture every person suffering from a micronutrient deficiency, not just iron deficiency (anemia) as under the MDGs. Depending on the local diet, it is possible that not all 6 micronutrients will need to be tracked in every country or region of a country. An international organization such as WHO should make such a determination. Where possible, countries should identify sensitive sub-populations facing shortfalls in multiple micronutrients and focus interventions on these groups. Interventions should not be limited to supplements but should also include improving overall diets and reducing the prevalence of diseases that prevent the uptake of micronutrients.

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

Comments and limitations: Some experts suggest that vitamin D be added this list. This question would need to be resolved before this indicator is included in a post-2015 monitoring framework. A complementary indicator on micronutrient deficiencies is anemia in non-pregnant women (see ~~Tier 2~~Complementary National Indicators below).[50]

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 indicator 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 measures the percentage of children age [5] years~~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 in children captures the broad effects of chronic malnourishment and therefore is a good indicator for the hunger target. Stunting in children can have severe impacts on the physical, mental, and emotional development of children, and evidence has shown that the effects of stunting at a young age, particularly on brain development, may be impossible to undo at a later age even if the child receives appropriate nutrition. This indicator therefore draws attention to the critical importance of providing adequate nutrition to young children.~~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.

[50] WHO, (2014c).

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

Comments and limitations: Some advocate for measuring ~~stunting at~~children aged 2 years and under. A final decision on the age at which to measure ~~stunting~~ will need to be taken.

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

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

Potential lead agency or agencies: The indicator is routinely measured and data could be collected by UNICEF and WHO.[51]

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.[52]

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 ~~agriculture~~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.

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

[51] WHO, (2014b).
[52] 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.

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: To be determined.

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.[53]

Indicator 12: [Crop nitrogen use efficiency (%)] – to be developed

Rationale and definition: Nitrogen plays a central role for the productivity, sustainability and environmental impact of food systems. Most of the anthropogenic nitrogen produced enters global cycles as fertilizer in crop production. Hence, optimizing 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.
This indicator is the ratio of nitrogen in harvested crop products to the amount of nitrogen applied per cropping season or year. It is directly related to the efficiency of fertilizer use on agricultural land, including new technologies and stewardship programs targeting farmers and advisors.

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 indicator and the water productivity indicator. A possible target range for this indicator could be to improve crop nitrogen efficiency by [30%] relative to current levels in countries in which the current efficiency is well below levels than can be achieved with good nutrient management and stewardship.

The SDSN and the International Fertilizer Association are working with international and regional organizations, ~~the fertilizer~~ industry, and the scientific community ~~should work together~~ to refine this indicator. ~~This~~Consensus is beginning to emerge and this indicator should be clearly defined by September 2015. 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).

Disaggregation: Spatially and by crops or farming system.

Comments and limitations: We recognize the importance of other macro- and micronutrients for sustainable crop and livestock production through balanced nutrition. However, globally, nitrogen use and use-efficiency is of overarching importance also due to its impact on a wide range of ecosystem services (see also Indicator 13). Also, the proposed indicator does not address unsustainable soil nutrient depletion, which may reduce crop production and economic return. Countries where nutrients are underused in agriculture should consider additional indicators and quantitative targets for addressing such situations of underuse of nutrients.

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

[53] Ibid.

Primary data source: TBD

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

Indicator 13: [Excessive loss of reactive nitrogen [and phosphorus] to the environment] - to be developed

Rationale and definition: Nitrogen and phosphorus in fertilizers are essential for feeding the world's population. They are also critical for intensive farming, thereby limiting the conversion of land to agriculture. Both nutrients will play a critical role in achieving the SDGs after 2015. Large differences exist within and among countries in nutrient cycles. While some regions – notably sub-Saharan Africa – use too little nitrogen and phosphorus and thus deplete their soils, others experience excessive lifecycle losses of reactive nitrogen and phosphorus primarily from agriculture and livestock, but also from fuel combustion, sewage, and other activities. Such excessive nitrogen flows may affect the stability of key ecosystems and biomes, in particular marine ones, with repercussions at regional and global scales. Nutrients also move across political boundaries, requiring concerted international action to promote best management practices without undermining agricultural productivity.

As described by the SDSN Thematic Group on Sustainable Agriculture and Food Systems,[55] the main way of reducing nutrient losses without reducing agricultural productivity and soil quality is the effective and efficient application of plant nutrients, for which a variety of indicators can be utilized. Here we propose to define a complementary indicator to monitor excessive nutrient loads that cause damage to ecosystem functions. Such an indicator may be derived from work on indicators for nitrogen flows that is underway in several fora, including the Convention on Biological Diversity[56], the OECD, and industry initiatives.[57]

The SDSN and the International Fertilizer Association are working with international and regional organizations, industry, and the scientific community to refine this indicator. Consensus is beginning to emerge and this indicator should be clearly defined by September 2015.

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

Comments and limitations: We underscore that today's scientific understanding of regional and global nitrogen cycles is not robust enough to set quantitative planetary boundaries for nitrogen and phosphorus. Boundaries that have been proposed in the past may need to be revised.[58] Considering the importance of nutrients for sustainable development, advancing our knowledge of regional and global tipping points related to excessive loss of reactive nitrogen and phosphorus to quantify safe regional and global thresholds should be an important priority for earth systems science. Likewise, our understanding of the pathways through which excessive nitrogen flows affect the environment at local, national, regional, and global scales need to be improved to design clear headline indicators for nitrogen flows.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: TBD

[54] Ibid.
[55] Ibid.
[56] For more information, see Biodiversity Indicators Partnership webpage: www.bipindicators.net/nitrogenloss
[57] See in particular the 4R Nutrient Stewardship (www.nutrientstewardship.com)
[58] For example, see de Vries, M et al., (2013), Assessing planetary and regional nitrogen boundaries related to food security and adverse environmental impacts, *Current Opinion in Environmental Sustainability 5:392–402.*

Potential lead agency or agencies: UNEP or other agency.

Indicator 14: [Access to drying, storage, and processing facilities]— ~~Indicator~~ 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.[59]

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: To be determined.

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 over a period of time.[60] 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[61], 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: To be determined.

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

Potential lead agency or agencies: FAO, UNEP.

[59] Dobermann, A. and Nelson, R. et al., (2013).
[60] See FAOSTAT: http://faostat.fao.org/site/375/default.aspx
[61] 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.

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.[62]

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

Primary data source: TBD

Potential lead agency or agencies: FAO.

~~Additional~~Complementary National indicators that countries may consider:

2.1. **Prevalence of anemia in non-pregnant women of reproductive age**. Anemia is a multi-factorial disorder caused mainly by iron deficiency and infections and to a lesser extent by deficiencies of vitamin A, vitamin B12, folate, and riboflavin. It 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).

2.2. **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.

2.3. ~~**[Indicator on food price volatility] - to be developed**: extreme food price volatility is an important driver in food security and should be tracked.~~

2.4. ~~**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~~

- ~~**[Indicator on genetic diversity] - to be developed**: This indicator will track seed and genetic plant diversity~~

2.5. **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.

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

2.7. ~~**Prevalence of anemia in non-pregnant women of reproductive age**. Anemia is a multi-factorial disorder caused mainly by iron deficiency and infections and to a lesser extent by deficiencies of vitamin A, vitamin B12, folate, and riboflavin. It 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).~~

[62] Van Ittersum, M.K. et al., (2013).

2.8. ~~**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.~~

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

~~2.9.~~2.10. **[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.

~~2.10.~~2.11. **[Farmers with nationally appropriate crop insurance (%)]— to be developed**. This indicator seeks to quantify resilience (to storms, floods, drought, pests, etc.) in agricultural systems.

~~2.11.~~2.12. **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

~~2.12.~~2.13. **[Indicator on food price volatility] - to be developed**: extreme food price volatility is an important driver in food security and should be tracked.

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

Potential and Illustrative ~~Core~~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.[63]

Comments and limitations: Both metrics are difficult to measure as vital registration and health information systems are often weak in developing countries.

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, the United Nations 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. 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.[64]

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 represent an important subcomponent of under-five mortality rate, because past trends are for slower declines in neonatal and infant deaths than among children age 1 to 4.[65]

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.

[63] See WHO website on maternal and perinatal health: www.who.int/reproductivehealth/topics/maternal_perinatal/en/index.html
[64] 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.
[65] Ibid, 10.

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

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 prevalence, treatment, and mortality rates (modified MDG Indicator)

Rationale and definition: This indicator measures the number of individuals by age group living with HIV expressed as a percentage of the total population in the age group, as well as treatment rates with anti-retroviral therapy by age group. This tracks progress towards reducing HIV infection and improving access to treatment. Treatment describes the percentage of in each age group with HIV currently receiving antiretroviral therapy (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.

Disaggregation: By sex and age.

Comments and limitations: The age-specific measure of HIV prevalence is a better proxy for monitoring overall HIV incidence because trends in HIV prevalence differ by age group.

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 and UNAIDS report on the data for global monitoring.[66]

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.[67]

[66] UNAIDS, (2013), 30.
[67] See WHO website on TB: http://www.who.int/tb/en

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.[68]

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.[69]

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.[70]

Disaggregation: By sex. 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.[71]

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)

[68] United Nations, (2003).
[69] See WHO website on malaria: http://www.who.int/topics/malaria/en
[70] WHO Indicator and Measurement Registry, Version 1.7.0 (2011). See: http://apps.who.int/gho/indicatorregistry/App_Main/indicator_registry.aspx (2011).
[71] Agyepong et al., (2014 in press).

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.[72] 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.[73]

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.

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.[74] 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.[75]

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.[76] WHO would ensure comparable data is collected globally.

Indicator 25: Percent of population overweight and obese

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

Rationale and definition: This indicator tracks the share of a country's population that is overweight or obese. 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.[77]

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.

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]— ~~Indicator~~ 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.[78]

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.[79] 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

[77] WHO Indicator and Measurement Registry, (2011).
[78] WHO, (2013d).
[79] See for example the Movement for Global Mental Health Post-2015 article: http://www.globalmentalhealth.org/post-2015-development-agenda

challenge: they are the eighth overall cause of death globally, and the leading cause of death for youth aged 15~~–~~29.[80] 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.

Comments and limitations: To be determined.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

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]— ~~Indicator~~ 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.[81] 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 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. 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: To be determined.

Primary data source: TBD.

[80] WHO, (2013e), *Global status report on road safety.*
http://www.who.int/violence_injury_prevention/road_safety_status/2013/report/en/
[81] WHO, (2009*), Monitoring emergency obstetric care: a handbook*, Geneva, Switzerland: WHO Press, 10.

Potential lead agency or agencies: WHO.

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

Rationale and definition: A central component of universal health coverage (UHC) is financial affordability 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.[82] For this reason, a monitoring framework for the SDGs must include a Core 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 Core Indicator on financial protection in the health sector include:

1. The number of households falling below the poverty line (or being pushed deeper into poverty) due to out-of-pocket spending on health care
2. Out-of-pocket expenditure as a share of total health expenditure
3. The percentage of households experiencing catastrophic health expenditure (usually defined as a share of annual household income net of subsistence needs)
4. 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. 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. 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 provide a clear indication of the impact that out-of-pocket health expenditure might have on the health and economic situation of households.

[82] Agyepong, I., Liu, G., Reddy, S. et al., (2014), *Health In the Framework of Sustainable Development*, Paris, France and New York, USA: SDSN.

A recent report by the WHO and the World Bank recommended the first option.[83] 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.[84] 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 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 crosschecked 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: To be determined.

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.[85]

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.[86] This indicator measures the percent of children and adolescents who have received all aforementioned immunizations at the appropriate age, as recommended by WHO.

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

Comments and limitations: Countries may wish to include additional vaccinations, such as tetanus, yellow fever, etc., as recommended by the WHO's *Global Vaccine Action Plan.*[87]

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

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

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

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.[88]

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

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

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 ~~collects this data~~.[89]

Indicator 33~~: Household Dietary Diversity Score~~

~~Rationale and definition: Healthy diets are critical for good health and wellbeing. 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.~~
~~Disaggregation: By household income level and sex of head of household.~~

~~Comments and limitations: This indicator relies on detailed household surveys, which may not be feasible in some instances.[90] Several alternative indicators are available, including:~~

- ~~Fraction of calories from added saturated fats and sugars (%);~~
- ~~Per capita meat consumption (kg per capita);~~
- ~~Share of calories from non-staple foods (%) (also referred under Target 1b);~~
- ~~Food consumption score.[91]~~

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

~~Potential lead agency or agencies: FAO.~~

~~Indicator 34~~: 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 ~~outdoor~~ambient air pollution.[92] ~~The problem is growing and~~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,[93] however many cities regularly experience concentrations over ten times higher than these recommendations.

Disaggregation: By city and province.

[89] WHO Indicator and Measurement Registry, (2011).
[90] FAO, (2011).
[91] Developed by the World Food Programme (WFP). For more information see: http://www.wfp.org/content/technical-guidance-sheet-food-consumption-analysis-calculation-and-use-food-consumption-score-food-s.
[92] WHO Global Health Observatory. See: http://apps.who.int/gho/data/view.main
[93] 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.

Comments and limitations: ~~WHO tracks this data for~~ Many countries track the concentration of PM10 ~~particles~~ (i.e. particles with a diameter equal to or greater than 10 microns~~). There are concerns about the health impacts of fine particles measuring~~) and PM2.5 (diameter equal to or greater than 2.5 microns ~~in diameter, but data on such particles is less widely available.~~) 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.

~~Additional~~Complementary National indicators that countries may consider:

- ~~**Government expenditure on health, as a percentage of GDP.** Reaching universal health coverage requires countries to mobilize adequate funds for a national health system, as per the 2001 Abuja Declaration. This indicator tracks national public spending on health.~~

3.1. ~~**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.~~

3.2. ~~**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.~~

- ~~**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 34 but should be complemented by survey data.~~

3.3. ~~**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.~~

3.4. ~~**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.~~

3.5. **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.

3.6. **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.

3.7. **Post-natal care coverage (one visit)**. Similar to antenatal care coverage, the percentage of women aged 15–49 with a live birth in a given time period that received post-natal care provided by skilled

health personnel at least once following the birth of their child and by any provider four or more times after birth.

3.8. ~~**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.~~

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

3.10. **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.

3.11. **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.

3.12. **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.

3.13. **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.

3.14. **Percentage of population with advanced HIV infection with access to antiretroviral drugs (MDG Indicator)**

~~3.14.~~3.15. **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.

~~3.15.~~3.16. **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).

~~3.16.~~3.17. **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.

~~3.17.~~3.18. **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.

~~3.18.~~3.19. **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.

~~3.19.~~3.20. **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.

~~3.20.~~3.21. ~~**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.~~

~~3.21.~~3.22. **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.

~~3.22.~~3.23. **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.

~~3.23.~~3.24. **Incidence and death rates associated with hepatitis**. Prevalence and mortality rates for the various strains of hepatitis (A, B, E, etc.).

~~3.24.~~3.25. **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.

~~3.25.~~3.26. **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.

~~3.26.~~3.27. ~~**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.~~

~~3.27.~~3.28. **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.

- ~~**Percentage of beneficiaries using hospitals, health facilities, 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.~~

~~3.28.~~3.29. **Prevalence of insufficient physical inactivity**.~~**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~~**[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.~~

~~3.29.~~3.30. ~~**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.~~

~~3.30.~~3.31. ~~**Incidence and death rates associated with hepatitis**. Prevalence and mortality rates for the various strains of hepatitis (A, B, E, etc.).~~

~~3.31.~~3.32. ~~**Prevalence of physical inactivity**.~~ The percentage of people not reaching WHO recommendations for physical activity.[94]

~~3.32.~~3.33. **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.

~~3.33.~~3.34. **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.

~~3.34.~~3.35. **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.

~~3.35.~~3.36. **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

[94] WHO, (2010).

changes in per capita red meat consumption, with the goal of reducing overconsumption in some countries.

~~3.36.~~3.37. **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 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.

- ~~**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.~~

~~3.37.~~3.38. **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.

~~3.38.~~3.39. **[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.

~~3.39.~~3.40. **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.

3.41. **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.

~~3.40.~~3.42. **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.

~~3.41.~~3.43. **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

~~3.42.~~3.44. **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.

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

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~35~~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.[95]

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 ~~36~~35: Early Child Development Index (ECDI)

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.

Disaggregation: By sex and age.

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

Comments and limitations: 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.[96] 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 ~~37~~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.[97]

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.

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 ~~38~~37: Percentage of girls and boys who master a broad range of foundational skills, including proficiency in reading and foundational skills in mathematics

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

by the end of the primary school cycle (based on credibly established national benchmarks)

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).[98] 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 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 ~~39~~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

[98] 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.*

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 ~~40~~39: Percentage of girls and boys who achieve proficiency across a broad range of learning outcomes, including in mathematics by end of the lower secondary schooling cycle (based on credibly established national benchmarks)

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 ~~41~~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.

~~Additional~~Complementary National indicators that countries may consider:

4.1. ~~**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.[99]~~

- ~~**Percentage of pupils enrolled in early childhood development programs providing basic drinking water, adequate sanitation, and adequate hygiene services**. This indicator measures access to~~

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

~~drinking water, gender separated sanitation facilities, and hand washing facilities in schools, using WHO-UNICEF JMP definitions.~~

4.2. ~~[~~**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~~] – indicator 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.

4.3. **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.[100]

4.4. **[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.

4.5. **Proportion of young adults (18-24 years) who are literate.** This indicator measures the proportion of young adult women and men that are literate as a proportion of the total population within that age group.

4.6. **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.

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

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

~~4.7.~~4.9. ~~**Proportion of young adults (18-24 years) who are literate.** This indicator measures the proportion of young adult women and men that are literate as a proportion of the total population within that age group.~~

~~4.8.~~4.10. **[Indicator on supply of qualified teachers] -** to be developed: this indicator will track the supply of qualified teachers.

[100] 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, empower all women and girls

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~42~~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 the UN Statistics Division collect this data based on international and national surveys.[101]

Indicator ~~43~~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 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.

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

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.[102] UN Women could take on responsibility for gathering data.

Indicator ~~4443~~: 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.[103] 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: To be determined.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Household surveys.

Potential lead agency or agencies: UNICEF

Indicator ~~4544~~: Prevalence of harmful traditional practices

Rationale and definition: The prevalence of harmful traditional practices, particularly the practice of female genital mutilation (FGM, also called "female genital cutting" or "female genital mutilation/cutting") 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 traumatic, with immediate and long-term health consequences. The practice reflects deep-rooted gender inequality and is an extreme form of discrimination against women.[104]

Disaggregation: By age, ethnicity, and income level. WHO further distinguishes by four categories of FGM: Types I, II, III, and "nicking" Type IV.[105]

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[102] Global Network of Women Peacebuilders, (2012), *Women Count - Security Council Resolution 1325: Civil Society Monitoring Report*.

[103] See UNICEF webpage on Child marriage http://www.childinfo.org/marriage.html

[104] 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/

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

Comments and limitations: To be determined.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Household surveys.

Potential lead agency or agencies: WHO, UNICEF.

Indicator ~~46~~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).[106]

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.[107] 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).[108]

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 UN Statistics Division 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 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: To be determined.

Primary data source: Household surveys.

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

[106] 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

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

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

Indicator ~~47~~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[109] (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.[110] 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. 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.[111] Data on minorities are generally less available, so a significant effort would need to be made to collect such disaggregated data.

Indicator ~~48~~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.

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."[112] 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.[113]

[109] 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.
[110] United Nations, (2003), p.30.
[111] See website of the UCLG Standing Committee on Gender Equality: http://women.uclg.org
[112] 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
[113] 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

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[114], 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 ~~49~~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.[115]

Disaggregation: By age and rural/urban.

Comments and limitations: To be reviewed.

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

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.[116]

~~Additional~~Complementary National indicators that countries may consider:

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

- ~~**[Indicator on sexual health education] – to be developed**.~~

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

[114] See WHO webpage: http://www.who.int/reproductivehealth/topics/family_planning/unmet_need_fp/en
[115] SDSN, (2013a).
[116] A revised version of the report (2012) is at http://esa.un.org/unpd/wpp/index.htm

5.3. **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.

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

5.5. **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.

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

5.7. **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[117]

[117] 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 ~~Core~~Global Reporting Indicators:

Indicator ~~50~~49: Percentage of population ~~using basic drinking~~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 ~~basic~~safely managed drinking water services, as defined by the WHO/UNICEF Joint Monitoring Programme. This ambitious indicator goes beyond the previous "basic drinking water ~~is defined~~" indicator as it has been designed to incorporate an assessment of the quality and safety of the water ~~used by humans for ingestion, food preparation, and basic hygiene purposes.~~ people use."

Households are considered to have ~~basic~~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.[118]

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.[119]

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).[120]

~~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. This indicator provides a proxy measure both of exposure, in terms of access to safe drinking water, and the effectiveness of actions to improve access.~~

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

~~Comments and limitations: Use of an improved drinking water source is a proxy for measuring access to safe drinking water. The limitations of this indicator are that it does not specify a minimum available amount of water.~~

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 roundtrip including queuing.

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

[118] See Water Supply & Sanitation Collaborative Council (WSSCC), (2014), *WASH POST-2015: proposed targets and indicators for drinking-water, sanitation and hygiene.*

[119] UNESCO Water World Assessment Programme. See: http://webworld.unesco.org/water/wwap/wwdr/indicators/pdf/F4_Access_to_safe_drinking_water.pdf

[120] WHO-UNICEF Joint Monitoring Programme, (2013), "Post-2015 WASH Targets and Indicators."

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~~50: Percentage of population using ~~basic~~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 ~~an improved~~safely managed sanitation ~~facility~~services, as defined by the WHO/UNICEF Joint Monitoring Programme. This ambitious indicator goes beyond the pre-2015 "improved sanitation ~~facilities at home~~" 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).[121]

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.[122]

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: ~~A~~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 ~~52:~~ 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% of urban wastewater is untreated or insufficiently treated when discharged.[123] 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

[121] Ibid.
[122] 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.
[123] UNESCO, (2011), Global Challenge of Wastewater: Examples from Different Countries. Presentation at World Water Week in Stockholm, August 21-27, 2011.

wastewater is dumped directly into water sources, threatening human health, ecosystems, biodiversity, food security, and the sustainability of water resources.[124]

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.[125]

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.[126]

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.
~~Comments and limitations: To be reviewed.~~

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 ~~53~~52: Percentage 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.

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.[127]

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.

[124] Ibid.
[125] 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
[126] Ibid, and UNESCO, (2011).
[127] See UN DESA, (2007a).

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.[128]

~~**Indicator 54: [Reporting of international river shed authorities on trans-boundary river-shed management] — Indicator to be developed**~~

6.1. ~~Rationale and definition: 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.~~

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

~~Comments and limitations: To be reviewed once an indicator has been developed.~~

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

~~Potential lead agency or agencies: GEF, UNEP, or INBO can collect the required data.~~

[128] For more information see: http://www.fao.org/ag/aquastat

~~Additional~~Complementary National indicators that countries may consider:

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

6.3. **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.

6.4. ~~**[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.~~

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

~~6.5.~~6.6. **Percentage of pupils enrolled in early childhood development programs 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.

~~6.6.~~6.7. **Percentage of beneficiaries using hospitals, health facilities, 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.

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

~~6.7.~~6.9. **[Reporting of international river shed authorities on trans-boundary 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.

~~6.8.~~6.10. **[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.

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

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

~~6.9.~~6.13. ~~**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.~~

~~6.10.~~6.14. ~~**Percentage of population reporting practicing open defecation**. This indicator measures population not using any sanitation facility and is a strong measure of poverty.~~

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

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~55~~53: Share of the population with access to modern cooking solutions (%)

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.[129] 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. ~~While important for meeting climate related goals,~~ Measuring access to modern cooking solutions ~~also~~ 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.[130]

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 SE4All, IEA and WHO, can provide data for this indicator.

Indicator ~~56~~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.[131] As for access to modern cooking solutions, currently available global

[129] 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

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

[131] Ibid.

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.[132]

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 ~~57~~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.[133] A similar definition was proposed by the Australian Productivity Commission report on carbon emission policies in key economies.[134]

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_2e 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 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.

[132] Ibid.
[133] OECD, (2013b), *Effective Carbon Prices,* OECD Publishing.
[134] Productivity Commission, (2011), *Carbon Emission Policies in Key Economies*, Research Report, Canberra.

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 ~~58~~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.[135]

Disaggregation: By sector.

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.[136] 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: To be determined.

Primary data source: Administrative data.

Potential lead agency or agencies: SE4ALL, IEA

~~Additional~~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.

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

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.[137]

[137] 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 ~~Core~~Global Reporting Indicators:

Indicator ~~59~~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.[138]

We therefore recommend that they be complemented by other "beyond GDP" indicators (See also Table 2 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 ~~60~~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), 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

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

environmental purposes.[139] 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: To be determined.

Primary data source: International reporting.

Potential lead agency or agencies: The UN Statistics Division.

Indicator ~~61~~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.[140]

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.

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: To be determined.

[139] 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.
[140] 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,

Primary data source: Labor Force surveys.

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

Indicator ~~62: [Index of decent work] - Indicator to be developed~~

8.1. ~~Rationale and definition: We propose that an indicator be considered to track countries' compliance with the decent work agenda adopted by member states of the ILO.[141] 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 crosscutting issue. Currently, such a single index does not exist, but it could be created (potentially as a composite indicator).~~

60

~~The ILO is currently developing statistical indicators covering ten component categories of decent work that could serve as a basis for such an indicator.[142] Similarly, the OECD is developing a conceptual and operational framework for measuring job quality. This work integrates that of the UNECE Taskforce on quality of employment, whose members include both the OECD and ILO.~~

~~Better labor statistics can also be gleaned from socio-demographic statistics of the System of National Accounts and System of Environmental Economic Accounting. According to the UN Statistics Division, "these Systems should be used to generate a consistent set of economic and employment statistics that become vital with the adoption of labor market policies that are integrated and benchmarked with other policy objectives for the real, fiscal and monetary sector. With the emerging country practices in the implementation of SEEA, also the concept of 'green jobs' could be clarified."[143]~~

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

~~Comments and limitations: Adequate indicators for decent work are still being developed. In the interim, an appropriate proxy may be 'the proportion of employed people living below an international poverty line' (MDG Indicator 1.6).~~

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

~~Potential lead agency or agencies: ILO.~~

~~Indicator 63~~: 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.[144]

[141] See ILO, (2012b).
[142] See UN Statistics Division, (2014), paragraph 7.6.
[143] Ibid, paragraph 7.7.
[144] See ILO webpage on Conventions and Recommendations: http://ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm

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.

~~Additional~~Complementary National indicators that countries may consider:

8.2. **Growth rate of GDP per person employed (MDG Indicator),** which is a key measure of labor productivity.

8.3. **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.

8.4. **[Index of decent work] - Indicator 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.[145] 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 crosscutting issue. Currently, such a single index does not exist, but it could be created (potentially as a composite indicator).

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

8.6. **Employment to population ratio (MDG Indicator)** by sex 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.

8.7. **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.[146]

8.8. **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.

8.9. **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.

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

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

~~8.10.~~8.11. ~~**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.~~

~~8.11.~~8.12. ~~**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.~~

~~8.12.~~8.13. ~~**Household income, including in-kind services (PPP, current US$ Atlas method):** This indicator is derived from the system of national accounts (SNA).~~

~~8.13.~~8.14. ~~**Growth rate of GDP per person employed (MDG Indicator),** which is a key measure of labor productivity.~~

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

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~64~~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.[147]

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 ~~65~~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.[148] 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 ~~66~~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.

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.

[147] Dobermann, A. and Nelson, R. et al., (2013).
[148] 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

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

Primary data source: Administrative data

Potential lead agency or agencies: ITU.

Indicator ~~66~~63: [Index on ICT ~~infrastructure performance~~maturity]—indicator 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 ~~and~~, performance, and affordability of countries' ICT infrastructure.

The proposed index would measure ~~three~~four equally weighted dimensions of ICT ~~infrastructure performance~~maturity:

1. *Fixed broadband quality*~~:~~ measured as mean ~~download~~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 ~~download throughput of [1 megabit per second]~~ 10 Mbps downlink speed (or ~~greater; and~~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 ~~61~~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.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: TBD

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

Indicator ~~67~~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).[149] 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

[149] See https://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2

fabricated assets, or the depletion and degradation of any natural resources.[150] The indicator is expressed as a share of gross domestic product (GDP).

Disaggregation: Can be disaggregated by individual sectors (as per ISIC definitions).

Comments and limitations: To be determined.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Administrative data.

Potential lead agency or agencies: World Bank, OECD

Indicator ~~68:~~ 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.[151]

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.

Indicator ~~6966~~: 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,[152] and the special chapters on energy[153] and industry-related emissions.[154]

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.

[150] See World Bank data: http://data.worldbank.org/indicator/NV.IND.MANF.ZS
[151] See OECD stats database: http://stats.oecd.org/Index.aspx?DataSetCode=PERS_OCCUP
[152] 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
[153] Ibid, see volume 2 on Energy: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html
[154] Ibid, see volume 3 on Industrial Processes and Product Use: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol3.html

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.[155] 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.[156]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.

~~Additional~~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.

[155] Peters, G. and Hertwich, E., (2008), Post-Kyoto greenhouse gas inventories: production versus consumption, *Climatic Change*, Volume 86, Issue 1-2, 51-66.
[156] Boitier, B., (2012), *CO_2 emissions production-based accounting vs. consumption: Insights from the WIOD databases.*

9.3. ~~**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.).~~

Goal 10. Reduce inequality within and among countries

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~70~~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 70, 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.[157] 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.[158]

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

Primary data source: Household surveys,

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

[157] 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

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

Indicator ~~71~~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 ~~still rare in most countries. Frequently such measurements are~~only conducted once every two to three years and data becomes available with reporting lags of up to three years.[159]

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. The UN Statistics Division, World Bank, or the OECD could take the lead in compiling data.

~~Additional~~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)**

~~10.6.~~10.7. **[Average remittance cost] - Indicator 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

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

to improve data collection for monitoring of remittance costs.[160] ~~**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.~~

~~10.7.~~10.8. ~~**[Indicator on migration] - to be developed**: this indicator will track the orderly, safe, and responsible migration and mobility of people~~

[160] UN Statistics Division, (2014).

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

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~72~~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.[161]

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.[162] 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).

***Indicator ~~4~~5:* Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented rights to housing, and (ii) percentage who do not fear arbitrary eviction**

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

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

new indicator comprises two components: (i) percentage with documented rights to housing and (ii) percentage who do not fear arbitrary eviction. 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 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 sex and income. Further opportunities for disaggregation to be reviewed.

Comments and limitations: The rural component of this indicator is included under target 6c.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Household surveys.

Potential lead agency or agencies: UN-Habitat, UNDP

Indicator ~~73~~70: Percentage of urban households with regular solid waste collection

Rationale and definition: Urban households produce substantial amounts of solid waste that must be collected regularly and disposed of properly in order to maintain healthy and sanitary living conditions. Uncollected solid waste can end up in drains, causing blockages that result in flooding and unsanitary conditions. Mosquitos that spread malaria and dengue can breed in blocked drains.[163] In addition, some constituents of solid waste, such as organic matter, can attract flies and rodents that spread gastro intestinal and parasitic diseases.[164]

Sustainable solid waste management is essential. Source reduction, recycling, and composting are preferred methods and should be promoted, as they reduce demand on scarce environmental resources, reduce energy use, and minimize the quantity of waste that must eventually be disposed of via incinerators and landfills.

UN-Habitat (2009) has specified that solid waste collection can include collection from individual households, regular dumpster group collection, but not local dumps to which the household must carry garbage. Solid waste collection should be considered regular and adequate if it occurs at least once a week.

Disaggregation: Opportunities for disaggregation to be reviewed.

Comments and limitations: In many countries, monitoring systems for solid waste collection are weak, with data that is incomplete or not available. The development of adequate monitoring systems may require a major effort in some countries.

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

~~Potential lead agency or agencies:~~Primary data source: Administrative data. Data on solid waste collection may be available from municipal bodies, public services, and private contractors dealing with solid waste collection and disposal, or NGOs. Within cities, waste collection may vary from one area to another

[163] UN-Habitat, (2009), *Urban Indicator Guidelines: Better Information, Better Cities, Monitoring the Habitat Agenda and the Millennium Development Goals – Slum Target*, Nairobi, Kenya: UN-Habitat.
[164] Sustainable Communities Index. See : http://www.sustainablecommunitiesindex.org/indicators/view/4

depending on the level of tax payment.[165] ~~Data can be presented to UN-Habitat at the city or national urban level.~~

Potential lead agency or agencies: Data can be presented to UN-Habitat at the city or national urban level.

Indicator ~~74~~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)[166] 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.

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.[167]

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 ~~75~~72: [Indicator on the deployment of a sustainable development strategy for each urban agglomeration above [250,000] – to be developed

Rationale and definition: Sustainable development in urban areas requires long-term strategies that integrate infrastructure development, the provision of urban services, deep decarbonization efforts and land use. Such strategies are specific to each city and therefore need to be developed at the city level. Public discussion and consultation on such strategies will ensure that they meet the needs of the entire urban population, including businesses. We propose developing an indicator that tracks which of the larger urban centers, e.g. with populations above 250,000, have developed a sustainable development strategy. Ideally each country would develop a national registry of such strategies and collect key performance targets

[165] Ibid, and UN-Habitat, (2009).
[166] 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
[167] UN Statistics Division, (2014).

identified for each city. Such an indicator will help focus attention on the long-term sustainable development needs of cities, and promote citywide dialogues on appropriate sustainable development pathways.

This indicator would follow up on the work of Agenda 21, the non-binding, voluntarily implemented action plan on sustainable development that the United Nations developed at the UNCED in Rio in 1992. Chapter 28 of this document recommended that local governments take steps to implement the plan locally, and these programs are often referred to as "Local Agenda 21".

Disaggregation: By city and province, by city size.

Comments and limitations: To be reviewed.

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

Primary data source: Administrative data.

Potential lead agency or agencies: World Bank, UN-Habitat.

~~**Indicator 76:**~~

Complementary National indicators that countries may consider:

Urban green space per capita

~~Rationale and definition~~**:** This indicator measures the amount of urban green space available to residents of a city. Urban green space is defined as including: amenity areas and allotments, formal open space and outdoor recreation areas, informal open space and children's playgrounds, public parks, heritage parks, nature conservation areas and woodlands. ~~This indicator is expressed in square meters per resident. An alternative measure is individuals' distance to an urban green space, but such a metric would have much higher data requirements.~~

11.1. Urban green spaces are important for quality of life in increasingly urbanized societies. Empirical evidence indicates that the presence of natural areas serves social and psychological purposes (recreation, relaxation, improved health), as well as providing environmental and ecological services (cooling, water management, carbon capture).[168]

~~Disaggregation: Opportunities for disaggregation to be reviewed.~~

~~Comments and limitations: Numerous tools are available for assessing urban green space. Some are universal, like remote sensing, and some are location-specific such as on-site surveys.~~

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

~~Potential lead agency or agencies: UN-Habitat.~~

~~**Additional indicators that countries may consider:**~~

11.2. ~~**City Biodiversity Index (Singapore Index).** Self-assessment tool for cities to evaluate their biodiversity conservation efforts along 23 indicators.[169]~~

[168] Chiesura, A., (2004), The role of urban parks for the sustainable city, *Landscape and Urban Planning,* 68:1, pp. 129-138.
[169] Rodricks, S., (2010), *Singapore City Biodiversity Index*, Geneva: Switzerland: The Economics of Ecosystems and Biodiversity (TEEB).

11.3. **[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.

11.4. **City Biodiversity Index (Singapore Index).** Self-assessment tool for cities to evaluate their biodiversity conservation efforts along 23 indicators.[170]

11.5. **[Indicator on supporting LDCs for sustainable and resilient buildings using local materials] - to be developed**

[170] Rodricks, S., (2010), *Singapore City Biodiversity Index*, Geneva: Switzerland: The Economics of Ecosystems and Biodiversity (TEEB).

Goal 12. Ensure sustainable consumption and production patterns

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator 73: Publication of resource-based contracts

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.[171]

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,[172] 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: To be reviewed.

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.

~~77~~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

[171] Collier, P and Antonio, P. et al., (2013), *Harnessing Natural Resources for Sustainable Development: Challenges and Solutions*, Paris, France and New York, USA: SDSN.
[172] See Resource Governance Index website: http://www.revenuewatch.org/rgi

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.[173]

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 ~~78~~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).[174]

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.

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

Primary data source: Administrative data.

Potential lead agency or agencies: ~~The~~ UNEP Ozone Secretariat ~~collects internationally comparable data~~.

Indicator ~~79~~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.

Comments and limitations: To be reviewed.

[173] 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.
[174] For more information on emissions of ozone-depleting substances and their contribution to planetary boundaries, see Rockström et al., (2009).

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Remote sensing/satellite.

Potential lead agency or agencies: ~~Satellites collect the data for this indicator so it can be available for all countries.~~ An agency such as UNEP could be responsible for collecting internationally comparable data across all countries.

Indicator ~~80~~77: [Share of companies valued at more than [$1 billion] that publish integrated reporting]— Indicator 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, the World Business Council for Sustainable Development (WBCSD), and/or the International Integrated Reporting Council (IIRC) could track such an indicator.

~~**Indicator 81**~~**Complementary National**~~**: Publication of resource-based contracts**~~

~~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.~~[175]

[175] Collier, P and Antonio, P. et al., (2013), *Harnessing Natural Resources for Sustainable Development: Challenges and Solutions*, Paris, France and New York, USA: SDSN.

~~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,[176] 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: To be reviewed.~~

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

~~Potential lead agency or agencies: UN Global Compact, EITI, and/or UNCTAD.~~

~~Additional~~ indicators that countries may consider:

12.1. **[Strategic environmental and social impact assessments required]— Indicator 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]— Indicator 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.

- ~~**[Indicator on toxic chemicals] - to be developed**. This indicator would measure safety and exposure to key toxic chemicals that affect human health and ecosystem functions.~~
- ~~**[Indicator on policies for sustainable tourism] - to be developed:** this indicator would measure policies on sustainable tourism.~~

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.

[176] See Resource Governance Index website: http://www.revenuewatch.org/rgi

~~12.5.~~12.6. ~~**[Legislative branch oversight role regarding resource-based contracts and licenses] — Indicator to be developed.** This indicator measures the existence and enforcement of a legislative framework around natural resources.~~

Goal 13. Take urgent action to combat climate change and its impacts

Potential and Illustrative ~~Core~~Global Reporting Indicators:

Indicator ~~82~~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 ~~83~~79: CO_2 intensity of ~~the power sector, and 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 ~~is~~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 ~~sector needs to be near zero-carbon. Tracking the evolution of the CO_2 intensity of the power sector is therefore important to assess its contribution to the overall GHG emissions reductions. Understanding what drives the evolutions of the CO_2 intensity of the power sector is also important to define the appropriate policies to reduce the CO_2 emissions of this sector. In addition to the CO_2 intensity of the total stock, it is therefore important to measure the CO_2 intensity of the flow of new capacities installed, with technology, and taking into account their contribution to base load and peak power generation~~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.

~~This~~ 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) ~~generated from the power sector as a whole (total capacities); and~~ from new capacities installed (between two dates of measurement of the indicator).

~~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~~

~~Potential lead agency or agencies: The UNFCCC and the IEA.~~

~~Indicator 84: CO2 intensity of~~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 ~~**(gCO2/vkm), and of new cars (gCO2/pkm) and trucks (tCO2tkm)**~~

~~Rationale and definition: The fuel consumption and the fuel carbon content of the transport sector are responsible for a large share of total GHG emissions. The increase in transport~~, changes in activity ~~is one of the main reasons for~~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~~-related emissions per vehicle kilometer travelled~~ and new trucks for freight transport allows for more relevant historic and cross-country comparisons, by giving an understanding of how well countries are ~~carrying~~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.

~~Understanding what drives the evolution of the CO2 intensity of the transport sector is also important to define appropriate policies to reduce the CO2 emissions of that sector. GHG emissions from international air and maritime transport are not easily attributable to a particular country. But, in addition to the aggregate CO2 intensity of the transport, it is important to measure the CO2 intensity of new cars for passenger transport and new trucks for freight transport.~~

~~The proposed indicator is defined as: the amount (measured in grams) of CO_2 emissions per vehicle, kilometer travelled in aggregate; and 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).~~

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: ~~B~~ Power sector A /Transport sector B

Primary data source: Administrative data.

Potential lead agency or agencies: The UNFCCC and the IEA ~~can collect data for this indicator.~~ [177]

Indicator ~~85~~80: Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector (tCO_2e)

[177] For example, see OECD, (2008), *Greenhouse Gas Reduction Strategies in the Transport Sector: Preliminary Report*.

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,[178] and the Good Practice Guidance for Land Use, Land Use Change and Forestry (GPG-LULUCF).[179]

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,[180] 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 distinguish between causal factors. In addition, this indicator complements #51 Crop nitrogen use efficiency (%).

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 ~~86~~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: To be determined.

Primary data source: International reporting.

[178] Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K., (eds.), 2006.
[179] See Good Practice Guidance for Land Use, Land-Use Change and Forestry: www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_contents.html
[180] See: http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_01_Ch1_Introduction.pdf

Potential lead agency or agencies: OECD DAC, UNFCCC.

~~Additional~~Complementary National indicators that countries may consider:

13.1. **[Climate Change Action (CCA) Index]— Indicator to be developed**. Composite indicator 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 ~~Core~~Global Reporting Indicators:

Indicator ~~87~~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 to use 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.[181] 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).[182] 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. Countries should also disaggregate the index by key marine systems.

Comments and limitations: 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.

Indicator ~~88~~83: Percentage of fish stocks within safe biological limits (MDG Indicator)

Rationale and definition: The percentage 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. [183]

Disaggregation: By region and global**.** Other opportunities for disaggregation to be reviewed

[181] 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

[182] For detailed information on the methodology used to calculate the Index, see: www.oceanhealthindex.com

[183] 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

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.

~~Additional~~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.[184]

14.3. ~~**[Use of destructive fishing techniques] - Indicator to be developed**: This indicator tracks the use of destructive fishing techniques, such as trolley fishing.~~

14.4. **[Eutrophication of major estuaries] - Indicator to be developed**: The increased levels of nutrient runoff and untreated sewage resulting from human activities, are leading to eutrophication, harmful algal blooms (HAB)[185] and "dead zones". The levels of eutrophication need to be monitored in all major estuaries.

14.5. **Share of coastal and marine areas that are protected**

~~14.5.~~14.6. **[Use of destructive fishing techniques] - Indicator to be developed**: This indicator tracks the use of destructive fishing techniques, such as trolley fishing.

14.7. **[Indicator on access to marine resources for small-scale artisanal fishers] - to be developed**

14.8. **[Indicator on transferring marine technology] - to be developed**

~~14.6.~~14.9. ~~**[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.[186]~~

~~14.7.~~14.10. ~~**Area of coral reef ecosystems and percentage live cover:** This indicator measures the area of live coral reef ecosystem coverage within the national waters.~~

[184] For more information, see website of IOC UNESCO initiative on marine spatial planning: http://www.unesco-ioc-marinesp.be

[185] 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.

[186] For more information, see website of IOC UNESCO initiative on marine spatial planning: http://www.unesco-ioc-marinesp.be

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 ~~Core~~Global Reporting Indicators:

Indicator ~~89~~84: Annual change in forest area and land under cultivation

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).[187] 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.[188]
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 ~~90~~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 ~~(Target 6b)~~ 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[189] has proposed this indicator measuring the percentage of forest under sustainable management.

Disaggregation: Countries with strong forest management systems can disaggregate the indicator spatially.

[187] See FAOSTAT: http://faostat.fao.org/site/375/default.aspx
[188] See FAO Global Forest Resources Assessments: http://www.fao.org/forestry/fra/en
[189] FAO, (2010), *Global Forest Resources Assessment 2010*, Rome, Italy: FAO.

Comments and limitations: A challenge for this indicator is to arrive at an internationally consistent definition of sustainable forest management practices.[190] 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 ~~9186~~: Red List Index ~~(by country and major species group, for Internationally Traded Species)~~

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.[191] 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)[192] 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"[193]. 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.[194] It has been developed for many major species groups, such as amphibians and ~~avians~~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 ~~RLI (SRLI)~~approach can be used that is based on representative samples of species from taxonomic groups.[195]

Disaggregation: by country and major species group, and for Internationally Traded Species.
The RLI can also be disaggregated to regional and national levels.[196] 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).[197] 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.

Comments and limitations: To be reviewed.
~~Comments and limitations: One of the limitations is the focus on wild species as opposed to those species commonly used as food or for agriculture by humans. In addition to this, the Index does not consider the genetic status of species, capturing only one aspect of biodiversity.~~

[190] UN Statistics Division, (2014).
[191] 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.
[192] See: http://www.bipindicators.net/indicators for indicators to measure progress towards the Aichi targets.
[193] For more information, see: http://www.iucnredlist.org/technical-documents/categories-and-criteria
[194] For an overview of the Red List, see: http://www.iucnredlist.org/about/red-list-overview
195 Baillie, J.E.M., Toward monitoring global biodiversity, *Conservation Letters* 1 (2008) 18–26.
[196] For more information on national and regional RLIs see: http://www.bipindicators.net/LinkClick.aspx?fileticket=LxlQO8fYW-4%3D&tabid=72&mid=1895
[197] See CITES website: http://www.cites.org

Primary data source: International reporting.

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

Potential lead agency or agencies: IUCN and ~~CITES~~Partner organisations, in particular BirdLife International and UNEP-WCMC.

Indicator ~~92~~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.[198] This indicator, developed by BirdLife International and IUCN for UNEP-WCMC (the world conservation monitoring center~~) with the collaboration of several other specialized organizations,~~), 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,[199] 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 and Conservation~~ International to further improve the datasets and methodology used to calculate the IBA and AZE Protection Indices.[200]

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 indicator for 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

[198] This and the following description of the indicator is drawn from Biodiversity Partnership Indicators; for more information see: http://www.bipindicators.net/paoverlays

[199] See Biodiversity Indicators Partnership, (2010).

[200] 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

protection[201] and is reported under the Marine Protected Areas Database (WDPA).[202] 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.

[201] See United Nations Convention on the Law of the Sea website: http://www.un.org/depts/los/convention_agreements/texts/unclos/part5.htm
[202] See WDPA website: http://www.wdpa.org

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

15.1. ~~**Abundance of invasive alien species:** This indicator tracks the number of invasive alien species found in the country.~~

15.2. **Improved land ownership and governance of forests**: Percent of forest area with clear and secure land ownership.

15.3. **[Indicator on the conservation of mountain ecosystems] - to be developed**: this indicator would measure the sustainable conservation and management of mountain ecosystems

~~15.3.~~15.4. **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.[203]

15.5. **[Indicator on access to genetic resources] - to be developed**

~~15.4.~~15.6. **Abundance of invasive alien species:** This indicator tracks the number of invasive alien species found in the country.

15.7. ~~**the conservation of mountain**~~ **[Indicator on financial resources for biodiversity and ecosystems] - to be developed**~~: this indicator the~~

~~15.5.~~15.8. **[Indicator on financial resources for sustainable** ~~conservation and~~ **forest management** ~~of mountain ecosystems~~**] - to be developed**

15.9. **[Indicator on global support to combat poaching and trafficking of protected species] - to be developed**

[203] For more information see VITEK website: http://www.terralingua.org/vitek/

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 ~~Core~~Global Reporting Indicators:

Indicator ~~93~~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[204] 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.

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 ~~collected~~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. 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.[205]

Indicator ~~94~~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 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.

[204] See UNODC database: http://www.unodc.org/unodc/en/data-and-analysis/statistics/index.html
[205] See UCDP database: http://www.pcr.uu.se/research/ucdp/database

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,[206] the UN High Commissioner for Refugees, and OCHA.

Indicator ~~95~~90: Assets and liabilities of BIS reporting banks in international tax havens (as per OECD definition), by country

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.[207] 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: To be determined.

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.[208]

Indicator ~~96~~91: Publication of all payments made to governments under resource contracts

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 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.[209]

[206] See IDMC statistics http://www.internal-displacement.org/8025708F004CE90B/(httpPages)/22FB1D4E2B196DAA802570BB005E787C?OpenDocument
[207] See BIS website: http://www.bis.org/statistics/about_banking_stats.htm
[208] See OECD website: http://www.oecd.org/tax/transparency/
[209] Collier, P and Antonio, P. et al., (2013).

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: To be reviewed.

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.

~~**Indicator 97: Compliance with recommendations from the Universal Periodic Review and UN Treaties**~~

~~Rationale and definition: This new indicator assesses the extent to which states engage with the UN human rights mechanisms. The Universal Period Review (UPR) is a peer review conducted by the member states of the UN Human Rights Council. The UPR working group scrutinizes what states have done to improve human rights and fulfill their human rights obligations.[210] Each UN member state is subject to review every 4.5 years. The UN Human Rights Treaty Bodies are quasi-legal expert bodies created by human rights treaties. When a state ratifies a treaty, it is obliged to periodically provide reports to the relevant treaty body.[211]~~

~~Both the 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.~~

[210] See OHCHR website on the UPR: http://www.ohchr.org/EN/HRBodies/UPR/Pages/UPRMain.aspx
[211] See OHCHR website on the Treaty Bodies: http://www.ohchr.org/EN/HRBodies/Pages/TreatyBodies.aspx

~~Disaggregation: By treaty.~~

~~Comments and limitations: To be reviewed.~~

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

~~Potential lead agency or agencies: UN OHCHR.~~

Indicator ~~98~~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

~~Potential lead agency or agencies:~~Primary data source: Civil registration and vital statistics. This indicator is measured through national official registration figures, which are 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.[212]

Indicator ~~99: [Indicator on freedom~~93: Existence and implementation of ~~expression, peaceful assembly, association] —~~a national law or constitutional guarantee on the right to ~~be developed~~information

~~Rationale and definition: The ability to express oneself freely, to assemble peacefully, and to associate are enshrined in the Universal Declaration of Human Rights and form an important part of achieving peaceful and inclusive societies. Possible indicators for freedom of expression include measures of press freedom, such as censorship, perceptions of press independence, and intimidation, harassment or imprisonment of journalists.[213] Indicators on freedom of peaceful assembly and association include measures of whether these freedoms are guaranteed in law and respected in practice.~~
~~Disaggregation: To be determined.~~

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 be due to a lack of capacity, more systematic institutional resistance, or a culture of secrecy or corruption.[214] Furthermore, exceptions or contradictory laws, such as government secrecy regulations, can erode these guarantees.

Disaggregation: To be determined.

Comments and limitations: To be determined.

[212] UNICEF, (2013), *Every Child's Birth Right: Inequities and trends in birth registration*, New York, NY: UNICEF, 6.
[213] See UNESCO website on Fostering Freedom of Expression
https://en.unesco.org/themes/fostering-freedom-expression
[214] UNESCO, (2010), *ment Indicators: A framework for assessing media development.*

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: International reporting.

Potential lead agency or agencies: ~~To be determined~~UNESCO.

Indicator ~~100:~~ 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).[215] 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.[216]

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.

[215] See TI's Corruption Perceptions Index website: http://www.transparency.org/research/cpi/overview

[216] 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

16.3. **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.

~~16.2.~~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.

~~16.3.~~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.**

~~16.4.~~16.7. **[Indicator on illicit financial flows] - to be developed**: this indicator will track illicit financial flows in and out of countries.

~~16.5.~~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

~~**Indicator 101:**~~ **Percent of UN Emergency Appeals delivered**

~~16.6.~~16.9. ~~Rationale and definition~~**:** 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.

~~Disaggregation: Opportunities for disaggregation to be reviewed.~~

~~Comments and limitations: The main limitation is that this is an input measure that cannot evaluate the effectiveness or impact of the aid.~~

~~Preliminary assessment of current data availability by Friends of the Chair: To be determined.~~

~~Potential lead agency or agencies: Data is readily available from UNHCR and OCHA.~~

16.10. ~~**Additional**~~**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 is tracked by UNESCO and measures the safety and fundamental freedom of journalists and associated media personnel to practice their profession.

~~**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:~~

- ~~**Children out of school because of conflict, insecurity, or disaster**. This indicator measures the percentage of school-aged children out of school because of conflict, insecurity, or disaster and could be measured by UNSECO.~~

~~16.7.~~16.11. ~~**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.~~

16.8.16.12. **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.[217]

16.9.16.13. **[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.

- **[Compliance with OECD or other applicable Anti-Bribery Convention] Indicator to be developed.**

16.10.16.14. **[Indicator on total illicit financial flows] – indicator to be developed:** this indicator will track illicit financial flows in and out of countries.

16.11.16.15. **[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

[217] 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

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Potential and Illustrative ~~Core~~Global Reporting Indicators:

~~**Indicator 102: Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries (MDG Indicator)**~~

~~Rationale and definition: This MDG 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. Removing developed country tariffs, particularly in these sectors which account for a large portion of developing country exports, could help significantly increase economic growth in developing countries.~~[218]

~~Disaggregation: By sector and product categories.~~

~~Comments and limitations: This indicator does not capture non-tariff barriers to trade, such as technical standards or sanitary regulations.~~

~~Preliminary assessment of current data availability by Friends of the Chair: To be determined.~~

~~Potential lead agency or agencies: UNCTAD, WTO~~

~~**Indicator 103:**~~ **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: To be determined.

[218] See International Trade Center, UN Conference On Trade And Development, and WTO webpage on Market Access Indicators: http://www.mdg-trade.org/

Primary data source: International reporting.

Potential lead agency or agencies: WTO, IMF, WIPO.

Indicator ~~104:~~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.[219] 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' 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.[220]

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 ~~105:~~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: To be determined.

Primary data source: Administrative data.

Potential lead agency or agencies: IMF.

Indicator ~~106:~~98: Private net flows for sustainable development at market rates as share of high-income country GNI

[219] OECD, (2013), *Development Cooperation Report 2013: Ending Poverty*, Paris, France: OECD Publishing.
[220] More information on the OECD's work on External Financing for Development is available here: http://www.oecd.org/dac/Financing-Development.htm

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).[221]

Disaggregation: By destination, type of private flows.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

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 (to be determined).

~~**Indicator 107: Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms**~~

~~Rationale and definition: 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. The indicator will be tracked for each high-income country.~~

~~Disaggregation: By multilateral mechanism.~~

~~Comments and limitations: The OECD-DAC is currently revising and improving indicators on ODA, which can help improve this measure.~~

~~Preliminary assessment of current data availability by Friends of the Chair: To be determined.~~

~~Potential lead agency or agencies: Data will be collected mostly by the OECD-DAC, the World Bank, and if necessary by the pooled multilateral financing mechanisms.~~

~~**Indicator 108: [Indicator on investments in data and monitoring] — to be developed**~~

[221] Ibid.

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. ~~An indicator on investments in data and monitoring could track direct investments in these types of programs, or measure investments as a share of ODA or GNI.~~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: To be determined.

~~Disaggregation: To be determined.~~

Comments and limitations: ~~To~~The indicator should only track indicators that can and should be ~~determined~~tracked annually. This may, for example, exclude life expectancy at birth.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: TBD.

Potential lead agency or agencies: ~~UNSD, PARIS21 (OECD), World Bank~~UN Statistics Division

Indicator ~~109:~~ 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.[222]

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, 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.[223]

Disaggregation: By sex and age.

Comments and limitations: To be reviewed.

Preliminary assessment of current data availability by Friends of the Chair: To be determined.

Primary data source: Household surveys.

[222] 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

[223] For more details see SDSN, (2013b), *World Happiness Report*, http://unsdsn.org/happiness

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.

~~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.~~

~~Additional~~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.[224]

17.2. **~~] - Indicator to be developed.~~** ~~This is a new indicator being development by the OECD to measure all public efforts to support the broader development agenda.~~[225]

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 debt sustainability] - to be developed**: this indicator ~~track~~tracks the sustainability of a country's debt.

17.5. **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.

17.6. [**Indicator on technology sharing and diffusion] - to be developed**: this indicator would measure technology diffusion across countries.

17.7. **[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

17.8. **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.

17.9. **Value of LDC exports as a percentage of global exports**

17.10. **[Indicator on investment promotion regimes for LDCs] - to be developed**

~~17.8.~~17.11. **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. ~~**diffusion] - to be developed**: this indicator would measure technology diffusion across countries.~~

~~17.9.~~17.12. ~~**[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~~

~~17.10.~~17.13.

[224] See OECD, (2014), *Modernising the DAC's development finance statistics,* Paris: OECD.
[225] See OECD, (2014), *Modernising the DAC's development finance statistics,* Paris: OECD.

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.[226] 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.[227] Others have pinpointed cases of perverse incentives where only the poorest benefitted most.[228] For this reason, it is very important that the Sustainable Development Goals, targets and indicators can be disaggregated.

The High-Level Panel of Eminent Persons on the Post-2015 Development Agenda in their report *A New Global Partnership*[229] and the SDSN's *Action Agenda for Sustainable Development* have first 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.[230]

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,[231]
- Age,[232]
- Income deciles,
- Disability,
- Religion,

[226] 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.

[227] For example, 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 Millennium Development Goals,' *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.

[228] 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.

[229] High-Level Panel, (2013).

[230] 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*.

[231] For a internationally accepted definition of the distinction between sex and gender, see www.who.int/gender/whatisgender/en/

[232] 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).

- Race, ethnicity, familial descent or indigenous status,
- Economic activity,[233]
- 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 ~~109 Core~~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	(4), 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 ~~above~~here. For example, indicator 49 (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, 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[234]) and often data produced by these different surveys is non-comparable.

Substantive investments in national statistical capacity will therefore be required to ensure standardized collection of data relating to all of the above-defined dimensions. 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.[235]

[233] For example, water use should be accounted for by economic activity using ISIC Rev 4.

[234] 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."

[235] The UN Statistics Division 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 UN Statistics Division, (2014), footnote 3.

Annex 4: Indicators for goals and targets proposed by the SDSN

This annex reproduces an updated version of the indicators arranged by the draft goals and targets proposed by the SDSN. It appeared as Table 1 in previous versions of the report. The numbering of the indicators has been retained from the previous version of the report.

# [236]	Potential and Illustrative Indicator	Potential lead agency or agencies
SDSN GOAL 1: End Extreme Poverty including Hunger		
Target 1a. End extreme poverty, including absolute income poverty ($1.25 or less per day).		
1	Percentage of population below $1.25 (PPP) per day (MDG Indicator)	World Bank
2	[Percentage of population in extreme multi-dimensional poverty] – indicator to be developed	World Bank, UN Statistics Division
	Tier 2 Indicators: ○ Percentage of population covered by social protection programs ○ Percentage of population living below a country's poverty line (MDG Indicator) ○ Poverty gap ratio (MDG Indicator)	
	The following Core Indicators under other targets are also relevant: 3 (1b), 13 (2c), 18 (3b), 24 (4a), 31 (4c), 34 (5a), 38 (5b), 39 (5b), 41 (5b), 42 (5b), 43 (5b), 57 (6c/7b), 58 (6c/7b), 64 (7a), 65 (7a), 71 (8a), and 72 (8a)	
Target 1b. End hunger and achieve food security, appropriate nutrition, and zero child stunting. *[237]		
3	Prevalence of stunting in children under [5] years of age	WHO, UNICEF
4	Percentage of population below minimum level of dietary energy consumption (MDG Indicator)	FAO, WHO
5	[Percentage of population with shortfalls of any one of the following essential micronutrients: iron, zinc, iodine, vitamin A, folate, and vitamin B12] – indicator to be developed	FAO, WHO
	Tier 2 Indicators: ○ Share of calories from non-staple crops. ○ Prevalence of anemia in non-pregnant women of reproductive age.	
	The following Core Indicator under another target is also relevant: 46 (5c)	
Target 1c. Provide enhanced support for highly vulnerable states and Least Developed Countries, to address the structural challenges facing those countries, including violence and conflict. *		
6	Refugees and internal displacement caused by conflict and violence	UNHCR, OCHA
7	Percent of UN Emergency Appeals delivered	UNHCR, OCHA
	Tier 2 Indicators: ○ ODA as a percentage of vulnerable countries' GNI. ○ Children out of school because of conflict, insecurity, or disaster. ○ Frequency of payment of salaries within security forces. ○ Percentage of women and men who report feeling safe walking alone at night in the city or area where they live. ○ [Indicator on security sector reform]— to be developed.	
	The following Core Indicators under other targets are also relevant: 25 (4a), 31 (4c), 91 (10a)	

[236] Some indicators appear in multiple places. Such indicators only have one indicator number assigned, which may result in non-sequential numbering in this column.
[237] Targets marked with an asterisk need to be specified at country or sub-national level.

SDSN GOAL 2: Promote Economic Growth And Decent Jobs within Planetary Boundaries		
Target 2a. Each country reaches at least the next income level and promotes decent work.		
8	GNI per capita (PPP, current US$ Atlas method)	IMF, World Bank, UN Statistics Division
9	[Index of decent work] – indicator to be developed	ILO
	Tier 2 Indicators: o Manufacturing value added (MVA) as percent of GDP. o Share of informal employment in total employment o Employment to population ratio (MDG Indicator) by sex and age group (15–64). o Percentage of own-account and contributing family workers in total employment. o Percentage of population with access to banking services (including mobile banking). o Working poverty rate measured at $2 PPP per capita per day. o Household income, including in-kind services (PPP, current US$ Atlas method). o Growth rate of GDP per person employed (MDG Indicator).	
	The following Core Indicator under another target is also relevant: 22 (3c)	
Target 2b. Countries report on their contribution to planetary boundaries and incorporate them, together with other environmental and social indicators, into expanded GDP measures and national accounts.*		
10	[Excessive loss of reactive nitrogen [and phosphorus] to the environment] – indicator to be developed	[UNEP or other agency, TBD]
11	Aerosol optical depth (AOD)	UNEP
12	Consumption of ozone-depleting substances (MDG Indicator)	UNEP Ozone Secretariat
	Tier 2 Indicators o [Indicator on chemical pollution] — to be developed. o [Indicator on toxic chemicals] — to be developed.	
	The following Core Indicators under other targets are also relevant: 54 (6b), 75 (8a), 81(9a/9b), 85 (9c), 89 (10a)	
Target 2c. Realize sexual and reproductive health and rights for all, and promote the rapid reduction in fertility to replacement level or below through exclusively voluntary means.		
13	Met demand for family planning (modified MDG Indicator)	UN Population Division and UNFPA
14	Contraceptive prevalence rate (MDG Indicator)	UN Population Division and UNFPA
15	Total fertility rate	UN Population Division and UNFPA
	Tier 2 Indicators: o Mean age of mother at birth of first child. o [Indicator on sexual health education] – to be developed.	
	The following Core Indicators under other targets are also relevant: 33 (4c), 34 (5a), 39 and 41 (5b)	
SDSN GOAL 3: Ensure Effective Learning for All Children and Youth for Life and Livelihood		
Target 3a. All children under the age of 5 reach their developmental potential through access to quality early childhood development programs and policies.		
16	Percentage of children receiving at least one year of a quality pre-primary education program	UNESCO, UNICEF, World Bank
17	Early Child Development Index (ECDI)	UNICEF

	Tier 2 Indicators: ○ Percentage of children under 5 experiencing responsive, stimulating parenting in safe environments. ○ Percentage of pupils enrolled in primary schools and secondary schools providing basic drinking water, adequate sanitation, and adequate hygiene services.	
Target 3b. All girls and boys receive quality primary and secondary education that focuses on a broad range of learning outcomes and on reducing the dropout rate to zero.		
18	Primary completion rates for girls and boys	UNESCO
19	[Percentage of girls and boys who master a broad range of foundational skills, including proficiency in reading and foundational skills in mathematics by the end of the primary school cycle (based on credibly established national benchmarks)] – indicator to be developed	UNESCO
20	Secondary completion rates for girls and boys	UNESCO
21	[Percentage of girls and boys who achieve proficiency across a broad range of learning outcomes, including in mathematics by end of the lower secondary schooling cycle (based on credibly established national benchmarks)] – indicator to be developed	UNESCO
	Tier 2 Indicators: ○ [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] – indicator to be developed	
Target 3c. Ensure that all youth transition effectively into the labor market.*		
22	Youth employment rate, by formal and informal sector	ILO
23	Tertiary enrollment rates for women and men	UNESCO
	Tier 2 Indicators: ○ Percentage of adolescents (15-19 years) with access to school-to-work programs. ○ Percentage of young people not in education, employment, or training (NEET). ○ Percentage of young adults (18-24 years) with access to a learning program. ○ Proportion of young adults (18-24 years) who are literate.	
SDSN GOAL 4: Achieve Gender Equality, Social Inclusion, and Human Rights		
Target 4a. Monitor and end discrimination and inequalities in public service delivery, the rule of law, access to justice, and participation in political and economic life on the basis of gender, ethnicity, religion, disability, national origin, and social or other status.		
24	Percentage of children under age 5 whose birth is registered with a civil authority	UNICEF
25	Compliance with recommendations from the Universal Periodic Review and UN Treaties	UN OHCHR
26	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)
27	Average number of hours spent on paid and unpaid work combined (total work burden), by sex	ILO with IAEG-GS (UNSD)
28	Ratification and implementation of fundamental ILO labor standards and compliance in law and practice	ILO
	Tier 2 Indicators: ○ Share of women on boards of national / multinational corporations. ○ Gender gap in wages, by sector of economic activity. ○ Percentage of women without incomes of their own.	
	The following Core Indicators under other targets are also relevant: 13 and 15 (2c), all (3b), 39 (5b), 68 (7b/9c)	
Target 4b. Reduce by half the proportion of households with incomes less than half of the national median income (relative poverty).		
29	Percentage of households with incomes below 50% of median income ("relative poverty")	UN Statistics Division, World Bank/OECD

30		[Indicator on inequality at top end of income distribution: GNI share of richest 10% or Palma Ratio]	UN Statistics Division, World Bank/OECD
		Tier 2 Indicators: ○ Gini Coefficient. ○ Income/wage persistence.	
Target 4c. Prevent and eliminate violence against individuals, especially women and children.*			
31		Violent injuries and deaths per 100,000 population	UNODC, UNOCHA, WHO
32		Prevalence of women 15-49 who have experienced physical or sexual violence by an intimate partner in the last 12 months	WHO, UN Statistics Division
33		Percentage of referred cases of sexual and gender-based violence against women and children that are investigated and sentenced	UN Women
		Tier 2 Indicators: ○ Percentage of women aged 20-24 who were married or in a union before age 18. ○ Prevalence of harmful traditional practices.	
		The following Core Indicator under another target is also relevant: 6 (1c)	
SDSN GOAL 5: Achieve Health and Wellbeing at all Ages			
Target 5a. Ensure universal coverage of quality healthcare, including the prevention and treatment of communicable and non-communicable diseases, sexual and reproductive health, family planning, routine immunization, and mental health, according the highest priority to primary health care.			
34		[Consultations with a licensed provider in a health facility or the community per person, per year] — Indicator to be developed	WHO
35		[Percentage of population without effective financial protection for health care] – Indicator to be developed	WHO
36		Percentage of children receiving full immunization as recommended by WHO	UNICEF, GAVI, WHO
37		[Functioning programs of multi-sectoral mental health promotion and prevention in existence] - Indicator to be developed	WHO
		Tier 2 Indicators: ○ Government expenditure on health, as a percentage of GDP ○ Percentage of fully and consistently equipped and supplied service delivery points to provide basic package of services. ○ Ratio of health professionals to population (MDs, nurse midwives, nurses, community health workers, EmOC caregivers). ○ Percentage of population with access to affordable essential drugs and commodities on a sustainable basis. ○ Percentage of new health care facilities built in compliance with building codes and standards ○ Percentage of 1 year-old children immunized against measles (MDG Indicator). ○ Percentage of births attended by skilled health personnel (MDG Indicator). ○ Antenatal care coverage (at least one visit and at least four visits) (MDG Indicator). ○ Post-natal care coverage (one visit). ○ Condom use at last high-risk sex (MDG Indicator). ○ Coverage of iron-folic acid supplements for pregnant women (%). ○ Percentage of exclusive breastfeeding for the first 6 months of life. ○ Percentage of HIV+ pregnant women receiving PMTCT. ○ Percentage of tuberculosis cases detected and cured under directly observed treatment short course (MDG Indicator). ○ Percentage of children under 5 with fever who are treated with appropriate anti-malarial drugs (MDG Indicator). ○ Percentage of people in malaria-endemic areas sleeping under insecticide-treated bed nets (modified MDG Indicator). ○ Percentage of suspected malaria cases that receive a parasitological test. ○ Percentage of confirmed malaria cases that receive first-line antimalarial therapy according to national policy. ○ Percentage of pregnant women receiving malaria IPT (in endemic areas). ○ Percentage of women with cervical cancer screening.	

	~~o Percentage with hypertension diagnosed and receiving treatment.~~ ~~o Neglected Tropical Disease (NTD) cure rate.~~ ~~o Waiting time for elective surgery.~~ ~~o Percentage of beneficiaries using hospitals, health facilities, and clinics providing basic drinking water, adequate sanitation, and adequate hygiene.~~	
	~~The following Core Indicators under other targets are also relevant: 13 and 14 (2c)~~	
~~Target 5b. End preventable deaths by reducing child mortality to [20] or fewer deaths per 1000 births, maternal mortality to [40] or fewer deaths per 100,000 live births, and mortality under 70 years of age from non-communicable diseases by at least 30 percent compared with the level in 2015.~~		
~~38~~	~~Neonatal, infant, and under-five mortality rates (modified MDG Indicator)~~	~~WHO, UNICEF, UN Population Division~~
~~39~~	~~Maternal mortality ratio (MDG Indicator) and rate~~	~~WHO, UN Population Division, UNICEF, World Bank~~
~~40~~	~~Healthy life expectancy at birth~~	~~WHO~~
~~41~~	~~HIV prevalence, treatment rates, and mortality (modified MDG Indicator)~~	~~WHO, UNAIDS~~
~~42~~	~~Incidence and death rates associated with malaria (MDG Indicator)~~	~~WHO~~
~~43~~	~~Incidence, prevalence, and death rates associated with TB (MDG Indicator)~~	~~WHO~~
~~44~~	~~Probability of dying between exact ages 30 and 70 from any of cardiovascular disease, cancer, diabetes, or chronic respiratory disease~~	~~WHO~~
	~~Tier 2 Indicators:~~ ~~o Incidence rate of diarrheal disease in children under five years.~~ ~~o Incidence and death rates associated with hepatitis.~~ ~~o Road traffic deaths per 100,000 population.~~	
~~Target 5c. Implement policies to promote and monitor healthy diets, physical activity and subjective wellbeing; reduce unhealthy behaviors such as tobacco use by [30%] and harmful use of alcohol by [20%].~~		
~~45~~	~~Percentage of population overweight and obese~~	~~WHO~~
~~46~~	~~Household Dietary Diversity Score~~	~~FAO~~
~~47~~	~~Current use of any tobacco product (age-standardized rate)~~	~~WHO~~
~~48~~	~~Harmful use of alcohol~~	~~WHO~~
~~49~~	~~Evaluative Wellbeing and Positive Mood Affect~~	~~SDSN, Gallup, OECD~~
	~~Tier 2 Indicators:~~ ~~o Prevalence of physical inactivity.~~ ~~o Fraction of calories from added saturated fats and sugars (%).~~ ~~o Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years.~~ ~~o Prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day.~~ ~~o Percentage change in per capita [red] meat consumption relative to a 2015 baseline.~~ ~~o Age-standardized (to world population age distribution) prevalence of diabetes (preferably based on HbA1c), hypertension, cardiovascular disease, and chronic respiratory disease.~~ ~~o Percentage of population with basic hand-washing facilities in the home.~~	
~~SDSN GOAL 6: Improve Agriculture Systems and Raise Rural Prosperity~~		
~~Target 6a. Ensure sustainable food production systems with high yields and high efficiency of water, soil nutrients, and energy; supporting nutritious diets with low food losses and waste.*~~		
~~50~~	~~Crop yield gap (actual yield as % of attainable yield)~~	~~FAO~~
~~51~~	~~Crop nitrogen use efficiency (%)~~	~~FAO, International Fertilizer Industry Association (IFA)~~
~~52~~	~~[Crop water productivity (tons of harvested product per unit irrigation water)] - Indicator to be developed~~	~~FAO~~
~~53~~	~~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~~

	Tier 2 Indicators: ○ Cereal yield growth rate (% p.a.). ○ [Indicator on irrigation access gap] — to be developed. ○ Livestock yield gap (actual yield as % of attainable yield).	
Target 6b. Halt forest and wetland conversion to agriculture, protect soil resources, and ensure that farming systems are resilient to climate change and disasters.*		
54	Annual change in forest area and land under cultivation (modified MDG Indicator)	FAO, UNEP
55	Annual change in degraded or desertified arable land (% or ha)	FAO, UNEP
56	Losses from disasters in rural areas, by climate and non-climate-related events (in US$ and in lives lost)	UNISDR, FAO, WHO
	Tier 2 Indicators: ○ [Farmers with nationally appropriate crop insurance (%)] – indicator to be developed].	
	The following Core Indicator under another target is also relevant: 10 (2b)	
Target 6c. Ensure universal access in rural areas to basic resources and infrastructure services (land, water, sanitation, markets, mobile and broadband communication, agricultural inputs, and advisory services).		
57	Percentage of rural population using basic drinking water (modified MDG Indicator)	WHO/UNICEF Joint Monitoring Programme (JMP)
58	Percentage of rural population using basic sanitation services (modified MDG Indicator)	WHO/UNICEF Joint Monitoring Programme (JMP)
59	[Percentage of women and men in rural areas with secure rights to land, measured by (i) percentage with documented rights to land, and (ii) percentage who do not fear arbitrary dispossession of land] — Indicator to be developed	FAO, UNDP
60	Access to all-weather road (% access within [x] km distance to road)	World Bank
61	Mobile broadband subscriptions per 100 inhabitants in rural areas	ITU
62	[Access to drying, storage and processing facilities] — Indicator to be developed	FAO
63	Number of agriculture extension workers per 1000 farmers [or share of farmers covered by agricultural extension programs and services]	FAO
	Tier 2 Indicators: ○ Percentage of population reporting practicing open defecation. ○ Percentage of households with Internet, by type of service in rural areas.	
	The following Core Indicators under other targets are also relevant: 72 and 73 (8a), 68 (9c)	
SDSN GOAL 7: Empower Inclusive, Productive and Resilient Cities		
Target 7a. End extreme urban poverty, expand employment and productivity, and raise living standards, especially in slums.*		
64	Percentage of urban population with incomes below national extreme poverty line (modified MDG Indicator)	World Bank, UN-Habitat
65	[Indicator on the deployment of a sustainable development strategy for each urban agglomeration above [250,000] - to be developed	World Bank, UN-Habitat
66	Percentage of urban population living in slums or informal settlements (MDG Indicator)	UN-Habitat, Global City Indicators Facility (GCIF)
	The following Core Indicators under other targets are also relevant: 2 (1a), 3 (1b), 31 (4c), 91 (10a)	
Target 7b. Ensure universal access to a secure and affordable built environment and basic urban services including housing; water, sanitation and waste management; low-carbon energy and transport; and mobile and broadband communication.		
57	Percentage of urban population using basic drinking water (modified MDG Indicator)	WHO/UNICEF Joint Monitoring Programme (JMP)
58	Percentage of urban population using basic sanitation (modified MDG Indicator)	WHO/UNICEF Joint Monitoring Programme (JMP)
67	Percentage of urban households with regular solid waste collection	UN-Habitat

59	[Percentage of women and men in urban areas with security of tenure, measured by (i) percentage with documented rights to housing, and (ii) percentage who do not fear arbitrary eviction] – indicator to be developed	UN-Habitat, UNDP
68	Percentage of people within [0.5] km of public transit running at least every [20] minutes	UN-Habitat
61	Mobile broadband subscriptions per 100 inhabitants in urban areas	ITU
	Tier 2 Indicators: ○ Percentage of solid waste that is recycled or composted. ○ Mean daily travel time for individuals to reach employment, education, health and community services. ○ Percentage of income spent by urban families on transport to reach employment, education, health and community services. ○ Travel share of public transport, cycling and walking. ○ Percentage of households with Internet, by type of service in urban areas.	
	The following Core Indicators under other targets are also relevant: 72 and 73 (8a)	
Target 7c. Ensure safe air and water quality for all, and integrate reductions in greenhouse gas emissions, efficient land and resource use, and climate and disaster resilience into investments and standards.*		
69	Mean urban air pollution of particulate matter (PM10 and PM2.5)	UN-Habitat, UNEP, WHO
70	Percentage of wastewater flows treated to national standards, by domestic and industrial source	WHO/UNICEF Joint Monitoring Programme (JMP)
71	Urban green space per capita	UN-Habitat
56	Losses from disasters in rural areas, by climate and non-climate-related events (in US$ and in lives lost)	UNISDR, FAO, WHO
	Tier 2 Indicators: ○ [Climate Change Action (CCA) Index] — Indicator to be developed. ○ [Disaster Risk Reduction (DRR) Index] — Indicator to be developed. ○ City Biodiversity Index (Singapore Index).	
SDSN GOAL 8: Curb human-induced climate change and ensure sustainable energy		
Target 8a: Decarbonize the energy system, ensure clean energy for all, and improve energy efficiency, with targets for 2020, 2030 and 2050.		
72	Share of the population with access to modern cooking solutions, by urban and rural (%)	Sustainable Energy for All, IEA, WHO
73	Share of the population with access to reliable electricity, by urban and rural (%)	Sustainable Energy for All, IEA, World Bank
74	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
75	Total energy and industry-related GHG emissions by gas and sector, expressed as production and demand-based emissions (tCO_2e)	UNFCCC, OECD
76	CO2 intensity of the power sector, and of new power generation capacity installed (gCO_2 per kWh)	UNFCCC, IEA
77	CO2 intensity of the transport sector (gCO_2/vkm), and of new cars (gCO_2/pkm) and trucks (tCO_2/tkm)	UNFCCC, IEA
	Tier 2 Indicators: ○ Primary energy by type. ○ CO2 intensity of the building sector and of new buildings (KgCO2/m2/year).	
	The following Core Indicators under other targets are also relevant: 54 (6b), 56 (6c/7c), 96 and 98 (10b)	
Target 8b: Reduce non-energy related emissions of greenhouse gases through improved practices in agriculture, forestry, waste management, and industry.		
78	Net GHG emissions in the Agriculture, Forest and other Land Use (AFOLU) sector (tCO_2e)	UNFCCC
	Tier 2 Indicators: ○ GHG emissions intensity of areas under forest management (GtCO2e/ha).	

	The following Core Indicators under other targets are also relevant: 56 (6c/7c), 96 and 98 (10b)	
Target 8c: Adopt incentives, including pricing greenhouse gases emissions, to curb climate change and promote technology transfer to developing countries.		
79	Implicit incentives for low-carbon energy in the electricity sector (measured as US$/MWh or US$ per ton avoided CO_2)	IEA, UNFCCC
	Tier 2 Indicators: ○ Fossil fuel subsidies ($ or %GNI).	
	The following Core Indicators under other targets are also relevant: 96 and 98 (10b)	
SDSN GOAL 9: Secure Biodiversity, and Ensure Good Management of Water, Oceans, Forests and Natural Resources		
Target 9a. Secure ecosystem services by adopting policies and legislation that address drivers of ecosystem degradation, and requiring individuals, businesses and governments to pay the social cost of pollution and use of environmental services.*		
80	Ocean Health Index (national index)	Ocean Health Index Partnership
81	Red List Index (by country and major species group)	IUCN
82	Protected areas overlay with biodiversity (national level)	UNEP-WCMC
	Tier 2 Indicators: ○ [Use of destructive fishing techniques] — Indicator to be developed. ○ [Eutrophication of major estuaries] — Indicator to be developed. ○ [Indicator on the implementation of spatial planning strategies for coastal and marine areas] — to be developed.	
	The following Core Indicators under other targets are also relevant: 10 (2b), 51, 52 and 53 (6a), 54 and 55 (6b), 89 and 90 (10a)	
Target 9b. Participate in and support regional and global arrangements to inventory, monitor, and protect ecosystem services and environmental commons of regional and global significance and curb trans-boundary environmental harms, with robust systems in place no later than 2020.		
80	Ocean Health Index (regional index)	Ocean Health Index Partnership
83	Percentage of fish stocks within safe biological limits (MDG Indicator)	FAO
81	Red List Index (for Internationally Traded Species)	IUCN, CITES
82	Protected areas overlay with biodiversity (regional and global)	UNEP-WCMC
84	[Reporting of international river shed authorities on trans-boundary river-shed management] - Indicator to be developed	UNEP, INBO, GEF
	Tier 2 Indicators: ○ Abundance of invasive alien species. ○ Area of coral reef ecosystems and percentage live cover.	
	The following Core Indicators under other targets are also relevant: 10 (2b), 55 (6b), 78 (8b)	
Target 9c. All governments and businesses commit to the sustainable, integrated, and transparent management of water, agricultural land, forests, fisheries, mining, and hydrocarbon resources to support inclusive economic development and the achievement of all SDGs.		
85	Percentage of total water resources used (MDG Indicator)	FAO, UNEP
86	Area of forest under sustainable forest management as a percentage of forest area	FAO, UNEP
87	Publication of resource-based contracts	UN Global Compact, EITI, UNCTAD
88	Publication of all payments made to governments under resource contracts	UN Global Compact, EITI, UNCTAD
	Tier 2 Indicators: ○ [Legislative branch oversight role regarding resource-based contracts and licenses] — Indicator to be developed. ○ [Strategic environmental and social impact assessments required] — Indicator to be developed. ○ Improved land ownership and governance of forests. ○ Vitality Index of Traditional Environmental Knowledge.	
	The following Core Indicator under another target is also relevant: 83 (9b)	

SDSN GOAL 10: Transform Governance and Technologies for Sustainable Development		
Target 10a. Governments (national and local) and major companies support the SDGs, provide integrated reporting by 2020, and reform international rules to achieve the goals.		
89	Country implements and reports on System of Environmental-Economic Accounting (SEEA) accounts	UN Statistics Division
90	[Share of companies valued at more than [$1 billion] that publish integrated reporting] - Indicator to be developed	Global Compact and/or WBCSD, IIRC
91	Perception of public sector corruption	Transparency International
92	Annual report by Bank for International Settlements (BIS), International Accounting Standards Board (IASB), International Financial Reporting Standards (IFRS), International Monetary Fund (IMF), World Intellectual Property Organization (WIPO), and World Trade Organization (WTO) [other organizations to be added] on the relationship between international rules and the SDGs	WTO, IMF, WIPO
93	Assets and liabilities of BIS reporting banks in international tax havens (as per OECD definition), by country (US$)	OECD
	Tier 2 Indicators: o [Compliance with OECD or other applicable Anti-Bribery Convention]— indicator to be developed. o Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries (MDG Indicator). o [Indicator on press freedom]— to be developed.	
Target 10b. Adequate domestic and international public finance for the Sustainable Development Goals, including 0.7 percent of GNI in ODA for all high-income countries and an additional $100 billion per year in climate finance by 2020 from developed-country Parties to the UNFCCC.		
94	Domestic revenues allocated to sustainable development as percent of GNI	IMF
95	Official development assistance (ODA) and net private grants as percent of high-income country's GNI	OECD-DAC, IMF
96	Official climate financing from developed countries that is incremental to ODA (in US$)	OECD-DAC, UNFCCC
97	Percent of official development assistance (ODA), net private grants, and official climate finance channeled through priority pooled multilateral financing mechanisms	OECD-DAC, World Bank
98	Private net flows for sustainable development at market rates as share of high-income country GNI	OECD-DAC and to be determined
	Tier 2 Indicators: o Net ODA to LDCs as percentage of high-income countries' GNI (modified MDG Indicator). o [Total Official Support for Development]— to be developed. o [Average remittance cost]— to be developed.	
Target 10c. Accelerate adoption of new technologies for the SDGs.		
99	[Index on ICT infrastructure performance]—indicator to be developed	ITU
100	Researchers and technicians in R&D (per million people)	UNESCO, OECD
	Tier 2 Indicators: o Gross domestic expenditure on R&D as share of GDP.	
	The following Core Indicators under other targets are also relevant: 19 and 21 (3b), 23 (3c), 61 (6b/7c)	

~~Annex 5: Arranging indicators for cross-cutting themes by goals~~[238]

~~Many important issues, such as gender equality, health, sustainable consumption and production, or nutrition are tracked by indicators arranged under different goals. It is therefore important to understand how each "cross-cutting issue" is tracked by an indicator framework. The table below illustrates how the Core Indicators address cross-cutting issues across the goals proposed by the SDSN in the . It describes only the indicators without explaining the cause-effect relationships with other sustainable development objectives. A similar table can be prepared for a consolidated set of the goals proposed by the Open Working Group.~~

[238] The table in this annex appeared as Table 2 in the previous version of this report and the numbers in parentheses refer to the previous indicator numbering.

~~Annex 6~~

Annex 4: 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.*[239]

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: 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. In some cases the indicators may also serve as operational metrics. The World Business Council on Sustainable Development and the SDSN are exploring with several partners how business metrics could be designed alongside the proposed indicator framework.

Question 3: What are the main lessons from the MDG Indicators and monitoring of the MDGs?

[239] SDSN, (2013a).

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 4: 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.

Question 5: 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 have ~~recently~~ been proposed by the Open Working Group for Sustainable Development Goals. Previous 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 summarized in Annex 1 of this report.

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 do we mean by "~~Core~~Global Reporting Indicators" and "~~Tier 2~~Complementary National Indicator" indicators?

We propose that each target be tracked by a small number of global "~~Core~~Global Reporting Indicators" that will be monitored systematically for all countries. Some ~~Core~~Global Reporting Indicators apply only to some countries (e.g. ODA or malaria), but the vast majority of ~~Core~~Global Reporting Indicators have been designed to apply to every country. We recommend that the number of ~~Core~~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 ~~Core~~Global Reporting Indicators that will, to the extent applicable, be monitored and reported for all countries, we propose additional ~~Tier 2~~Complementary National Indicators that

individual countries may consider for their monitoring systems. These ~~Tier 2~~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 ~~Tier 2~~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. See the *Action Agenda* for a more extensive discussion.

Question 9: How can a country tell whether it has achieved a target? What are the target ranges for the indicator?

Quantitative target ranges for the indicators help us determine whether targets have been reached. In some cases the target explicitly defines the indicator range. For example, SDSN Target 5b calls for reducing child mortality to [20] or fewer deaths per 1000 live births. 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 2014 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.

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. 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;[240] 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 indicators included in this report?

Composite indicators 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 indicators, which may obscure rather than clarify. Yet in some cases a composite indicator can be very useful. This seems to be the case, for example, in capturing ecological complexities.

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 ~~Core~~Global Reporting Indicators:

- Evaluative Happiness Wellbeing and Positive Mood Affect (~~109~~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 (~~100~~94): 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 additionally recommend a ~~Tier 2~~Complementary National Indicator on people's perceptions of security.

Question 14: Why are multiple variables combined?

The combination of multiple variables happens mainly at the level of the target. In this case, countries will combine variables to track the target. 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.

[240] For example, water use should be accounted for by economic activity using International Standard Industrial Classification of All Economic Activities ISIC.

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 103 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.

Bibliography

Alder, J. et al. (2010). Aggregate performance in managing marine ecosystems of 53 maritime countries. *Marine Policy*, 34: 468-476.

Alkire, S. (2014). *A New Household Survey to Catalyse the Data Revolution*, Post2015.org. Available online at: http://post2015.org/2013/11/21/a-new-household-survey-to-catalyse-the-data-revolution/

Alkire , S. and Foster, J. (2011). Understanding and misunderstandings of multidimensional poverty measurement. *The Journal of Economic Inequality*. June 2911, Volume 9, Issue 2, p 289-314.

Alkire, S. and Sumner, A. (2013). *Multidimensional Poverty and the Post-2015 MDGs*. OPHI Briefing Note. Available online at http://www.ophi.org.uk/wp-content/uploads/MPI-post-2015-MDGs-FINAL.pdf

Baillie, J.E.M. (2008). Toward monitoring global biodiversity, *Conservation Letters* 1, 18–26.

Baker, J.L. (2008). *Urban Poverty: A Global View*. Urban Paper 5 (January 2008). Washington, DC: The World Bank Group. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2008/03/24/000333037_20080324021722/Rendered/PDF/430280NWP0Glob10Box327344B01PUBLIC1.pdf

Banerjee, A. (2013). *Evolving the MDGs*. High-level Panel Working Papers Series.

Banerjee, S.G. et al. (2013). *Global tracking framework*, Vol. 3. Sustainable energy for all. Washington D.C.; The World Bank. http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/05/28/000112742_20130528084417/Rendered/PDF/778890GTF0full0report.pdf

Berlinski, S. Galiani, S. and Gertler, P. (2009). The effect of pre-primary education on primary school performance. *Journal of Public Economics*, 93, 219-234.

Berlinski, S. Galiani, S. and Manacorda, M. (2008). Giving children a better start: Preschool attendance and school age profiles. *Journal of Public Economics*, 92, 1416-1440.

Biodiversity Indicators Partnership. (2010). *Coverage of protected areas: Guidance for national and regional use*. Cambridge, U.K. 2010 BIP Secretariat

Boitier, B. (2012). *CO_2 emissions production-based accounting vs. consumption: Insights from the WIOD databases.* http://www.wiod.org/conferences/groningen/paper_Boitier.pdf

Broadband Commission. (2013a). *The State of Broadband 2013: Universalizing Broadband*. Geneva, Switzerland: Broadband Commission for Digital Development. Online at: http://www.broadbandcommission.org/documents/bb-annualreport2013.pdf

---. (2013b). *Transformative Solutions for 2015 and Beyond.* Geneva, Switzerland: Broadband Commission for Digital Development. Online at http://www.broadbandcommission.org/documents/working-groups/bb-wg-taskforce-report.pdf

Butchart, S.H.M. et al. (2012). Protecting Important Sites for Biodiversity Contributes to Meeting Global Conservation Targets. *PLoS ONE* 7(3). http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0032529

---. (2007). Improvements to the Red List Index. *PLoS One* 2(1): 1-8. Online at http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0000140

~~Butchart, S.H.M. ---. et al.~~ (2005). Using Red List Indices to measure progress towards the 2010 target and beyond. *Philosophical Transactions of the Royal Society of London*. 360 (1454): 359–372

Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning* 68:1, pp. 129-138.

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. Available at: www.grida.no

de Vries, M et al. (2013). Assessing planetary and regional nitrogen boundaries related to security and adverse environmental impacts. Current Opinion in Environmental Sustainability 5:392–402.

Dora, C. et al. (2014). Indicators linking health and sustainability in the post-2015 development agenda. *The Lancet*. Available at: http://dx.doi.org/10.1016/S0140-6736(14)60605-X

Eggleston, H.S. Buendia L. Miwa K. Ngara T. and Tanabe K. (eds.). *2006 IPCC Guidelines for National Greenhouse Gas Inventories* (5 volume collection). Available at http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html

Eurostat. (2012). *Guide to Statistics in European Commission Development Co-operation*. Version 2.0. Luxembourg: Publications Office of the European Union. Available at http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-11-028/EN/KS-RA-11-028-EN.PDF

Food and Agriculture Organization (FAO~~).~~), International Fund for Agricultural Development (IFAD~~).~~), and World Food Programme (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. Rome.

Food and Agriculture Organization (FAO). (2014). *Food Waste Footprint*. Available at http://www.fao.org/nr/sustainability/food-loss-and-waste/en

---. (2011). *Guidelines for measuring household and individual dietary diversity.* Available at http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/FAO-guidelines-dietary-diversity2011.pdf

---. (2010). *Global Forest Resources Assessment 2010*. Rome, Italy: FAO. Available online at: http://www.fao.org/docrep/013/i1757e/i1757e.pdf

Fuller, R. A. and Gaston, K.J. (2009). The scaling of green space coverage in European cities. *Biology Letters*. doi:10.1098/rsbl.2009.0010. http://rsbl.royalsocietypublishing.org/content/early/2009/02/22/rsbl.2009.0010.full.pdf+html

Gandure, S. and Kumwenda, H. (2013). *Draft Report on Sustainable Development Goals for the Southern Africa Subregion*. Discussion paper for the Africa Regional Consultative Meeting on the Sustainable Development Goals, Addis Ababa, Ethiopia. Available online at http://www.uneca.org/sites/default/files/uploaded-documents/SDG/2013/sdg2013_draft-sdgs-report-southern-africa_en.pdf

Global Network of Women Peacebuilders. (2012). *Women Count - Security Council Resolution 1325: Civil Society Monitoring Report.* http://www.gnwp.org/wp-content/uploads/2010/02/Global_Monitoring_Report.pdf

Habitat for Humanity. (2012). *The Post-2015 Development Agenda: Elevating Housing in the Next Millennium Development Goals*. Washington, DC: Habitat for Humanity. Available at http://www.habitatireland.ie/wp-content/uploads/2011/12/MDGs-HFHI-position-paper-Final.pdf

Halpern, B. et al. (2012). An index to assess the health and benefits of the global ocean. *Nature,* 488, 615–620. http://www.nature.com/nature/journal/v488/n7413/full/nature11397.html

High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. (2013). *A New Global Partnership: Eradicate Poverty And Transform Economies Through Sustainable Development*. United Nations Publishing. Available online at: http://www.post2015hlp.org/the-report/

ILO. (2013a). *Jobs and livelihoods in the post-2015 development agenda: Meaningful ways to set targets and monitor progress.* ILO Concept Note No. 2 for the post-2015 development agenda. Available online at: http://www.ilo.org/global/topics/post-2015/documents/WCMS_213209/lang--en/index.htm

~~---~~---. (2013b). *Guide to the Millennium Development Goals Employment Indicators, second edition.* Geneva, Switzerland: ILO. Available online at http://www.ilo.org/wcmsp5/groups/public/---

ed_emp/---emp_elm/documents/publication/wcms_208796.pdf

--- (2012*). Jobs and livelihoods at the heart of the post-2015 development agenda*. ILO Concept Note No. 1 on the post-2015 development agenda. Available online at http://www.ilo.org/global/topics/post-2015/documents/WCMS_193483/lang--en/index.htm

---. (2012b). *Decent Work Indicators. Concepts and definitions*. Geneva: ILO. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---integration/documents/publication/wcms_229374.pdf

ILO, DESA, ESCAP, IFAD, IOM, UNDP, UNFPA, UNIDO, and UNWOMEN. (2013). *TST Issue Brief on Employment And Decent Work*. Available online at: http://sustainabledevelopment.un.org/content/documents/18330406tstissuesemploywork.pdf

Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG). (2014). *A World That Counts: Mobilising The Data Revolution for Sustainable Development*. Available online at: http://www.undatarevolution.org/report/

International Dialogue on Peacebuilding and Statebuilding. (2013). *Peacebuilding and statebuilding indicators – progress, interim list and next steps.* Discussion paper for Third International Dialogue global meeting. Washington, D.C. Available online at http://www.pbsbdialogue.org/documentupload/03%20PSG%20Indicators%20EN.pdf

International Human Rights Internship Program and Forum-Asia. *Module on The Right to Adequate Housing*. University of Minnesota.http://www1.umn.edu/humanrts/edumat/IHRIP/circle/modules/module13.htm

IUCN. (2009). A Users' Guide to the IUCN Red List Website. Available online at http://www.iucnredlist.org/news/iucn-red-list-site-made-easy-guide

---. (2005). *Sampled Red List Index: measuring progress towards the 2010 biodiversity targets*. Available online at http://www.iucn.org/themes/ssc/images/miscellaneous/SRLIsmall.jpg

Janus, M. and Offord, D.R. (2007). Development and psychometric properties of the Early Development Instrument. *Canadian Journal of Behavioural Science*, 39, 1-22.

Joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development. (2013). *Framework and suggested indicators to measure sustainable development.* Available online: http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/2013/SD_framework_and_indicators_final.pdf

Mitchell, T. L. Jones, E. Lovell, and E. Comba (eds). (2013). *Disaster Management in Post-2015 Development Goals: Potential Targets and Indicators.* London, UK: ODI. Available online at: http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8354.pdf

Moreno-Serra R. Millett C. Smith P.C. (2011). Towards Improved Measurement of Financial Protection in Health. PLoS Med 8(9): e1001087. Available online at: http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001087.

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

Nykvist, B. et al. (2013). *National Environmental Performance on Planetary Boundaries*. A study for the Swedish Environmental Protection Agency. Stockholm, Sweden: The Swedish Environmental Protection Agency. Available online at: http://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-6576-8.pdf

OECD. (2014). Modernising the DAC's development finance statistics. Paris, France: OECD Publishing. Available online at: http://www.oecd.org/dac/externalfinancingfordevelopment/documentupload/SLM%20Dev%20Fin%20DAC(2014)9.pdf

---. (2013a). *Development Cooperation Report 2013: Ending Poverty*. Paris, France: OECD Publishing.

---. (2013b). *Effective Carbon Prices.* OECD Publishing. http://dx.doi.org/10.1787/9789264196964-en

---. (2008). *Greenhouse Gas Reduction Strategies in the Transport Sector: Preliminary Report*. http://www.internationaltransportforum.org/pub/pdf/08ghg.pdf

Partnership on Measuring ICT for Development. (2014). Report for the forthcoming UN Statistical Commission meeting (Annex1). Available online at: http://unstats.un.org/unsd/statcom/doc14/2014-8-ICT-E.pdf

Peters, G. and Hertwich, E. (2008). Post-Kyoto greenhouse gas inventories: production versus consumption. *Climatic Change*. Volume 86, Issue 1-2, p 51-66. http://link.springer.com/article/10.1007%2Fs10584-007-9280-1

Pintér, L. Almássy, D. and Hatakeyama, S. (2014). *Sustainable Development Goals and Indicators for a Small Planet, Part II: Measuring Sustainability*. Singapore: Asia-Europe Foundation. Available online at: http://www.asef.org/images/stories/publications/documents/ENVforum-Part_II-Measuring_Sustainability.pdf

Productivity Commission. (2011). *Carbon Emission Policies in Key Economies*. Research Report, Canberra. http://www.pc.gov.au/__data/assets/pdf_file/0003/109830/carbon-prices.pdf

Revenue Watch Institute. (2013). *The 2013 Resource Governance Index: A Measure of Transparency and Accountability in the Oil, Gas and Mining Sector.* New York, NY: Revenue Watch. Available online at: http://www.revenuewatch.org/rgi/report

Rockström, J. et al. (2009). Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society* 14:2, 32.

Ricketts, T.H. et al. (2005). Pinpointing and preventing imminent extinctions. *Proceedings of the National Academy of Sciences*. 51, pp. 18497-18501.

Rodricks, S. (2010). *Singapore City Biodiversity Index*. Geneva: Switzerland: The Economics of Ecosystems and Biodiversity (TEEB). http://www.teebweb.org/wp-content/uploads/2013/01/Singapore-city-biodiversity-index.pdf

Satterthwaite, D. (2013). Setting the bar too low: is there really progress on UN development goals? *IIED Blog post*. http://www.iied.org/setting-bar-too-low-there-really-progress-un-development-goals

Sayeg, P. Starkey, P. and Huizenga, C. (2014). Updated *Draft Results Framework on Sustainable Transport*. SLoCAT (Partnership on Sustainable Low Carbon Transport). Available at http://www.slocat.net/results-framework-sustainable-transport

Save the Children. (2013). *Ending Poverty in Our Generation: Save the Children's vision for a post-2015 framework*. London, UK: Save the Children. Available at http://www.savethechildren.org.uk/sites/default/files/images/Ending_Poverty_in_Our_Generation_Africa.pdf

Twerefou, D.K. (2013). *Report on Sustainable Development Goals for the West Africa Subregion*. Discussion paper for the Africa Regional Consultative Meeting on the Sustainable Development Goals, Addis Ababa, Ethiopia. Available online at http://www.uneca.org/sites/default/files/uploaded-documents/SDG/2013/sdg2013_draft-sdgs-report-west-africa_en.pdf

United Nations. (2012). *The Future We Want, Our Common Vision*. Outcome document of the Rio+20 Conference. (A/CONF.216/L.1). Available at https://rio20.un.org/sites/rio20.un.org/files/a-conf.216l-1_english.pdf

---. (2003). *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts, and Sources*. New York, NY: United Nations. Available online at http://mdgs.un.org/unsd/mdg/Resources/Attach/Indicators/HandbookEnglish.pdf

UNDESAUN DESA. (2007a). *Indicators of Sustainable Development: Guidelines and Methodologies.*

Third Edition. New York: United Nations. http://www.un.org/esa/sustdev/natlinfo/indicators/guidelines.pdf

---(---. (2007b). *Indicators of Sustainable Development: Guidelines and Methodologies –Methodology sheets.* New York: United Nations. http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets.pdf

UN Department of Peacekeeping Operations (DPKO) and the Office of the UN High Commissioner for Human Rights (OHCHR). (2011). *Rule of Law Indicators: Implementation Guide and Project Tools.* New York, NY: United Nations. Available online at http://www.un.org/en/peacekeeping/publications/un_rule_of_law_indicators.pdf

UNDP. (2013). *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World*. New York, NY: UNDP. Available online at http://hdr.undp.org/en/content/human-development-report-2013

---. (2012). *Measuring Democracy and Democratic Governance in a post-2015 Development Framework*. New York, NY: UNDP. Available online at http://www.undp.org/content/dam/undp/library/Democratic Governance/OGC/Post2015 governance metrics _14 Aug.pdf

UNESCOUNESCO. (2014). *Free, Independent and Pluralistic Media In The Post-2015 Development Agenda: A Discussion Brief.* Available online at : http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/news/post_2015_agenda_brief.pdf

---. (2011). *Global Challenge of Wastewater: Examples from Different Countries*. Presentation at World Water Week in Stockholm, August 21-27, 2011. Available at http://www.worldwaterweek.org/documents/WWW_PDF/2011/Sunday/K21/The-Malin-Flakenmark-Seminar/Global-challenge-of-wastewater-Example-from-different-continents.pdf

---. (2010). *Media Development Indicators: A framework for assessing media development.* Available online at: http://unesdoc.unesco.org/images/0016/001631/163102e.pdf

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*. http://www.brookings.edu/research/reports/2013/09/learning-metrics-task-force-universal-learning#

UN-Habitat. (2009). *Urban Indicator Guidelines: Better Information, Better Cities, Monitoring the Habitat Agenda and the Millennium Development Goals – Slum Target*. Nairobi, Kenya: UN-Habitat. Available at: http://www.unhabitat.org/downloads/docs/Urban_Indicators.pdf

----.---. (2006). *State of the World's Cities 2006/7*. Available online at http://www.unhabitat.org/documents/media_centre/sowcr2006/sowcr 5.pdf

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. Available online at http://www.childinfo.org/files/infant_child_mortality_2006.pdf

UNIDO, UNDP, UN-HABITAT and UNEP. (2013). *Sustained and Inclusive Economic Growth, Infrastructure Development, and Industrialization*. Available online at: http://sustainabledevelopment.un.org/content/documents/2078Draft%20Issue%20Brief_Sustained%20and%20Inclusive%20Economic%20Growth_Final_16Oct.pdf

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.

UN Office on Drugs and Crime (UNODC). (2013). *Accounting for Security and Justice in the Post-2015 Development Agenda*. Geneva: UNODC. Available online at

http://www.unodc.org/documents/about-unodc/Post-2015-Development-Agenda/UNODC_-_Accounting_for_Security_and_Justice_in_the_Post-2015_Development_Agenda.pdf

UN Population Division. (2011). *World Contraceptive Use 2011.* New York: UN. Available online at http://www.un.org/esa/population/publications/contraceptive2011/contraceptive2011.htm

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.* Available online at: http://www.un.org/millenniumgoals/pdf/A%20Life%20of%20Dignity%20for%20All.pdf;

---. (2010). *Women and peace and security*. Security Council Report S/2010/173. New York, NY: United Nations. Available online at http://www.un.org/docs/sc/sgrep10.htm

UN Statistics Division. (2013). *Principles and Recommendations for a Vital Statistics System (Revision 3).* Available at: http://unstats.un.org/unsd/demographic/standmeth/principles/default.htm

---,---. 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*. Available online at: http://sustainabledevelopment.un.org/content/documents/3647Compendium%20of%20statistical%20notes.pdf

UN System Task Team on the Post-2015 UN Development Agenda. (2013). *Statistics and indicators for the post-2015 development agenda.* New York, NY: United Nations. Available online at: http://www.un.org/en/development/desa/policy/untaskteam_undf/UNTT_MonitoringReport_WEB.pdf

UN Women. (2013). *A Transformative Stand-Alone Goal On Achieving Gender Equality, Women's Rights And Women's Empowerment: Imperatives And Key Components.* New York, NY: United Nations. Available online at: http://www.unwomen.org/~/link.aspx?_id=981A49DCB34B44F1A84238A1E02B6440and_z=z

US Environmental Protection Agency. (2009). *Drinking Water Glossary: A Dictionary of Technical and Legal Terms Related to Drinking Water*. Washington DC: Office of Water/Office of Ground Water and Drinking Water. http://water.epa.gov/drink

World Health Organization. (2014a). NCD Global Monitoring Framework. Available at http://www.who.int/nmh/global_monitoring_framework/en

---(---. (2014b). Global Database on Child Health and Malnutrition; Child growth indicators and their interpretation. Available at http://www.who.int/nutgrowthdb/about/introduction/en/index2.html

---.---. (2014c). Micronutrients. Available at http://www.who.int/nutrition/topics/micronutrients/en/index.html

---.---. (2013a). WHO recommendations for routine immunization - summary tables. Available at http://www.who.int/immunization/policy/immunization_tables/en/index.html

---.---. (2013b). *Global Vaccine Action Plan, 2011 – 2020.* Available at http://www.who.int/immunization/documents/general/ISBN_978_92_4_150498_0/en/index.html

---.---. (2013c). Global Action Plan for the Prevention and Control of Non-Communicable Diseases. Available at http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf

---(---. (2013d). Mental Health Action Plan 2013 – 2020. Available at http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf

---.---. (2013e), *Global status report on road safety*. Available at http://www.who.int/violence_injury_prevention/road_safety_status/2013/report/en/

---.---. (2012). Proposed targets for maternal, infant, and young children nutrition. WHO Discussion paper. Available at

http://www.who.int/nutrition/topics/nutrition_globaltargets2025/en/index.html

---. (2010). Global Recommendations on Physical Activity for Health. Available at http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf?ua=1

---. (2009*). Monitoring emergency obstetric care: a handbook*. Geneva, Switzerland: WHO Press, 10. Available at http://whqlibdoc.who.int/publications/2009/9789241547734_eng.pdf

---. (2008). *Toolkit on monitoring health systems strengthening service delivery*. Geneva, Switzerland: WHO. Available at http://www.who.int/healthinfo/statistics/toolkit_hss/EN_PDF_Toolkit_HSS_ServiceDelivery.pdf

---. (2005). *The World health report 2005: make every mother and child count.* Geneva: WHO. Available online at http://www.who.int/whr/2005/whr2005_en.pdf?ua=1

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. Available at: http://www.who.int/healthinfo/country_monitoring_evaluation/UHC_WBG_DiscussionPaper_Dec2013.pdf

World Food Programme (WFP). (2008). *Technical Guidance Sheet - Food Consumption Analysis: Calculation and Use of the Food Consumption Score in Food Security Analysis.* Available online at http://www.wfp.org/content/technical-guidance-sheet-food-consumption-analysis-calculation-and-use-food-consumption-score-food-s.

Water Supply & Sanitation Collaborative Council (WSSCC). (2014). *WASH POST-2015: proposed targets and indicators for drinking-water, sanitation and hygiene.* Online at http://www.wssinfo.org/fileadmin/user_upload/resources/post-2015-WASH-targets-factsheet-12pp.pdf

WHO-UNICEF Joint Monitoring Programme. (2013). "Post-2015 WASH Targets and Indicators." Online at http://www.wssinfo.org/post-2015-monitoring

WWF. (2012). *Living Planet Report*. Gland, Switzerland: WWF International. http://awsassets.panda.org/downloads/1_lpr_2012_online_full_size_single_pages_final_120516.pdf

Yale Center for Environmental Law and Policy, and Columbia Center for International Earth Science Information Network. (2012). *2012 EPI - Environmental Performance Index and Pilot Trend Environmental Performance Index*. Available at http://epi.yale.edu/sites/default/files/downloads/2012-epi-full-report_0.pdf

VanIttersum, M.K. et al. (2013). Yield gap analysis with local to global relevance-A review. *Field Crops Res*. 143, 4-17

Yoshikawa, H. et al. (2013). *Investing in the future: The evidence base for early childhood education*. Washington, DC: Society for Research in Child Development.

Yossa, T. (2013). *Report on Sustainable Development Goals for the Central Africa Subregion*. Discussion paper for the Africa Regional Consultative Meeting on the Sustainable Development Goals, Addis Ababa, Ethiopia. Available online at http://www.uneca.org/sites/default/files/uploaded-documents/SDG/2013/sdg2013_draft_sdgs_report_central_africa_en.pdf

Documents and Reports Prepared by the SDSN

(All are available at http://unsdsn.org/resources)

Agyepong, I. Liu, G, and Reddy, S. et al. (2014). *Health In the Framework of Sustainable Development.*

Paris, France and New York, USA: SDSN.

Alkire, S. (2014), *Towards frequent and accurate poverty data.* SDSN Briefing Paper. Paris, France and New York, USA: SDSN.

Alkire, S. and Samman, E. (2014). *Mobilizing the household data required to progress toward the SDGs*. SDSN Briefing Paper. Paris, France and New York, USA: SDSN.

Bakker, P. and Leisinger, K. et al. (2013). *The key challenges to 2030/2050: Mapping out long-term pathways to sustainability and highlighting solutions that should be scaled up.* Background Paper for the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. Paris, France and New York, USA: SDSN.

Begashaw, B. et al. (2014 forthcoming). *Reducing Poverty and Building Peace in Fragile Regions*. Draft report of the Thematic Group.

Bradshaw, S. Castellino, J. and Diop, B. et al. (2013). *Achieving Gender Equality, Social Inclusion, and Human Rights for All: Challenges and Priorities for the Sustainable Development*. Paris, France and New York, USA: SDSN.

Cassidy, M. (2014). *Assessing Gaps in Indicator Coverage and Availability*, SDSN Briefing Paper, Paris, France and New York, USA: SDSN

Chavan, M. and Yoshikawa, H. et al. (2014). *The Future of Our Children: Lifelong, Multi-generational Learning for Sustainable Development*. Draft Technical Report from the Thematic Group on Early Childhood Development, Education, and Transition to Work. Paris, France and New York, USA: SDSN.

Collier, P and Antonio, P. et al. (2013). *Harnessing Natural Resources for Sustainable Development: Challenges and Solutions*. Paris, France and New York, USA: SDSN.

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.

Naeem, S. Viana, V. Visbeck, M. (2014). *Forests, Oceans, Biodiversity and Ecosystem Services*. Draft report of the Thematic Group FOBES, SDSN. To be published by Sustainable Development Solutions Network.

Revi, A. and Rosenzweig, C.et al. (2013a*). The Urban Opportunity to enable Transformative and Sustainable Development*. Background Paper for the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. Paris, France and New York, USA: SDSN.

---. (2013b). *Why the World Needs an Urban Sustainable Development Goal.* Paris, France and New York, USA: SDSN.

Rockström, J. Sachs, J. Öhman, M. and Schmidt-Traub, G. (2013) *Sustainable Development and Planetary Boundaries*. Background Paper for the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda. Paris, France and New York, USA: SDSN.

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

Sustainable Development Solutions Network. (2013a). *An Action Agenda for Sustainable Development.* Report for the UN Secretary-General. Paris, France and New York, USA: SDSN.

---. (2013b). *World Happiness Report 2013*. New York, USA: SDSN. http://unsdsn.org/happiness

Thematic Consultations Organized by the United Nations

Conflict, Violence, and Disaster. (2012, November 7). Concept Note on the Impact of Conflict, Violence and Disaster on Long-Term Development. UNDP, PBSO, UNISDR and UNICEF, with support from the Government of Finland. Available at

http://www.worldwewant2015.org/conflict

Education. (2013, May 17). Executive Summary (Draft): Envisioning education in the post-2015 development agenda. Co-led by UNDP and OHCHR with support from the Government of Canada. Available at http://www.worldwewant2015.org/education2015

Energy. (2013, April 16). Global Thematic Consultation on Energy and the Post-2015 Development Agenda: Key Messages. UN-Energy. Available at http://www.worldwewant2015.org/Energy2015

Environmental Sustainability. (2013, March). Co-Chairs Summary of the Leadership Meeting. Co-led by UNEP and UNDP with support from the Government of France. Available at http://www.worldwewant2015.org/sustainability

---. (2013, March). Summary Report of Submitted Discussion Notes. Co-led by UNEP and UNDP with support from the Government of France. Available at http://www.worldwewant2015.org/sustainability

Food Security and Nutrition. (2013, April 4). Food Security and Nutrition for All: A Vision and Building Blocks for a Global Agenda. Co-led by FAO and WFP with support from the Government of Spain. 2013. Available at http://www.worldwewant2015.org/food2015

Governance. (2013, March 4). Key Outcomes and Recommendations from Pre-Meetings to the Post-2015 Global Thematic Consultation on Governance. Co-led by UNDP and OHCHR with support from the Government of Germany. Available at http://www.worldwewant2015.org/governance

---. (2013, March 16). Meeting Report: Governance and human rights: Criteria and measurement proposals for a post-2015 development agenda. Co-led by UNDP and OHCHR with support from the Government of Germany. Available at http://www.worldwewant2015.org/governance

---. (2013, May 14). Review of Outcomes - Final meeting of the Global Thematic Consultation on Governance and the Post-2015 Framework. Co-led by UNDP and OHCHR with support from the Government of Germany. Available at http://www.worldwewant2015.org/governance

Growth and Employment. (2012, May 16). Growth, Structural Change and Employment: Report of the first thematic consultation on the post-2015 framework for development. Co-led by UNDP and ILO with support from the Government of Japan. Available at http://www.worldwewant2015.org/employment

Health. (2013, April). Health in the Post-2015 Agenda. Task Team for the Global Thematic Consultation on Health in the Post-2015 Development Agenda. Co-led by WHO and UNICEF with support from the Government of Sweden and Government of Botswana. Available at http://www.worldwewant2015.org/health

Inequality. (2013, March 13). Addressing Inequalities: Synthesis Report of Global Public Consultation. Co-led by UNICEF and UN Women with support from the Governments of Denmark and Ghana. Available at http://www.worldwewant2015.org/inequalities

Population. (2013, March 14). A Call to Integrate Population Dynamics into the Post‑2015 Development Agenda: draft outcome document. Co-led by UN-DESA, UNFPA, UN-HABITAT and IOM with the support of the Governments of Bangladesh and Switzerland. Available at http://www.worldwewant2015.org/population

Water. (2013, April 23). Water Thematic Consultation Report, Draft Version for Comments. Co-led by UN-Water, UNDESA, UN-Habitat and UNICEF with support from the Governments of the Netherlands and Switzerland. Available at http://www.worldwewant2015.org/water

United Nations Development Group (2013a). *The Global Conversation Begins: Emerging Views for a New Development Agenda*. Available at http://www.worldwewant2015.org/the-global-conversation-begins

---. (2013b). Growth and Employment in the Post-2015 Agenda Messages from a global consultation. Available online: www.worldwewant2015.org/employment

[i] High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, (2013), 17.
[ii]. United Nations (2012). *The Future We Want, Our Common Vision*. Outcome document of the Rio+20 Conference. (A/CONF.216/L.1), paragraph 247.
[iii]. See for example UNICEF (2013) *Key Asks On the Post-2015 Development Agenda*, New York: United Nations Children's Fund; or Save the Children (2013) *Getting to Zero: How We can be the generation that ends poverty*, London, UK: Save the Children UK.
[iv]. United Nations, (2003), *Indicators for Monitoring the Millennium Development Goals: Definitions, Rationale, Concepts, and Sources*, New York, NY: United Nations.
[v] High-Level Panel of Eminent Persons on the Post-2015 Development Agenda, (2013), 17.