Statistics Netherlands

Memo

to Expert Group Meeting on the indicator framework for the post-2015 development agenda

cc

from dr. J.P. Smits
Senior statistical researcher

subject Statistics Netherlands input: Aligning SDG indicators with CES conceptual framework
19 februari 2015

The final document of the *Rio+20 United Nations Conference on Sustainable Development* outlines an agenda for further activities. First, paragraph 38 of the outcome document *The future we want* of the Conference indicates that "We recognize the need for broader progress to complement gross domestic product in order to better inform policy decisions, and in this regard we request the United Nations Statistical Commission, in consultation with relevant United Nations system entities and other relevant organisations, to launch a programme of work in this area building on existing initiatives". Secondly, the outcomes of the Rio+20 Conference point to the need for policy action and formulating policy goals. Paragraph 104 of the outcome document of the Conference states that "we recognize that goals, targets and indicators, including where appropriate gender-sensitive indicators, are valuable in measuring and accelerating progress". The document proposes that the UN community formulate Sustainable Development Goals (SDG) to replace or augment the Millennium Development Goals (MDG).

It is good to see that the measurability of the political goals is recognized as an important part of the post-2015 development agenda. Especially the Open working Group for Sustainable Development Goals has done a lot of work in identifying the main relevant topics that should be taken on board.

Besides, important investigations have been done into the measurability of the suggested goals and targets, as well as the data availability. Especially the Reports of the High Level Panel, the Sustainable Development Solutions Network and the UN System Task Team on the Post-2015 UN Development Agenda.

However, the many different measurement initiatives that are under investigation, do confront us with three problems:

(1) **We need less and not more measurement frameworks:** There are already ca. 1000 different sustainable development measurement systems. Do we really want to add another one to this ever growing number of initiatives? One of the reasons why the System of National Accounts (SNA) has been so influential is that there has been a strong convergence toward one standard, and that the SNA were applied world-wide. The UNECE/Eurostat/OECD Task Force for Measuring Sustainable Development has done a lot of work on the convergence of the many different SDI sets. Last year the final report of this Taskforce, the so-called *CES Recommendations on Measuring Sustainable Development*, was

published. This Report has been endorsed by ca. 60 countries, of which some are already doing some pilot testing. The Friends of the Chair Group mentions the *CES Recommendations* as a possible basis to arrive at a global set of SD indicators. The main findings of these *Recommendations* are included in the Annex of this note)

http://www.unece.org/fileadmin/DAM/stats/publications/2013/CES_SD_web.pdf

(2) **Necessity to align SDG indicators with conceptual indicators system (CES Recommendations):** The SDG indicators as proposed by the Open Working Group are the outcome of a political process. This has the clear advantage that the indicators will be widely used by policy makers. However, in the process of political decision making, biases may have been created. It is therefore good to use the conceptual framework mentioned above in order to check whether all relevant aspects of sustainable development have been included. It would be good to include the SDG indicators in the UNECE/Eurostat/OECD framework, which is currently broadened to also include the relevant indicators for developing countries. This has the advantage that all relevant themes of sustainable development are included in the indicator set, but that for specific policy purposes, the SDG indicators can be selected as a sub-set.

Currently, work is done at Statistics Netherlands in the field of aligning the suggested SDG indicators with the *CES Framework*. Besides, also a further alignment to the insicators which are part of the System of Economic and Environmental Accounts (SEEA) is considered. The main results of this research will be presented June 2015.

(3) **Need for data revolution or decreasing the number of indicators?**: Currently, more than 300 SDG indicators are suggested by the Open Working Group. In order to obtain all these indicators world-wide, a data revolution is needed which is hardly forseeable. It might therefore be good to look at possibilities to decrease the actual number of indicators, also in order to avoid countries to "cherry pick" from an indicator set which is simply too large.

The earlier work of the High Level Panel Group and the Sustainable Development Solutions Network may give good guidance. In a joint paper that the Dutch, British and Australian Statistical offices wrote for the Friends of the Chair Group, the data suggestions provided by the HLPG and SDSN are discussed and compared with the outcomes of the *CES Recommendations*. This document is included in the email message.

Annex: Main messages and short narrative of the CES Recommendations on Measuring Sustainable Development

Why measure sustainable development?

1. There is a widespread understanding that society needs a better statistical 'compass' to shift emphasis from measuring economic phenomena to measuring sustainable development. The latter concept entails making choices between using resources to maximise current human well-being or preserving resources for future use; or between maximising the human well-being of one country at the expense of others. In addition to prevalent macroeconomic indicators such as GDP, sustainable development indicators pay due attention to current human well-being, including its distribution across and within countries, as well as to the intergenerational aspects of human well-being. The concept of sustainable development focuses, among other things, on the depletion of natural resources, climate change and other factors that affect society in the long run.

The need for harmonisation

2. The last two decades have seen a huge proliferation of methods and indicators to measure sustainable development. Many composite indicators have been proposed in the academic literature, while many institutes have adopted sets of sustainable development indicators (SDI) to track progress towards a sustainable society. While these initiatives have helped to put sustainable development on the agenda of national and international institutions, the differences between the approaches remain large. A conceptual framework is needed to harmonise the different ways in which sustainable development has been measured. Therefore, the UNECE jointly with the European Commission (Eurostat) and the OECD undertook this task by setting up a dedicated Task Force to develop such a framework. The framework, which is presented in this publication, may serve as an organising principle to facilitate users' choices through large numbers of indicators and to present the information in a concise manner. Although the publication is primarily aimed at statisticians, it may also be relevant for policymakers, as policy targets for sustainable development are increasingly being formulated at national and international levels.

Proposed conceptual framework

3. The framework aims to link the SDI sets currently produced by national and international statistical organisations, and formulate a list of potential indicators based on a sound conceptual framework. As such, the framework could facilitate the comparison and harmonisation of existing SDI sets. A distinction is made between *three conceptual dimensions* of human well-being, i.e. human well-being of the present generation in one particular country (referred to as 'here and now'), the well-being of future generations ('later') and the well-being of people living in other countries ('elsewhere'). *Twenty themes* are distinguished, covering environmental, social and economic aspects of sustainable development: subjective well-being, consumption and income, nutrition, health, housing, education, leisure, physical safety, trust, institutions, energy resources, non-energy resources, land and ecosystems, water, air quality, climate, labour, physical capital, knowledge capital, and financial capital. Population has been added as a context indicator.

Theoretical and practical foundations of the framework

4. The proposed measurement system is based on the following sources:

(a) *Brundtland definition*. The framework builds on the definition of sustainable development in the Brundtland Report, prepared by the United Nations World Commission on Environment and Development (WCED): "Sustainable development is a development which meets the needs of the present generation without compromising the ability of future generations to meet their needs". The Brundtland Report also argues that sustainable development is essentially about distributional justice, in both time and space. This means that the distribution of well-being between the present and future generations is included, as well as the difference in well-being between countries.

(b) *Economic theory, with additional insights from social sciences*. The framework is developed on the basis of a thorough study of the available academic literature related to economic theory and measurement of capital. It builds on the notion of a production function which links human well-being to capital. The conceptual basis of the framework covers the economic, environmental, and social aspects of sustainable development.

(c) *Stiglitz-Sen-Fitoussi report and other international initiatives.* The Stiglitz-Sen-Fitoussi Report gave an important impetus to the issue of measuring sustainable development. The framework developed by the Task Force stays close to the recommendations made by Stiglitz et al. The work by the European Commission (Eurostat), OECD and other international organisations related to measuring sustainable development has also been taken into account, such as the European Commission Communication on GDP and beyond, the recommendations of the EU Sponsorship Group on Measuring Progress, Well-being and Sustainable Development, and the OECD work on measuring and fostering the progress of societies, including the Better Life initiative.

(d) *The commonalities in existing SDI sets.* The conceptual framework allows for a pragmatic approach in developing an SDI set. The selection of themes and indicators is based on an in-depth analysis of the sustainable development themes and indicators currently used in several national and international datasets.

Transboundary impacts

5. In an increasingly globalised world, the relationships between countries are becoming more and more important. An important conclusion is that SDI sets should reflect the transboundary impacts of sustainable development, by highlighting how a country in the pursuit of the well-being of its citizens may affect the well-being of citizens of other countries.

Procedure to select three sets of potential indicators

6. Based on the measurement framework, a procedure to derive three indicator sets is proposed. The indicator sets include a large set of 60 indicators selected on a conceptual basis to provide information about the well-being in the 'here and now', 'later' and 'elsewhere'; a large set of 90 indicators selected on a thematic basis with more detailed indicators about policy drivers; and a small set of 24 potential indicators to communicate the main messages more efficiently to policymakers and the general public. The small set of indicators should be regarded as a possible way of narrowing down the number of indicators. Users may also find other ways to define a small dataset from the proposed large and comprehensive sets of potential indicators. As the aim is to identify indicators that are available for a wide set of countries, the publication does not

prescribe how to select country specific indicators linked to sustainable development policies defined at country level.

Relevance of the framework

7. The framework can be used in a flexible way – it links the three conceptual dimensions defined in the Brundtland report ('here and now', 'later' and 'elsewhere') to policy-relevant themes. It strives to harmonise the measurement of sustainable development on a solid conceptual basis, and it proposes an indicator set without claiming to provide a one-size-fits-all solution. Although the proposed sustainability themes are universal, there is room for selecting country-specific indicators. The framework also allows for the development of indicators which may provide information on how to reverse 'negative' trends or to sustain 'positive' ones from a sustainable development perspective. The framework is expected to contribute to setting the Sustainable Development Goals and targets in such a way that they are measurable. Once the SDGs have been established, the suggested indicators can be aligned with the Goals.

Measuring sustainable development within the realm of official statistics

8. Important criteria for the selection of sustainable development indicators are that they are in line with the quality standards of official statistics. Official statistics entail any statistical activity carried out within a national statistical system, or under the statistical programme of an intergovernmental organisation. The majority of suggested indicators are already produced by national statistical offices and collected by international and supranational organisations such as the United Nations and the European Commission (Eurostat). This particularly applies to the small set of indicators selected on the basis of their availability in a great number of international datasets. Other important criteria applied are the commonalities of the current SDI sets of countries, and the ability of indicators to describe the phenomena they are designed to measure.

SHORT NARRATIVE

Introduction

9. The publication presents a broad conceptual framework for measuring sustainable development and suggests sustainable development indicators that can be used for international comparison. While the publication is aimed primarily at statisticians, it may also serve as guidance to policymakers in setting targets for sustainable development policies and monitoring their implementation.

10. The publication is a step towards harmonising the various approaches and indicators already used by countries and international organisations to measure sustainable development. The framework takes into account existing approaches used by the various initiatives undertaken by United Nations, European Commission and the OECD, as well as initiatives of individual countries. Examples include the European Commission's work on 'GDP and beyond', the recommendations of the EU Sponsorship Group on Measuring Progress, Well-being and Sustainable Development, and the OECD work on measuring well-being and fostering the progress of societies, including the Better Life Initiative.

11. The work has been done by the Joint UNECE/Eurostat/OECD Task Force on Measuring Sustainable Development (TFSD). It is a follow-up to the Working Group on Statistics for Sustainable Development (WGSSD), which published a report on measuring Sustainable Development in 2009[1]. The WGSSD focused mainly on the inter-generational issues of sustainable development using capital measures, while the new work also takes the well-being of the current generation into account.

Conceptual background (Part I of the publication)

12. A starting point for the framework is the Brundtland Report (1987), which defines sustainable development as development that "*meets the needs of the present without compromising the ability of future generations to meet their needs*".

13. Furthermore, the Brundtland Report puts emphasis on the fairness of societal developments on a global scale. In an increasingly globalised world, the measurement approaches should reflect the transboundary impact of sustainability, by highlighting how a country in the pursuit of well-being of its citizens may affect the well-being of citizens of other countries. Essentially, sustainable development deals with the inter- and intragenerational aspects of human well-being, including the distribution of this well-being.

14. Following the Brundtland definition, three dimensions of sustainable development are distinguished, i.e. human well-being of the present generation in one particular country (referred to as 'here and now'), the well-being of future generations ('later') and the well-being of people living in other countries ('elsewhere'). This approach enables the user to distinguish to what extent the choices the present generation makes may lead to problems 'elsewhere' or 'later'.

[1] http://www.unece.org/fileadmin/DAM/stats/publications/Measuring_sustainable_development.pdf

Dimensions and themes of sustainable development (Part II of the publication)

15. Part II of the publication identifies which specific themes of sustainable development need to be measured for the three conceptual dimensions of human well-being, i.e. 'here and now', 'later' and 'elsewhere'.

Human well-being 'here and now'

16. There is no theoretical consensus on how to measure the human well-being of the present generation. Essentially, human well-being is determined by what people regard as important in their lives. This can be a mix of subjective and objective measures. The main themes are identified in a pragmatic way. First, the various perspectives on measuring human well-being are discussed starting out from an exploration of the academic literature. Second, a selection of themes is made based on a number of important empirical studies.

17. The measurement of human well-being 'here and now' distinguishes the following themes: subjective well-being, consumption and income, nutrition, health, labour, education, housing, leisure, physical safety, land and ecosystems, water, air quality, trust and institutions.

Human well-being 'later'

18. The well-being of future generations is dependent on the resources the current generation leaves behind. The abundant literature on capital measurement, discussed extensively in the 2009 WGSSD report, makes it relatively easy to distinguish the main themes of this dimension. The WGSSD agreed that assets that should be preserved for future generations fall under four main types of capital: economic, natural, human and social capital. The measurement system estimates the current levels of capital and their increase/decrease to show how choices of the present generation might impact on future generations; it does not aim to forecast the well-being levels that may be attained by future generations.

19. The choice of themes for economic capital is based on the international standard, the System of National Accounts (SNA). The Central Framework of the System of Economic and Environmental Accounts (SEEA), adopted as a statistical standard in 2012, provides the basis for measurement of natural capital. However, the asset boundary used in the framework for measuring sustainable development is broader than in the SEEA 2012 Central Framework, as it also encompasses natural assets such as ecosystems and climate.

20. There are no international standards yet for the measurement of human and social capital. The publication reflects current developments in research in this area. Human capital is defined as the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being. Social capital encompasses the generalised trust that is being built through the repeated interactions between citizens. A second theme related to social capital concerns the quality of society's institutions.

21. Human well-being 'later' distinguishes the following themes: for economic capital - physical capital, knowledge capital and financial capital; for natural capital - energy

resources, non-energy resources, land and ecosystems, water, air quality and climate; for human capital - labour, education and health; and for social capital - trust and institutions.

Human well-being 'elsewhere'

22. The 'elsewhere' dimension captures the ways in which countries affect the human well-being of the rest of the world. The transboundary impacts of a country may affect other countries via various channels. One example are the indicators on international aid from developed countries to less developed countries (e.g. official development assistance). Another example is the extent to which one country may deplete the resources of other countries, i.e. the so-called footprint indicators, which calculate the environmental pressure attributable to consumption in one country on resources abroad.

23. Human well-being 'elsewhere' distinguishes the following themes: consumption and income, energy resources, non-energy resources, land and ecosystems, water, climate, labour, physical capital, knowledge capital, financial capital and institutions.

Inequality

24. Inequality and distributional issues have a special importance in the measurement of sustainable development. Inequality is a cross-cutting issue relevant to most of the themes and indicators included in an SDI set. Inequality may also be seen as an important driver of well-being, as the literature suggests that people's own well-being is strongly influenced by their position in relation to a peer group. Therefore, wherever possible, a breakdown of indicators for different groups (e.g. gender, age, ethnic background, etc.) is proposed.

Sustainable development indicators (Part III of the publication)

25. Part III of the publication focuses on selecting the potential indicators grouped in three indicator sets as proposed by the TFSD: two large sets of 60 and 90 indicators respectively, as well as a small set of 24 indicators. The suggested indicators should be viewed as example indicators, identified on the basis of commonalities between different indicator sets and availability in international databases. The set can be considered by countries as a potential set of indicators that can be derived from the conceptual framework. The aim is to identify indicators that are available for a large number of countries and so enable international comparison. Therefore data availability is an important criterion for indicator selection.[2]

Two large indicator sets

26. There are two ways to structure an SDI set. The conceptual and thematic categorisations can be seen as complementary. It is possible to select and use just one of them, or both simultaneously in developing a set of indicators. The relationship between the conceptual and thematic categorisations is shown in Table 1:

[2] Because of the emphasis on data availability and international comparability, the publication does not address issues of choosing indicators to cater for specific country situations. There is no prescription on how to select country specific indicators that are linked to sustainable development policies at country level. However, the Task Force aimed at providing an input to measuring sustainable development at a global level and contributing to actions taken in the wake of the Rio+20 Conference (see Part IV of the publication).

(a) In the **conceptual categorisation** a set of proposed indicators is presented according to the dimensions ‘here and now’, ‘later’ and ‘elsewhere’.

(b) In the **thematic categorisation**, the SDI set is organised according to the twenty themes defined in Part II of the publication. Here, the indicators are no longer allocated along the dimensions ‘here and now’, ‘later’ and ‘elsewhere’. For example, education is one of the themes. The same indicators that are used to measure ‘education’ in the thematic categorisation, are used to measure both the well-being ‘here and now’ and the well-being ‘later’ in the conceptual categorisation. These links are marked with a cross in the relevant cells in Table 1. In addition to the ‘core’ indicators, indicators for the so-called ‘policy drivers’ are provided for each theme. These ‘policy driver’ indicators show how society (and policymakers) can influence the core indicators. In the case of education, for example, a ‘policy driver’ indicator could be the ‘percentage of early school leavers’.

Table 1. Framework for measuring sustainable development: relationship between the conceptual and thematic categorisations

Themes	Dimensions		
	Human well-being ('Here and now')	**Capital ('Later')**	**Transboundary impacts ('Elsewhere')**
TH1. Subjective well-being	X		
TH2. Consumption and income	X		X
TH3. Nutrition	X		
TH4. Health	X	X	
TH5. Labour	X	X	X
TH6. Education	X	X	
TH7. Housing	X		
TH8. Leisure	X		
TH9. Physical safety	X		
TH10. Land and ecosystems	X	X	X
TH11. Water	X	X	X
TH12. Air quality	X	X	
TH13. Climate		X	X
TH14. Energy resources		X	X
TH15. Non-energy resources		X	X
TH16. Trust	X	X	
TH17. Institutions	X	X	X
TH18. Physical capital		X	X
TH19. Knowledge capital		X	X
TH20. Financial capital		X	X
Economic capital - monetary		X-*M*	
Natural capital - monetary		X-*M*	
Human capital - monetary		X-*M*	
Social capital - monetary		X-*M*	

Monetisation

27. Economic, natural, human and social capital can be measured both in physical and monetary terms. The issues related to monetisation of different types of capital are discussed. For some capital stocks, monetisation methods are available within the realm of official statistics. Produced, financial capital and some natural resources are covered by the SNA 2008. The System of Environmental-Economic Accounting (SEEA) 2012 Central Framework covers a number of natural resources. The SEEA Experimental ecosystem accounting describes the approaches to monetisation of ecosystem services which is in an experimental stage.

28. The publication is cautious on the use of monetisation because of the assumptions involved with respect to future extraction rates, discount factors, and the estimation of implicit prices for stocks for which there is no market. Variation of these assumptions can often affect the outcome significantly. Capital indicators that can be measured in monetary terms are marked with 'M' in Table 1.

Introducing the two large sets

29. The advantage of the conceptual categorisation is that it emphasises the trade-offs between the 'here and now', 'elsewhere', and 'later'. It is also closely connected with economic theory and is therefore more amenable to economic modelling and to developing satellite accounts. Another advantage of the conceptual categorisation is that it identifies all important aspects of sustainable development which *should* be measured, and can therefore be helpful in identifying data gaps.

30. The advantages of the thematic categorisation are that the terminology is more suited to the language of the policymakers and the general public. In addition, the framework can easily incorporate indicators on the key 'policy drivers' for each theme. The policy drivers are a useful tool for policymakers as they can provide more detailed information on how to reverse negative or sustain positive trends.

31. The publication does not aim to define a one-size-fits-all approach, but rather presents a flexible framework that can respond to a variety of needs. Users who want to stress the current as well as the future aspects of human well-being (the 'integrated approach'), can base their indicator system on the twenty themes. Those who want to emphasise the intergenerational aspects of sustainable development (the 'future-oriented' or 'capital approach') can restrict themselves to the use of capital indicators. Within the future-oriented approach, some users may prefer to use monetised capital indicators (the 'monetary capital approach') shown in the last four rows of Table 1. Others may opt for the 'hybrid capital approach' that uses capital indicators in both monetary and physical terms.

32. The different approaches to constructing an SDI set have been linked on the basis of the flexible framework. The relationship between the conceptual and thematic categorisations is shown in Table 1.

Selection procedure for the two large indicator sets

33. The following three considerations were taken into account in selecting the indicators included in the large set:

(a) *Indicators based on theoretical concepts that are most fitting to measure specific aspects of sustainable development.* These are referred to as 'ideal indicators'. The indicators are derived by taking into account the measurement methods described in the academic literature although not all of them are currently available in practice. The choice of indicators is primarily based on conceptual grounds.

(b) *Indicators based on the analysis of commonalities in existing SDI sets.* These are indicators which are included in the majority of existing SDI sets. Annex V of the publication provides a detailed analysis of the indicators developed and used by United Nations, Eurostat and the World Bank as well as seven countries, members of the Task Force.

(c) *Analysis of the data availability in international databases.* The availability of the indicators was checked in the databases of the United Nations, the OECD and Eurostat.

Themes	Thematic categorisation

	Conceptual categorisation (dimensions)			
	Human well-being ('Here and now') (2)	**Capital ('Later') (3)**	**Transboundary impacts ('Elsewhere') (4)**	**Policy drivers (5)**
TH1. Subjective well-being	Life satisfaction			
TH2. Consumption and income	Final consumption expenditure; Distr: Income inequality; gender pay gap		Official Development Assistance (ODA); Imports from developing countries	GDP per capita; Labour productivity
TH3. Nutrition	Obesity prevalence			
TH4. Health	Life expectancy at birth; Distr: Distribution-health	Life expectancy at birth Distr: Distribution-health		Healthy life expectancy at birth; Suicide death rate; Health expenditures; Smoking prevalence
TH5. Labour	Employment rate Distr: Female employment rate, Youth employment rate	Employment rate Distr: Female employment rate, Youth employment rate	Migration of human capital	Hours worked; Average exit age from labour market
TH6. Education	Educational attainment; Distr: Distribution-education	Educational attainment Distr: Distribution-education		Expenditures on education; Competencies; Early school leavers; Lifelong learning
TH7. Housing	Living without housing deprivation			Housing stock Investment in housing; Housing affordability
TH8. Leisure	Leisure time			
TH9. Physical safety	Death by assault/homicide rate			Expenditures on safety
TH10. Land and ecosystems	Land assets Bird index	Land assets Bird index	Land footprint (foreign part)	Protected areas; Nutrient balance; Emissions to soil; Threatened species
TH11. Water	Water quality index	Water resources	Water footprint (foreign part)	Water abstractions; Emissions to water
TH12. Air quality	Urban exposure to particulate matter	Urban exposure to particulate matter		Emissions of particulate matter; Urban exposure to ozone; Emissions of ozone precursors; Emissions of acidifying substances
TH13. Climate		Global CO_2 concentration; State of the ozone layer	Carbon footprint (foreign part)	Historical CO_2 emissions; GHG-emissions; GHG-emissions intensity; CFC emissions
TH14. Energy resources		Energy resources	Imports of energy resources	Energy consumption; Energy intensity; Renewable energy
TH15. Non-energy resources		Non-energy resources	Imports of non-energy resources	Domestic material consumption; Resource productivity; Generation of waste; Recycling rate
TH16. Trust	Generalised trust; Bridging social capital	Generalised trust; Bridging social capital		Contact with family and friends; Participation in voluntary work
TH17. Institutions	Voter turnout Distr: Percentage of women in parliament	Voter turnout Distr: Percentage of women in parliament	Contribution to international institutions	
TH18. Physical capital		Physical capital stock	Exports of physical capital	Gross capital formation
TH19. Knowledge capital		Knowledge capital stock	Exports of knowledge capital	R&D expenditures; Knowledge spillovers
TH20. Financial capital		Assets minus liabilities	Foreign Direct Investment (FDI)	Consolidated government debt; Current deficit/surplus; Pension entitlements
Context				*Size of population*
Monetary aggregates		*Economic capital, Natural capita, Human capital, Social capital*		

34. Table 2 presents the indicators included in the two large sets. The indicators in the conceptual categorisation are provided in columns 2-4. The large set according to thematic categorisation includes the same indicators as the conceptual categorisation, and additional indicators (in column 5) that are used to measure the 'policy drivers'. A distinction can be made between different types of 'policy drivers', such as indicators on investment, depreciation, productivity and intensity. The publication contains more details on the different types of indicators. The indicators marked with 'Distr.' are aimed to measure distribution among different population groups (according to gender, age, etc.). The four indicators in the last row of the table are monetary capital indicators.

35. Some of the indicators in the table are 'placeholders' showing that the indicator is not yet available. The placeholders demonstrate a need for new indicators that statisticians can strive to develop in the future. Several of these placeholders are indicators that are expected to be developed as a result of the application of the SNA and SEEA standards. Other placeholders include footprint indicators as well as indicators related to inequality.

Table 2. The framework for measuring sustainable development: indicators

Selection procedure for the small indicator set

36. A smaller set of indicators is needed to communicate the main messages to policy makers and the general public more efficiently. Table 3 proposes a small set of 24 indicators, selected based on commonalities in existing SDI sets and data availability in the reviewed international databases. The indicators are allocated according to the 20 policy-relevant themes. They are derived from the 90 indicators of the large set (thematic categorisation). Population is added as a context indicator.

Table 3. Sustainable development indicators: small set – thematic categorisation (24 indicators)

Theme	**Indicator**
TH1. Subjective well-being	Life satisfaction
TH2. Consumption and income	Final consumption expenditure
	Official Development Assistance (ODA)
	Imports from developing countries
	Income inequality
	Gender pay gap
TH3. Nutrition	Obesity prevalence
TH4. Health	Life expectancy at birth
TH5. Labour	Employment rate
TH6. Education	Educational attainment
TH7. Housing	Living without housing deprivation
TH8. Leisure	Leisure time
TH9. Physical safety	Death by assault/homicide rate
TH10. Land and ecosystems	Bird index
TH11. Water	Water abstractions
TH12. Air quality	Urban exposure to particulate matter
TH13. Climate	GHG-emissions
TH14. Energy resources	Energy consumption
TH15.Non-energy resources	Domestic material consumption
TH16. Trust	Generalised trust

TH17. Institutions	Voter turnout
TH18. Physical capital	Gross capital formation
TH19. Knowledge capital	R&D expenditures
TH20. Financial capital	Consolidated government debt
Context indicator	*Size of population*

Availability of data in existing international databases

37. The mandate of the Task Force included an analysis of the indicators from the point of view of data availability within official statistics. The availability of data for the selected indicators for 46 countries (EU and OECD member countries and Brazil, Russia, India, Indonesia, China, and South Africa) in international databases was analysed to obtain a general estimate of how many of the proposed indicators are available within the databases of major international organisations.

38. Table 4 summarises to what extent the suggested indicators are available in the existing international databases. The indicators are divided into three categories: (i) data that are currently available in the databases of the United Nations and Eurostat, (ii) data available from other sources such as the OECD and the European Social Survey, and (iii) indicators as placeholders (i.e. indicators that are not yet available).

Table 4. Data availability of the indicators in the large and small sets

	Large set					**Small set**
	Conceptual categorisation				**Thematic categorisation**	**Thematic categorisation**
	'Here and now'	'Later'	'Elsewhere'	Total		
Available:	82%	65%	50%	68%	76%	100%
- UN/Eurostat databases	73%	42%	50%	55%	69%	92%
- Other (OECD, World Bank, European Social Survey, National Oceanic and Atmospheric Administration, NASA)	9%	23%	0%	13%	7%	8%
Placeholders	18%	35%	50%	32%	24%	0%
Official statistics and placeholders from SEEA/SNA	73%	58%	50%	62%	80%	92%

39. Most indicators in the large sets (55% - conceptual categorisation, and 69% - thematic categorisation) and almost all (92%) indicators in the small set are available in the United Nations and Eurostat databases.

40. The availability is even greater if the scope of data sources is broadened to include the OECD, World Bank, European Social Survey, as well as climate-related sources (the US National Oceanic and Atmospheric Administration and the US National Aeronautics and Space Administration (NASA)).

Official statistics

41. Official statistics concern all statistical activities carried out within a national statistical system, or under the statistical programme of an intergovernmental organisation. The availability of indicators in official statistical sources is important from the viewpoint of the quality standards of official statistics. Data available from outside official statistics are not necessarily of lower quality: some data sources pay significant attention to quality and have strict procedures to verify the data. However, their quality criteria differ from those applied by national statistical offices and international organisations producing official statistics. Furthermore, the procedures of collecting, producing and disseminating data may also differ from those used in official statistics. For example, there may be no obligation to protect data confidentiality, some stakeholders may have privileged access to the data, or there are no adequate procedures to guarantee independence and impartiality.

42. The analysis of data availability shown in Table 4 is largely based on official international statistical sources. The results show that many of the indicators are available in the datasets of the United Nations and Eurostat or are covered by international guidelines such as the SNA and SEEA. With regard to the large set of indicators, for the conceptual categorisation 62% of the indicators can be considered within the realm of official statistics, and for the thematic categorisation - 80%.

43. The high availability of the suggested indicators shows that official statistics are already advancing in measuring sustainable development. However, there are areas in which further development of indicators is needed, as outlined below.

The Way Forward (Part IV of the publication)

44. Part IV of the publication outlines potential areas for future work: (i) measurement issues; (ii) communication and visualisation of the data and (iii) the ways in which the outcomes of the Task Force's work may contribute to the post Rio+20 policy agenda.

Refining, extending and implementing the measurement system

45. The publication identifies a number of measurement issues related to the refinement, extension and implementation of the proposed measurement system:

(a) *Harmonising indicator sets for measuring sustainable development.* There is a great need for national statistical agencies and international organisations to harmonise their SDI sets so that they are better suited to international comparison. The framework may serve as a basis for further harmonisation. This work could be done in a second phase to take into account the SDGs and the related targets and indicators.

(b) *Transboundary impacts*. More work needs to be done on measuring the international aspects of societal development. Apart from the environmental impact of countries on each other, the social and economic interrelationships between countries should be part of any measurement system of sustainable development.

(c) *Further work on specific topics.* More work needs to be done to arrive at better indicators in the following areas:

- Human, social, financial and natural capital. The measurement of these capital stocks and the wider availability of the related indicators need to be stimulated.
- Distribution. Income inequality measures need to be improved and augmented by comparable statistics on distribution in the area of health, education and other themes.
- Time use. More use can be made of information on time use in order to measure non-market activities which are relevant to sustainable development (especially in the field of human and social capital).

(d) *Linking subjective and objective indicators.* More work needs to be done to link subjective (perception) indicators of human well-being to objective measures (e.g., measure of the prevalence of disabilities and chronic illness linked to how people perceive their health).

(e) *Measuring sustainable development at different scale levels*. Attempts should be made to measure sustainable development at other levels than that of countries, i.e. local, regional, enterprise (Corporate Social Responsibility) and household levels.

(f) *Satellite accounts*. The possibilities of introducing satellite accounts for the other domains of sustainable development, in addition to environment should be explored. This will improve the consistency between indicators and will ensure that indicators going 'beyond GDP' are produced using the same concepts as those related to the measurement of GDP.

Communication and visualisation

46. A proper communication of the SDIs to a broad audience is crucial. The last part of the publication reflects on the issues of communication and visualisation.

Post Rio+20 agenda

47. Part IV of the publication explores the possibilities of linking the work of the Task Force to important ongoing global policy initiatives such as the Millennium

Development Goals, as well as the establishment of sustainable development goals (SDGs) as part of the post Rio+20 policy agenda. Section 9.3 investigates to what extent the potential indicator sets may be relevant in a global context. The research into the availability of data at a global level shows that the construction of global datasets is feasible. Table 5 presents a proposal for a 'global' small set.

48. Most indicators in this set are available for a large number of countries. Furthermore, the indicators of the Millennium Development Goals complement well the 'global' small set, as shown in Table 5.

49. In the post Rio+20 policy context, a strong cooperation between the statistical community and policymakers remains essential when formulating the SDGs and constructing global sets of sustainable development indicators. The framework is expected to contribute to setting up the goals and targets in such a way that they can be measured. Once the SDGs are defined, the indicators suggested in this publication can be aligned with the goals and the respective targets.

Table 5. Small set of indicators - global coverage and the link to MDG indicators

Theme	**Indicator**	**Alternative indicator worldwide**	**Worldwide availability (no. of countries)**	**Source**	**Relevant MDG indicators** (codes refer to the list of MDG indicators in Annex X)
TH1. Subjective well-being	Life satisfaction		135	World Happiness Database	
TH2. Consumption and income	Final consumption expenditure		210	United Nations	***1.4***
	Official Development Assistance (ODA) paid	Official Development Assistance (ODA) received	143	World Bank	***8.1-8.5; 8.9***
	Imports from developing countries	*Not relevant*	-	-	
	Income inequality	Share of poorest quintile in national consumption	134	United Nations (MDG database)	***1.1; 1.2; 1.3; 1.6***
	Gender pay gap		68	United Nations	***3.1- 3.3***
TH3. Nutrition	Obesity prevalence	Malnutrition prevalence	160	United Nations	***1.8; 1.9***
TH4. Health	Life expectancy at birth		185	United Nations	***4.1- 4.3; 5.1-5.6; 6.1-6.10; 7.9***
TH5. Labour	Employment rate		145	United Nations	***1.5; 1.7***
TH6. Education	Educational attainment		184	United Nations	***2.1-2.3***
TH7. Housing	Living without housing deprivation	Urban population in slums	91	United Nations (MDG database)	***7.10***
TH8. Leisure	Leisure time		20	Multinational Time Use Survey Database	
TH9. Physical safety	Death by assault/homicide rate		186	United Nations	
TH10. Land and ecosystems	Bird index	Bird species threatened	214	World Bank (WDI)	***7.1; 7.6, 7.7***
TH11. Water	Water abstractions		93	United Nations	***7.4-7.6; 7.8***
TH12. Air quality	Urban exposure to particulate matter		173	United Nations	
TH13. Climate	GHG-emissions	CO_2-emissions	229	World Bank	***7.2; 7.3***
TH14. Energy resources	Energy consumption		187	United Nations	
TH15. Non-	Domestic material		200	Sustainable Europe	

Theme	Indicator	Alternative indicator worldwide	Worldwide availability (no. of countries)	Source	**Relevant MDG indicators** (codes refer to the list of MDG indicators in Annex X)
energy resources	consumption			Research Institute	
TH16. Trust	Generalised trust	Public sector management (University of Calgary, Canada, Centre for Public Interest Accounting)	82	World Bank (World Development Indicators)	
TH17. Institutions	Voter turnout		194	International Institute for Democracy and Electoral Assistance	
TH18. Physical capital	Gross capital formation		156	United Nations	
TH19. Knowledge capital	R&D expenditures		116	United Nations	
TH20. Financial capital	Consolidated government debt		84	World Bank (World Development Indicators)	***8.10***