FRIEDRICH EBERT STIFTUNG

The 2030 Agenda

An Unprecedented Statistical Challenge

Steve MacFeely
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- The SDGs represent the first ever democratically forged agreement on universal development. They will guide the global development agenda until 2030. Contrary to the MDGs, which were written by the UN Secretariat in 2000 to shape development up to 2015, the SDGs came about not through the distillation of policy agreements from previous UN conferences but through governments negotiating.

- Although the 2030 Agenda's goals were agreed by all UN Member States, the process of selecting the performance indicators was effectively delegated to the global statistical community, which means that statisticians are defining the meaning of the 2030 Agenda targets and will thus be the ones to determine whether the Agenda is ultimately pronounced a success, a failure or something in-between.

- This paper offers insights into the unprecedented statistical challenge presented by this measurement framework and possible unintended consequences for countries, their statistical systems and the broader information ecosystem.

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1. Introduction: From MDGs to SDGs

At the beginning of 2016, the United Nations (UN) Sustainable Development Goals (SDGs) replaced the Millennium Development Goals (MDGs), which had been in place since the turn of the century. Although both sets of goals describe an aspirational road map for global development, the second set came about through a profoundly different process than the first, which was essentially a distillation of the major agreements from the large development conferences of the 1990s.[1] These agreements were compiled by the UN Secretariat and reflected in the UN Secretary General's Millennium Report, *We the Peoples: The Role of the United Nations in the 21st Century* (Annan 2000), which outlined the challenges for development in a globalised world. 189 Member States finally adopted the Millennium Declaration (UN 2000) at the Fifty-fifth General Assembly, designated the »Millennium Summit«. This Declaration committed nations to reduce extreme poverty by 2015: the following year, in August 2001, the UN Secretariat published the final set of eight MDGs.

The SDGs, by contrast, emerged from the shadow of the MDGs, which were criticised over the years since their adoption for pushing a donor-driven agenda and not fully reflecting the will or views of peoples or governments. From the outset, the SDG process aimed to create a people-centred development agenda. To do so, an unprecedented global consultation was undertaken. Following three years of consultation and negotiation, involving thousands of people, *Transforming Our World: The 2030 Agenda for Sustainable Development* (UN 2015d) was formally adopted by 193 heads of government, including 150 heads of state on 25 September 2015. In the words of Liz Ford (2015b), reporting for *The Guardian*, »To cheers, applause and probably a tinge of relief, the 17 global goals that will provide the blueprint for the world's development over the next 15 years were ratified by UN member states in New York.« These 17 goals and their 169 targets are universal, integrated and transformative. They are applicable to all nations, and they cover the whole sustainability agenda: poverty, human development, the environment and social justice.

1. The World Summit for Children (1990), the UN Conference on Environment and Development (1992), World Conference on Human Rights (1993), International Conference on Population and Development (1994), World Summit for Social Development (1995), Fourth World Conference on Women (1995), Second UN Conference on Human Settlements (Habitat II 1996) and the World Food Summit (1996).

Before going any further into the history of the transition from MDGs to SDGs, something with which readers may already be familiar, it is important to add a polemical note. Although the 2030 Agenda's goals were negotiated and agreed by all UN Member States, the process of selecting the performance indicators was effectively delegated to the global statistical community (albeit ratified by the General Assembly). Given the somewhat opaque nature of the 2030 Agenda text, this meant that statisticians effectively defined the precise meaning of the 2030 Agenda targets and will thus determine whether the Agenda is ultimately pronounced a success, a failure or something in-between.

1.1 The MDGs

The MDGs, described as a roadmap for world development, reflected the understanding of development at the time and attempted to bring governance and coordination to the global development agenda. Although it was a voluntary program, unsupported by any legally binding instruments or formal UN resolutions, the MDG framework was nevertheless politically and morally compelling, and was seen (if implicitly) as a reformulation of the Millennium Declaration. They were adopted, in this spirit, as the framework for international development cooperation until 2015. Thus, the MDGs were not, strictly speaking, a formal intergovernmental mechanism, but rather an initiative driven by the UN Secretariat. A downside of this approach was the criticism that the MDGs did not fully reflect the will of the peoples or the views of their sovereign governments. On the other hand, the process was relatively light and driven by subject matter experts, resulting in a limited set of focused goals and targets.

While the MDGs had eight goals and twenty-one targets, dealing with issues such as gender, disease and shelter and education, the primary and explicit aim was to reduce extreme poverty and hunger. The twenty-one targets were each accompanied by one or several predefined indicators. These indicators were the benchmarks against which progress was assessed. The MDGs achieved some notable successes, albeit with considerable help from a rapidly developing China, which dramatically improved global aggregates. For example, between 2000 and 2015 more than one billion people were lifted out of extreme poverty, and under-five child mortality was halved (UN 2015b). The actual measurement of progress was only

partially successful, however. After 15 years, developing countries could only populate two-thirds of MDG indicators, on average (United Nations Conference on Trade and Development 2016).

1.2 The SDGs

In 2012, at the UN Rio+20 Conference on Sustainable Development (United Nations Development Programme 2012), UN Member States met to create a new, global agenda for sustainable development. The outcome document, *The Future We Want* (UN 2012), mandated the UN to develop a »post-2015« global development program to replace, but build on, the momentum of the MDGs.

Cognizant of criticisms of the MDGs, the SDG process aimed to create a people-centred development agenda from the outset. To do so, an unprecedented global consultation was undertaken. Specialised panels were held to facilitate intergovernmental discussions, with the result that 193 governments expressed their opinion. The online *My Word* survey amassed over seven million responses (Bhattacharya and Kharas 2015). Civil society organisations, citizens, scientists, academics and private sectors around the world were consulted through various fora and given an opportunity to express their views.

Based on this feedback, the UN General Assembly Open Working Group on Sustainable Development Goals proposed that 17 goals be presented to the General Assembly for approval in September 2015 (UN 2013b). This proposal laid the ground for the new SDGs and the global development agenda between 2015 and 2030. In brief, the Open Working Group proposed that a set of SDGs be selected that build on the foundations of the MDGs but adopt a much broader scope, attempting to not only end extreme poverty and eradicate hunger but also to foster global prosperity in an economically and environmentally sustainable way. This expansion of scope arose from an attempt to move beyond the symptoms of poverty and hunger and to begin to address the causes: the pillars of social cohesion, economic stability and environmental sustainability, and many of the other interrelated issues that contribute directly or indirectly to poverty, hunger and inequality, such as peace, stability, human rights and good governance. The SDGs would be »action oriented, global in nature and universally applicable« (UN 2013b: 4) and were described by Ban Ki-moon (UN 2015a), former Secretary General of the UN, as the »to do list for planet and people.«

1.3 Reaction to the SDGs

Not surprisingly a programme the size and scale of the 2030 Agenda has attracted much comment and provoked mixed reactions, both positive and negative. On the negative side, the sheer scope and scale of the SDGs have come in for considerable criticism. So much so, The Economist (2015a) famously baptised the SDGs the »Stupid Development Goals,« dryly quipping that »Moses brought ten commandments down from Mount Sinai. If only the UN's proposed list of Sustainable Development Goals (SDGs) were as concise,« and arguing that the SDGs were so »sprawling and misconceived« that they would only »betray the world's poorest people.« Certainly from a statistics perspective, the criticism that »169 commandments means, in practice, no priorities at all« (The Economist 2015a) is not far off the mark. Measuring, validating and communicating 232 indicators will be difficult and expensive, begging the question whether some parsimony might have been prudent. The lack of prioritisation has further fuelled concerns that in moving from 21 MDG targets to 169 SDG targets there will be a fragmentation of effort and resources. Those defending the SDGs have put forward the optimistic counterargument that more targets must mean more funding. It remains to be seen who is correct.

But it is easy to criticise the SDGs. Even those who defend the 2030 Agenda would accept that it has flaws. But they would also, with some justification, point out that the SDGs mark the first time in human history that the nations of the world have reached an accord on a comprehensive vision, supported by goals and targets, for the development of our civilisation on planet earth. Most would also accept that many of the 169 targets could have been better. As Bhattacharya and Kharas (2015) note, »some are clearly not achievable and these may undercut the overall credibility of the package« but, as they also point out, this is the price of democracy. It reflects compromise and a desire for consensus. And this is an important point: the SDG goals and targets arise from a negotiated text and represent global agreement. Almost inevitably this will result in some inconsistencies and some flab but public good issues such as climate change or environmental sustainability cannot be real-

istically addressed any other way. Sandler-Clarke (2015) identified several reasons why the SDGs are better than the MDGs. First on this list is the fact that the SDGs are more »globally cooperative« than the MDGs, meaning that they are, unlike the MDGs, the outcome of detailed international negotiations involving middle-income and low-income countries; they are universal and apply to all countries; and they are more holistic in coverage, encompassing poverty reduction and inequality, sustainability and economic growth, including job creation.

Many have welcomed the broad vision of the SDGs and in particular the inclusion of climate and environmental targets, which are viewed as not only very important, both from a developmental and an existential perspective, but in fact, urgent (Intergovernmental Panel on Climate Change 2007; World Bank 2010). Development and climate experts alike welcomed the precautionary approach, agreeing that it would be imprudent to ignore the growing body of evidence suggesting climate is an issue that must be addressed in both the developed and developing worlds. However, the lack of prioritisation noted above has raised concerns that countries have not yet acknowledged the potential trade-offs between economic, social and environmental goals (Basnett and Bhattacharya 2015). Although not the most robust or unbiased source, but nevertheless indicative, an analysis of tweets with »#SDGs« in the days following the launch of the 2030 Agenda suggests that Goal 13 (climate change) and Goal 8 (economic growth) were the most cited. »Data« also featured prominently, with an apparent recognition that data will be needed, both as the lifeblood of decision-making and to track SDG implementation (Warren 2015).

1.4 The Difference between MDGs and SDGs

Clearly the concept of development has evolved considerably from the MDGs to the SDGs to now include economic, environmental and governance issues. As a result, the SDGs are very different in scope, complexity and ambition. The focus on »leaving no-one behind« also appears to place more emphasis on individual development and human rights than previously. As already noted, the SDGs are the product of an extensive and very inclusive participatory process, including not only intergovernmental machinery but also citizens, civil society and private industry. The SDGs have set out to finish the job begun by the MDGs, this time eradicating world hunger and poverty, not just reducing them. But the »zero« targets will most likely be very difficult to achieve and will require that poverty and hunger are tackled in the poorest and most underdeveloped regions of the world. The past performance of the MDGs may lead some to underestimate the challenge ahead. Many previous successes were helped significantly by developments in China. Progress in China over the next fifteen years is unlikely to be as impressive. Unlike the MDGs, the SDGs must address issues of peace and security. This is an important step as experts predict that the majority of those experiencing extreme poverty in the future will live in conflict-affected states. It is therefore sobering to observe that, as the curtain closed on the MDGs, the UN High Commissioner for Refugees (2015) stated that 2014 had seen the highest number of recorded refugees and displaced people since World War II (almost 60 million).

As already outlined, the scope of the 2030 Agenda is far broader than that of the previous MDGs. The SDGs are a universal, »integrated, indivisible set of global goals« (UN 2013b). In other words, development is no longer just an issue for developing countries and the provision of development aid is no longer just an issue for the developed world. This added complexity and ambition brings greater risks and there are concerns that the sheer scale of the 2030 Agenda will pose major challenges for implementation and resourcing. Certainly, OECD Development Assistance Committee (DAC) members can expect to face increasing pressure to provide more Official Development Assistance (ODA) from developing countries. The wider scope of the SDGs and the resultant increased demands for resources have also generated much discussion on whether a new measurement tool is required to capture not only DAC funding, but other sources too, including South-South cooperation. The OECD (2015) has proposed a new measure: Total Official Support for Sustainable Development (TOSSD). This new measure has proven controversial and has attracted much criticism (see Besharati 2016), mainly from developing countries where there are fears that it will dilute existing funding commitments and exempt the North from their historic responsibilities. It remains to be seen whether TOSSD will be adopted or not.

Another challenge for all countries and their national statistical systems will be the monitoring and evaluation of the SDGs. Unlike the MDGs, from the very beginning, the SDGs formally recognised the need to incorporate a monitoring and evaluation mechanism to ensure accountability and benchmark progress. The General Assembly Open Working Group noted that »It will be important to improve the availability of and access to data and statistics disaggregated by…characteristics relevant in national contexts. There is a need to take urgent steps to improve the quality, coverage and availability of disaggregated data to ensure that no one is left behind« (UN 2013b: 4). This call was further reinforced by the subsequent report of the UN Secretary General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development, *A World That Counts* (2014), which highlighted the need for but also the opportunities to improve data.

2. Measuring the SDGs

From a statistical perspective the implications of the 2030 Agenda for the accompanying indicator framework are enormous. Not only have the number of goals and targets increased considerably (the MDGs had 8 goals, 21 targets and 60 indicators whereas the SDGs have 17 goals, 169 targets and 232 indicators), but so also has the complexity of these targets. The scope of the 2030 Agenda is also far broader than that of its predecessor, attempting to span the full spectrum of development issues, including not only aspects of society, economy and the environment but also institutional coordination. The intricacies and ambition of this challenge led Mogens Lykketoft, President of the seventieth session of the UN General Assembly, to describe it as an »unprecedented statistical challenge« (Lebada 2016).

This unprecedented statistical challenge arose from criticisms of the data in the MDG process, which in turn led the High-Level Panel of Eminent Persons to call for a data revolution in their report *A New Global Partnership* (UN 2013a). Following this report, the then Secretary General of the UN, Ban Ki-moon, established the Independent Expert Advisory Group on a Data Revolution for Sustainable Development, asking the group to translate the broad-brush concept of a data revolution into something more concrete. In its report, *A World That Counts*, the expert group advanced several interesting ideas, but the underlying message stressed throughout was the need to better align data availability and decision-making cycles — more data, better data and, above all, faster data. The report also raised the thought-provoking idea that, in a data-driven world, the inability to access data should itself be a measure of inequality. Unfortunately, since the publication of the report, the terms »data revolution« and »big data« appear to have become synonymous in the minds of many, leading to unrealistic expectations and the misguided belief that the data revolution is an inexpensive panacea for the world's global statistical and data problems. Nothing could be further from the truth.

Compared with the 169 targets set out by the SDG program, the MDGs' requirements were modest, both in number and complexity (United Nations Statistics Division 2008). Yet at the end of the MDG life cycle in 2015, countries could populate, on average, only 68 per cent of MDG indicators (United Nations Conference on Trade and Development 2016). Nevertheless, at the forty-seventh session of the United Nations Statistics Commission (2016), the seventieth session of ECOSOC (2016) and at the seventy-first session of the UN General Assembly (2017), governments agreed to populate the 232 indicators proposed by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) for the global indicator framework.

Apart from resource constraints, there are also other technical and political complications that will make measuring the SDGs a challenging task. The first challenge facing statisticians was to clarify what it was they were being asked to measure. This was easier said than done. Deciphering or interpreting exactly what is meant by the agreed text of *Transforming our World: The 2030 Agenda for Sustainable Development* was not always straightforward. Lack of clear definitions and inconsistent use of terminology are just some examples of where, in selecting appropriate indicators, statisticians were forced to decide what the targets actually mean. For example, what is meant by »sustainable«? Does it just mean environmentally sustainable, or does it also mean economically sustainable, or socially sustainable? Environmentalists will naturally assume it means environmentally sustainable, but economists will assume it refers to economic sustainability. Assuming it is economic sustainability – what does that mean? A good example is target

17.13, which calls for global macro-economic stability. Although there is no consensus on what this means, it has been agreed that it will be measured by a dashboard of indicators. The composition of this dashboard will effectively determine whether the 2030 Agenda adopts an orthodox or heterodox view of the global economy. What are the »basic services» or the »new technologies« referred to in Target 1.4[2] and are they the same in all parts of the world? This might seem like pedantry, but it matters when you are trying to design an appropriate measurement. A plethora of seemingly commonly understood words, such as »access, adverse, adequate, appropriate, basic, benefit, efficient, effective, informal, infrastructure, integration, promote, resilience, resource, sustainable» and »vulnerable» caused comprehension problems and challenges of consistent interpretation across the 169 targets, requiring the construction of an SDG ontology (United Nations Environmental Programme 2015) to make progress.

Another challenge was the lack of prioritisation within complex and sometimes rather muddled targets. This proved particularly thorny as statisticians were instructed by their political masters to limit the number of indicators to one per target. Numerate readers will have noted that this guideline was not respected, as 169 targets resulted in 232 indicators. Take Target 17.19,[3] for example. This target combines two completely different and unrelated issues (the measurement of progress beyond Gross Domestic Product and supporting statistical capacity-building) in the same target. This problem, not uncommon to many targets, poses a dilemma. Which element of the target should be measured? Both are very important, but both are also very complex. The challenge of how to properly measure progress is a highly contentious issue, hotly debated by economists, social scientists, environmentalists and statisticians (MacFeely 2016), and a whole dashboard of indicators would probably be needed to do justice to this one issue. Equally, the best way to approach statistical capacity-building is also being actively discussed and reassessed (Jütting 2016). But the idea that such a cocktail of issues could somehow be amalgamated into a single indicator is absurd. The Economist (2015c), citing Target 4.7[4] as an example, put it bluntly, simply saying, »try measuring that.« Although the scope of the 2030 Agenda is universal and applies to all countries, clearly not all targets are relevant to every country. Striking a balance between national and global demands has proven challenging. For example, Target 3.3[5] aims to eradicate a wide variety of diseases, many of which are not prevalent across the globe. As a result, statisticians have selected two statistical indicators, targeting HIV and tuberculosis, as the appropriate global indicators. So not all elements of the target are addressed and some elements of the target must thus be ignored and remain unquantified. While this might make sense from a global perspective, it may not necessarily make sense from a regional or national viewpoint. For example, the control of dengue fever is not a big issue globally but is very important in South-East Asia. Not surprisingly, when the dust settled, researchers criticised the indicators for being »reductionist« (Mair et al. 2018).

Another tension between national and global perspectives has been the question of who supplies the data. Countries, anxious to keep control over messaging, insist that only official national data are used. At first glance, this seems sensible but more careful consideration pinpoints some problems with this approach. Targets, such as 16.5[6] or 16.6,[7] which deal with corruption, bribery and the accountability of institutions, provide perfect examples of why it might make sense to use external or unofficial data as official data may not exist or may not be trusted to provide an independent, impartial picture of such sensitive matters. Another exception might be where a single source could provide better-quality and globally more consistent data than the amalgamation of multiple individual country data sets. This might be ap-

2. Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

3. Target 17.19: By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP and support statistical capacity building in developing countries.

4. Target 4.7: By 2030, ensure all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

5. Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

6. Target 16.5: Substantially reduce corruption and bribery in all their forms.

7. Target 16.6: Develop effective, accountable and transparent institutions at all levels.

plicable to targets such as 15.1,[8] which deals with forest, drylands, wetlands and mountain regions governed by international agreements. Arguably superior quality and internationally comparable data could be derived from satellite imagery. Despite the best efforts of international organisations, acquiring internationally comparable data will be a real challenge for the SDG indicator framework generally. Many of the targets (and consequent indicators) fall well outside the scope of traditional official statistics and thus are not guided by agreed international measurement standards. Even for those indicators that fall within the scope of traditional official statistics, general quality and adherence to international standards will still vary significantly across countries. Thus, it may be sensible to apply a healthy scepticism to any of the resultant country rankings when published.

Using alternative sources to official national data might also be reasonable where problems with the data exist. Problems with data could mean anything from errors or inaccuracies, non-adherence to international standards, incompleteness or data gaps, inconsistencies over time or imbalances. A good example of where this might arise are the asymmetries that frequently exist between bilateral trade data sets. From a global perspective, unbalanced trade data are not especially useful, and so steps are taken to smooth out or remove these asymmetries. But this may lead to a mismatch between official national statistics and official international statistics. For the moment, the challenge of how to balance the needs of national and global interests remains unresolved. Equally, it is not clear how countries will balance the requirements of their own national development plans with those of the SDGs, or how statistical systems will be expected to serve the data demands of both (MacFeely and Barnat 2017).

All the goals and targets of the 2030 Agenda are underpinned by the ambition that »no one gets left behind« (UN 2015b). This ambition was translated for statisticians by Mogens Lykketoft, President of the seventieth session of the UN General Assembly, as »leaving no one uncounted« (Lebada 2016). In principle this is fine, but such a literal translation does not make much sense from a statistical perspective. The purpose of official statistics, with a few exceptions such as population censuses, is not to account for every single person or dollar, but rather to provide general aggregate, anonymised information on population cohorts of interest. This is the fundamental difference between producing official statistics and audited accounts. Apart from issues of confidentiality, the cost of realising the ambition of »leaving no one uncounted« would be prohibitive and not financially viable for even the best-resourced and most efficient statistical systems. So, the challenge for the global statistical system is how to sufficiently improve the granularity of data to satisfy this new political ambition, but in a way that prioritises the measurement of the poorest and most vulnerable and does not divert scarce resources into generating fruitless levels of disaggregation.

As noted above, the SDGs are significantly more ambitious in scope and complexity than their predecessors, the MDGs. It is evident that many of the new policy targets are far ahead of the available statistics. In fact, in many cases, an appropriate statistical concept from which to generate indicators simply does not exist. In May 2018, the Inter-Agency and Expert Group on Sustainable Development Goal Indicators reported that only 40 per cent of the selected indicators could be classified as Tier 1 meaning that the indicator is conceptually clear with an established methodology and set of standards and that data are already regularly produced by countries. Furthermore, they reported that 27 per cent of the indicators remained classified as Tier 3 (meaning there are, as yet, no internationally established methodologies or standards), which gives an indication of the magnitude of the task facing the global statistical community. As already noted, estimates of the resources required to support the poorest countries in implementing the SDG indicator framework range between 1 and 1.25 billion US dollars per annum. But many other countries will also require assistance or additional resources, meaning the investment required will most likely be far greater.

3. The Cost of Measurement

The SDGs, unlike their predecessors, the MDGs, are universal and apply to all signatories. As noted above, the development agenda has broadened, far beyond simply reducing extreme poverty, to now encompass the survival of our planet, improving equity and freedom in our societies and trying to develop a more stable and

8. Target 15.1: By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services – in particular forests, wetlands, mountains and drylands – in line with obligations under international agreements.

sustainable economic model. In other words, implementing the SDGs is not a developing-world challenge but rather a global one, with many topics of direct relevance for developed countries. One of the implications of such a broad and ambitious development agenda is the price tag. Estimates vary, but Ambassador Macharia Kamau of Kenya, who co-chaired the SDG intergovernmental consultative process, estimates that implementing the SDG agenda could cost somewhere between 3.5 and 5 trillion US dollars per year (Deen 2016). The Economist (2015a) described their estimate of between two and three trillion US dollars per year (or the equivalent of four per cent of global GDP) as »unfeasibly expensive.« The Intergovernmental Committee of Experts on Sustainable Development Financing (2014) estimated the value of investment in infrastructure required to achieve the eradication of poverty alone at between five and seven trillion US dollars annually.

Even for developed countries with relatively advanced and sophisticated statistical systems the demands arising from the SDG indicator framework are immense. When one considers that 27 per cent of the 232 indicators are classified as Tier 3 the magnitude of the challenge that lies ahead becomes clear. Developing statistical concepts and collecting all the data required will not be cheap or straightforward. PARIS21 (2015: 11) has estimated that »funding for statistics needs to be increased from current commitments of between US$300 million and 500 million to between US$1 billion and 1.25 billion by 2020.« While clearly the bulk of these resources will be required to develop statistical capacity in developing countries, it is evident that resources will be required in the developed world too in order to deliver on the promises made by national governments.

To put these numbers in perspective, total ODA contributions from the OECD DAC members average about 110 billion US dollars per year.[9] So there is clearly an expectation that additional funding will be made available for development aid. While new revenue streams, such as private funding, philanthropy and public–private partnerships, are all expected to be part of the mix, there will unquestionably be mounting pressure on the wealthier nations of the world to live up to the promises made in Monterrey in 2002 to contribute 0.7 per cent of their Gross National Income (GNI) to ODA (UN 2003) — particularly as these commitments were reaffirmed during the Third International Conference on Financing for Development in 2015 (UN 2015c). It is worth noting that since Monterrey, the cumulative shortfall in ODA between 2002 and 2016 for DAC countries stands at 2.4 trillion US dollars in current prices or 2.9 trillion US dollars in constant 2016 prices.[10] Thus, one can reasonably expect international pressure to grow on this front, particularly as a growing proportion of ODA is being diverted to Europe, away from developing countries, to deal with the migrant crisis.

4. Implications and Opportunities for NSOs

Beyond the compilation of the SDG indicators themselves, there are a number of issues, most notably the development of NSSs and accessing, organising and using administrative data that will be essential to delivering on the commitments that governments have made.

4.1 National Statistical Systems

The United Nations has long championed the importance of National Statistical Systems (NSSs) in their *Handbook of Statistical Organization*, the latest version (United Nations Statistics Division 2003) being no exception. PARIS21 (2004) too has advocated this cause, developing guidelines for NSSs — *National Strategies for the Development of Statistics* — back in 2004. More recently the Sustainable Development Solutions Network (2015) stressed the importance of NSSs for the production of official statistics. So too has the Addis Ababa Action Agenda of the Third International Conference on Financing for Development in July 2015, noting »National statistical systems have a central role in generating, disseminating and administering data« (United Nations 2015e).

If the reasons to put a formal NSS in place were not already clear, then the 2030 Agenda has surely provided sufficient justification. A National Statistical Office (NSO) cannot possibly meet the national demands posed by the SDG indicator framework alone. This will require a

9. Author's own calculations based on OECD DAC statistics (Table 1: Net Official Development Assistance) 2002–2014.

10. Author's own calculations based on OECD DAC statistics (Net Official Development Assistance as a Total Percentage of Gross National Income 2000–2017).

coordinated approach across many national agencies and government departments. Furthermore, the bulk of these demands will not be met by traditional survey data or statistics and will rely to a very large extent on administrative data (see next section). Finally, and perhaps most importantly, many of the data required are far beyond the scope and expertise of a typical NSO: water resource management (6.5), energy efficiency and intensity (7.3), labour rights (8.8), financial market regulation (10.5), corporate sustainability reporting (12.6), fish stock regulation (14.4), coastal conservation (14.5), corruption (16.5), investment promotion (17.5) and policy space (17.15), to name just a few. The data demands arising from the 2030 Agenda provide a perfect example of why an NSS is necessary.

NSOs will be expected to coordinate the »sign off« or validation of methodology and data used in the compilation of the 232 indicators each year. This will be very challenging as most SDG indicators fall well outside the normal scope of a typical NSO mandate and so will present some unique challenges. Sourcing, validating and linking data to compile indicators for these targets will require a combination of statistical and subject matter expertise. It further reinforces the importance of having a functioning and efficient statistical system, as much of the data and technical expertise will not normally be available from an NSO but will come from other government and public service departments and offices. For many countries this may require dedicating resources to SDG indicators in order to coordinate both the validation of data and metadata throughout the NSS and organise a reporting mechanism back to the various international custodian agencies. It may also require changes in national statistical legislation.

The insistence on using country data (United Nations Statistical Commission 2018) places additional pressures on countries to collect a lot of new data and compile a host of new indicators. As already outlined, the experiences of trying to populate the MDG indicators and the fact that only 40 per cent of the SDG indicators are classified as Tier I should give pause for thought. So much so that one wonders whether countries fully understand the commitments they are taking on.

4.2 Administrative Data

Although there has been much talk and excitement about big data and its potential for compiling official statistics and SDG indicators, relatively little attention has been paid to the importance of administrative data. This is a shame as, in the short to medium term, administrative data are likely to be a much richer source of useable data than big data. In the context of compiling SDG indicators, administrative data are likely to become more important as it is clear that for many of the SDG indicators, survey data will not be sufficient and compilation will require the use and integration of administrative data (UNCTAD 2016; MacFeely and Barnat 2017). But more broadly, accessing and using administrative data is existentially essential for a statistical system (MacFeely and Dunne 2014). Typically, a wide variety of statistics, ranging from national accounts and international trade to crime and agriculture statistics are all either partially or fully dependent on the availability of administrative data.

Arguably, however, NSOs could use the opportunity presented by the 2030 Agenda to explain to governments how administrative data could play an even greater role, not just for statistics, but for the efficient management of the state (see MacFeely and Dunne 2014). Fostering and cultivating a national data infrastructure and an NSS, with an increased emphasis on exploiting administrative data, is of immediate relevance to the SDGs, particularly Targets 9.1[11] and 17.19,[12] which deal with developing infrastructure and improving statistical capacity. Of critical importance for NSOs and NSSs is to secure legal access to administrative data. Looking toward the future, NSOs may need to start considering whether a broader definition of administrative data that includes private sector sources, such as that adopted by the Conference of European Statisticians in 2000 (UNECE 2000), is required. For this reason, the United Nations Economic Commission for Europe (2018) has recommended changes to statistical legislation to ensure that NSOs or NSSs have access to all the data sources necessary for statistics. MacFeely and Barnat (2017) have made similar recommendations, arguing that, in order to future-proof statistical legislation,

11. Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

12. Target 17.19: By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement GDP and support statistical capacity-building in developing countries.

consideration should be given to mandatory access to all appropriate secondary data, including some important, commercially held data.

5. Unanticipated Consequences

Although the process of selecting SDG indicators may seem a somewhat distant and dull topic to those who are not statisticians, some reflection will nevertheless be rewarded with insights into curious and perhaps unforeseen developments.

Deciding the actual meaning and specific objectives of the 2030 Agenda was effectively delegated to the statistical community. Many heads of state and policy mandarins might be surprised by, or even contest, this statement. But it was statisticians who selected the indicators that specifically defined what the text of the 2030 Agenda targets actually mean. This is an important point — the SDG indicators do not simply measure the 2030 Agenda, they define it. Those indicators and the statisticians who compile them will determine whether the 2030 Agenda is a success or a failure.

There are also consequences to measuring a multifaceted target with a single indicator. Very few of the indicators fit the specifications of the target exactly, so most of the indicators are, to some extent or other, proxies. Furthermore, most of those indicators were originally designed for another purpose. It is important to understand that original purpose so that its appropriateness for its new purpose as an SDG indicator can be assessed. In other words, very few SDG indicators are bespoke indicators, deliberately designed for the purpose for which they are now being used. This will matter when the trends and patterns identified by the indicator are extrapolated and applied to all elements of the broader target. The small print (otherwise known as metadata) will be very important when analysing the SDG indicators. The use of single discrete indicators also introduces the risk that unmeasured aspects of a target may be ignored and interconnections remain unseen or poorly understood.

The insistence by some UN member states that official country data should be prioritised may also be counter-productive in the longer term as it may place an enormous burden on some countries and it may also inadvertently undermine the role of international organisations. International organisations play an important role in compiling harmonised official international statistics, which often involves amending or imputing national data. Given the paucity of data available from many developing countries, limiting the SDG indicators to data supplied by countries is likely to result in many SDG indicators remaining unpopulated. Furthermore, as many of the indicators being used to populate the SDG indicator framework have been compiled by international organisations for many years, in some cases decades, this has the potential to disrupt many existing international time series.

Another unexpected outcome of the 2030 Agenda is the profound influence it may have on the shape and organisation of official statistics in the future. As noted above, many policy discussions are far ahead of available statistics, and so the SDGs are likely to be the driving force, or *raison d'être*, for many statistical advances in the coming years, both in terms of statistical concepts and methodology and also in terms of statistical organisation and the use of new data sources. These developments will undoubtedly yield new and fascinating statistics, but they may also inadvertently open the door to the outsourcing or privatisation of official statistics if the existing system fails to deliver on the huge, and arguably unrealistic, expectations that appear to exist. Given the very short timeframe to develop the reporting framework and lack of any appreciable additional resources, SDG reporting may disappoint the high expectations, and this in turn, may undermine the UN Statistical Commission.

Statistics has perhaps also inadvertently highlighted fault lines within the Global South. While Southern countries have complained about the proposed TOSSD, they have failed to offer any viable alternative (with a few exceptions such as the Network of Southern Think-Tanks, which has tried to galvanise and coordinate intellectual thinking in the South). The suspicion is that this inertia stems from the fact that some of the larger Southern »donors« simply do not want their South-South cooperation activities quantified, as measurement is likely to reveal that some of their principles, particularly »horizontality« are more honoured in the breach than the observance. Perhaps it also signifies some cultural ambivalence toward measurement or making evidence publicly available. Whatever the reasons, the vacuum has allowed the OECD, a »Northern institution«, to take control of the situation and push forward with their proposed metric.

The SDG indicators have, to some extent, hijacked the discussion on what statistics and data are required to support sustainable development. What is often lost in debate is that the SDG indicators are only performance metrics: they will tell us whether a target (as defined by statisticians) is being achieved or not. But a key role of statistics should be to inform policy decisions, and there has been relatively little discussion on what additional data are required to inform and design integrated policies in order to implement actions to achieve the SDG targets.

6. Conclusion/Recommendations

The statistics community has been working flat out to deliver on the expectations of the UN General Assembly to supply SDG indicators. Few statisticians have yet had time to pause and reflect on developments. This article is a first tentative review and contemplation. No doubt others will add further thoughts, but this may take some time, as one of the biggest challenges facing the SDGs is that they have not, in most countries, formed part of the national discourse. Although many national development issues overlap closely with some or all of the SDGs, the public do not typically view progress and development in those terms, and consequently many governments may not either. As Wulfhorst (2015) notes, selling the SDGs to the media and the public has been tough. For much of the developed world, the shift from the MDGs (which were largely an issue for developing countries) to the universal SDGs appears to be a slow awakening. Kroll (2015: 4) notes »policymakers in the OECD countries still generally look upon the SDGs as a development policy issue.« As a consequence, many NSOs from developed countries have not engaged in the SDG discussions to any great extent. While there are a variety of reasons for this — many understandable — NSOs will be forced to get involved, whether they like it or not. As yet, few SDG indicators have been published, but once data become available, and especially when country rankings are inevitably compiled, or when conflicting estimates of data are cited in global reports, national administrations and governments will wake up and react.

Unintended consequences are not always bad. The 2030 Agenda may have inadvertently opened-up new and unexpected opportunities to re-imagine the traditional role of official statistics, both for NSSs and international organisations. In this context, three key strategic issues are outlined below. No doubt others could be added, but the issues highlighted here must be central to any serious discussion regarding the strategic role of NSSs and the international statistical system in the future.

1. NSOs could consider broadening their mandate to include the accreditation or certification of data sets created by third parties or public or private sectors. Such a move would probably be welcomed by non-government organisations, civil society and academia – perhaps even the private sector. It would also help to keep control of quality and promote sound methodologies, transparency and openness of data (Cervera et al. 2014; Landefeld 2014; Kitchin 2015; MacFeely 2016; Hammer et al 2017). At the global level, the United Nations could be more proactive and introduce an accreditation system (with uniform standards) that would allow unofficial compilers of statistical indicators to be accredited as »official« for the purposes of populating the SDG indicator framework. One could envisage, for example, the IAEG-SDG or a similar body with the authority and competence to certify statistics as »fit for purpose« reviewing unofficial statistics to see whether they can be certified as »official« for the purposes of populating the SDG global indicator framework. Without going into detail, this approach would be suitable for Tier 3 or Tier 2 indicators that otherwise run the risk of remaining unpopulated. By encouraging more active participation in the measurement, such an approach might help to domesticate the 2030 Agenda.

2. Newly emerging globalised digital data sets also offer exciting possibilities and opportunities to reconsider the national production models currently employed by NSOs and NSSs all around the world. Switching from a national to a collaborative international production model might make sense from an efficiency or international comparability perspective, but it would be a dramatic change in approach, and possibly even a bridge too far for many NSOs and governments. These globalised data are already presenting challenges as they defy national sovereignty, putting the owners and the data themselves beyond the reach of national legal systems (MacFeely 2018). Governments which are already struggling to enforce national laws and protect citizens may be unwilling to countenance what they perceive as a further loss of control. The sensitivities surrounding this topic are evident from the document *Guidelines on Data Flows and Global Data Reporting for Sustainable Development*

Goals prepared by the IEAG-SDG (United Nations Statistical Commission 2018) where strong emphasis is placed on using nationally produced statistics as inputs into the global indicators. Nevertheless, in the case of global digital data, the most logical and efficient approach might be to centralise statistical production in a single centre rather than replicating production many times over in individual countries. Obviously, this would not work for all domains, but for some indicators that could conceivably be derived from globalised big data sets it would offer the chance of real international comparability. Some examples of this might be land use, maritime and fishery statistics derived from satellite imagery.

3. The 2030 Agenda may have provided a unique opportunity to make the case to countries to develop their NSSs and put in place a national data infrastructure. Possibly because most official statistics and disseminated administrative data are viewed as a public good, their value is not well understood or fully appreciated. Politicians do not always understand the concept of soft or non-physical infrastructure and so may find this argument nebulous. Nevertheless, the United Nations should take this opportunity to explain to countries that in a digital or an information age, data infrastructure will be every bit as important as broadband or electrical cabling. Governments must be helped to understand that administrative data are not an unfortunate and unavoidable cost but rather a valuable national asset. Equally they should be encouraged to understand that a national data infrastructure will not happen by itself but will require careful architectural design. If designed properly, the resulting data infrastructure would not only contribute to public sector efficiency but also better statistics to support public policy design, implementation and evaluation by allowing public sector data to be shared and linked across government departments and agencies.

This article has outlined some of the measurement challenges, possible consequences and strategic issues for statistics emerging from the 2030 Agenda. The SDGs have provided opportunities to reshape and redefine the role of NSOs and NSSs, opportunities to engage in new partnerships and build wider data ecosystems and opportunities to shape new statistical concepts and methodologies. While there are many misapprehensions arising from the profuse and loose use of terms such as data revolution and big data, there will clearly also be opportunities in the future to compile official statistics in new and exciting ways using new secondary data sources. But some emerging, and perhaps unexpected, risks can also be seen on the horizon. It is not clear whether the statistical community has yet given sufficient thought to these.

References

Annan, K. (2000): *We the peoples: The role of the United Nations in the 21st century*; available at: http://www.un.org/en/events/pastevents/pdfs/We_The_Peoples.pdf (last accessed on 7.2.2017).

Basnett, Y. and Bhattacharya, D. (2015): *Exploring spaces for economic transformation in the Sustainable Development Goals*. London: Overseas Development Institute.

Besharati, N. (2016): *New development finance measure should be TOSSD out the window*, in: South African Institute for International Affairs; available at: http://www.saiia.org.za/opinion-analysis/new-development-finance-measure-should-be-tossd-out-the-window (last accessed on 5.4.2018).

Bhattacharya, A. and Kharas, H. (2015): Worthy of support – Our piece on the Sustainable Development Goals; available at: http://www.economist.com/blogs/freeexchange/2015/04/our-piecesustainable-development-goals (last accessed on 7.2.2017).

Cervera, J.L., Votta, P., Fazio, D., Scannapieco, M., Brennenraedts, R., and van der Vorst, T. (2014): Big Data in Official Statistics, Eurostat ESS Big Data Event, Rome 2014 – Technical Event Report; available at: https://ec.europa.eu/eurostat/cros/system/files/Big%20Data%20Event%202014%20-%20Technical%20Final%20Report%20-finalV01_0.pdf (last accessed on 18.1.2018).

Deen, T. (2016): U.N. targets trillions of dollars to implement sustainable development agenda; available at: http://www.ipsnews.net/2015/08/u-ntargets-trillions-of-dollars-to-implement-sustainable-development-agenda/ (last accessed on 31.10.2016).

Ford, L. (2015a): Sustainable development goals: All you need to know; available at: https://www.theguardian.com/global-development/2015/jan/19/sustainable-development-goals-united-nations (last accessed on 3.2.2017).

– (2015b): World leaders agree sustainable development goals – as it happened; available at: https://www.theguardian.com/globaldevelopment/live/2015/sep/25/un-sustainable-development-summit-2015-goals-sdgs-united-nations-general-assembly-70thsession-new-york-live (last accessed on 3.2.2017).

Hammer, C.L., Kostroch, D.C., Quiros, G., and STA Internal Group (2017): Big Data: Potential, Challenges, and Statistical Implications. IMF Staff Discussion Note, SDN/17/06, September 2017; available at: http://www.imf.org/en/Publications/SPROLLs/Staff-Discussion-Notes (last accessed on 11.1.2018).

Independent Expert Advisory Group on a Data Revolution for Sustainable Development (2014): A world that counts: Mobilising the data revolution for sustainable development; available at: http://www.undatarevolution.org/report/ (last accessed on 10.11.2017).

Inter-Agency and Expert Group on Sustainable Development Goal Indicators (2018): Tier Classification for Global SDG Indicators; available at: https://unstats.un.org/sdgs/iaeg-sdgs/ (last accessed on 25.6.2018).

Intergovernmental Committee of Experts on Sustainable Development Financing (2014): Report of the Intergovernmental Committee of Experts on Sustainable Development Financing – Final Draft (8.8.2014); available at: https://sustainabledevelopment.un.org/content/documents/4588FINAL%20REPORT%20ICESDF.pdf (last accessed on 3.2.2017).

Intergovernmental Panel on Climate Change (2007): *Fourth assessment report – Climate change 2007: Working group II: Impacts, adaptation and vulnerability*; available at: https://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch9s9-7.html (last accessed on 13.2.2017).

Jütting, J. (2016): *Capacity building, yes – but how to do it?*; available at: http://undataforum.org/WorldDataForum/capacity-building-yes-but-howto-do-it/ (last accessed on 10.11.2017).

Kitchin, R. (2015): The opportunities, challenges and risks of big data for official statistics, in: Statistical Journal of the International Association of Official Statistics, Vol. 31, No. 3, 471–481.

Kroll, C. (2015): *Sustainable Development Goals: Are the rich countries ready?*; available at: https://www.bertelsmann-stiftung.de/en/publications/publication/did/sustainable-development-goals-are-the-rich-countriesready/ (last accessed on 20.2.2017).

Landefeld, S. (2014): Uses of Big Data for Official Statistics: Privacy, Incentives, Statistical Challenges, and Other Issues. Discussion paper presented at the United Nations Global Working Group on Big Data for Official Statistics, Beijing, China, 31 October 2014; available at: https://unstats.un.org/unsd/trade/events/2014/beijing/Steve%20Landefeld%20-%20Uses%20of%20Big%20Data%20for%20official%20statistics.pdf (last accessed on 18.1.2018).

Lebada, A.M. (2016): *Member states, statisticians address SDG monitoring requirements*; available at: http://sdg.iisd.org/news/member-statesstatisticians-address-sdg-monitoring-requirements/?rdr=sd.iisd.org (last accessed on 7.4.2016).

MacFeely, S. (2016): The continuing evolution of official statistics: Some challenges and opportunities, in: Journal of Official Statistics, 32 (4), 789–810.

– (2018): The Big (Data) Bang: What will it mean for compiling SDG Indicators? UNCTAD Research Paper, UNCTAD/SER.RP/2018/5 No.23.

MacFeely, S. and Barnat, N. (2017): Statistical capacity building for sustainable development: Developing the fundamental pillars necessary for modern national statistical systems, in: Journal of the International Association of Official Statistics, 33 (4), 895–909.

MacFeely, S. and Dunne, J. (2014): Joining up public service information – The rationale for a national data infrastructure, in: Administration, 61 (4), 93–107.

Mair, S., Jones, A., Ward, J., Christie, I., Druckman, A., and Lyon, F. (2018): A Critical Review of the Role of Indicators in Implementing the Sustainable Development Goals, in: Leal Filho, W (ed.) Handbook of Sustainability Science and Research. Manchester, UK: Springer: 41–56.

OECD (2015): *Measuring total official support for sustainable development*, The Development Assistance Committee (September 2015); available at: http://www.oecd.org/dac/financing-sustainable-development/TOSSD%20flyer.pdf (last accessed on 5.4.2018).

References

PARIS21 (2004): *A Guide to Designing a National Strategy for the Development of Statistics (NSDS)*, PARIS21 Secretariat (November 2004); available at: http://siteresources.worldbank.org/SCBINTRANET/Resources/NSD_Guide-Nov04.pdf (last accessed on 5.4.2018).

– (2015): *A road map for a country-led data revolution*; available at: http://www.oecd-ilibrary.org/docserver/download/4315051e.pdf?expires=1457406953&id=id&accname=guest&checksum=6B4747834B1E459F5E186E65EE1034B5 (last accessed on 11.1.2017).

Sandler-Clarke, J. (2015): 7 reasons the SDGs will be better than the MDGs; available at: https://www.theguardian.com/global-development-professionals-network/2015/sep/26/7-reasons-sdgs-will-be-better-than-the-mdgs (last accessed on 10.1.2017).

Sustainable Development Solutions Network (2015): *Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development*; available at: https://sustainabledevelopment.un.org/content/documents/2017Data-for-Development-Full Report.pdf (last accessed on 5.4.2018).

The 169 commandments, in: The Economist (28.3.2015); available at: https://www.economist.com/leaders/2015/03/26/the-169-commandments (last accessed on 29.6.2018).

The good, the bad and the hideous – Assessing development goals, in: The Economist (26.3. 2015); available at: http://www.economist.com/news/international/21647316-which-mdgs-did-some-good-and-whichsdgs-might-work-good-bad-and-hideous (last accessed on 27.1.2017).

United Nations (2000): *United Nations Millennium Declaration.* Resolution 55/2 adopted by the General Assembly; available at: http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/55/2 (last accessed on 3.2.2017).

– (2003): *Monterrey consensus of the International Conference on Financing for Development*; available at: http://www.un.org/esa/ffd/monterrey/MonterreyConsensus.pdf (last accessed on 31.10.2016).

– (2012): *The future we want.* Resolution 66/288 adopted by the General Assembly on 27 July 2012; available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/66/288&Lang=E (last accessed on 10.2.2017).

– (2013a): *A new global partnership: Eradicate poverty and transform economies through sustainable development.* The report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda; available at: http://www.post2015hlp.org/wp-content/uploads/2013/05/UN-Report.pdf (last accessed on 1.2.2017).

– (2013b): *Open Working Group proposal for Sustainable Development Goals*; available at: https://sustainabledevelopment.un.org/content/documents/1579SDGs%20Proposal.pdf (last accessed on 1.2.2017).

– (2015a): Agenda 2030 »To-Do List for People and Planet: Secretary-General Tells World Leaders Ahead of Adoption« (press release); available at: http://www.un.org/press/en/2015/sgsm17111.doc.htm (last accessed on 26.1.2015).

– (2015b): *Millennium Development Goals report 2015*; available at: http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf (last accessed on 23.1.2015).

– (2015c): Report of the third International Conference on Financing for Development; available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.227/20 (last accessed on 3.2.2017).

– (2015d): *Transforming our world: the 2030 Agenda for Sustainable Development*. Resolution 70/1 adopted by the General Assembly on 25 September 2015; available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E (last accessed on 7.2.2017).

– (2015e): Addis Ababa Action Agenda of the Third International Conference on Financing for Development - The final text of the outcome document adopted at the Third International Conference on Financing for Development (Addis Ababa, Ethiopia, 13–16 July 2015) and endorsed by the General Assembly in its resolution 69/313 of 27 July 2015; available at: http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf (last accessed on 5.4.2018).

United Nations Conference on Trade and Development (2016): *Development and Globalisation: Facts and Figures 2016*; available at: http://stats.unctad.org/Dgff2016/index.html (last accessed on 31.10.2016).

United Nations Development Programme (2012): *Rio+20 Sustainable Development Summit*; available at: http://www.undp.org/content/undp/en/home/presscenter/events/2012/June/rio-20-sustainable-development.html (last accessed on 10.11.2017).

United Nations Economic Commission for Europe (2000): Terminology on Statistical Metadata. Conference of European Statisticians Statistical Standards and Studies, No.53.

United Nations Economic Commission for Europe (2013): Generic Statistical Business Process Model - GSBPM: Version 5.0, December 2013; available at: http://www1.unece.org/stat/platform/display/GSBPM/GSBPM+v5.0 (last accessed on 5.4.2018).

United Nations Environmental Programme (2015): *Clarifying terms in the SDGs: Representing the meaning behind the terminology*; available at: http://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-02/Statements/UNEP%20-%20Clarifying%20terms%20in%20the%20SDGs.pdf (last accessed on 10.1.2017).

United Nations High Commissioner for Refugees (2015): *World at war – UNHCR global trends: Forced displacement in 2014*; available at: http://www.unhcr.org/556725e69.html (last accessed on 10.1.2017).

United Nations Statistics Commission (2018): Guidelines on Data Flows and Global Data Reporting for Sustainable Development Goals. Report prepared by the Inter-Agency and Expert Group on Sustainable Development Goal Indicators. Background document, 49th Session of the UNSC, 6–9 March 2018.

United Nations Statistics Division (2003): Handbook of Statistical Organization - 3rd Edition: The Operation and Organization of a Statistical Agency, Department of Economic and Social Affairs Statistics Division Studies in Methods Series F, No. 88 (United Nations, New York, 2003); available at: http://unstats.un.org/unsd/publication/SeriesF/SeriesF_88E.pdf (last accessed on 5.4.2018).

References

United Nations Statistics Division (2008): *Millennium Development Goals indicators – The official United Nations site for the MDG indicators*; available at: http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm (last accessed on 10.1.2017).

– (2016): Tier Classification for Global SDG Indicators (15.12.2017); available at: https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/ (last accessed on 5.4.2018).

Warren, S. (2015): *Analyzing the #SDGs on Twitter: The social media response to the Sustainable Development Goals*; available at: http://dalberg.com/blog/?p=3857 (last accessed on 2.2.2017).

World Bank (2010): *Understanding the links between climate change and development*; available at: http://siteresources.worldbank.org/INTWDRS/Resources/47736513275044267 66/8389626-1327510418796/Chapter-1.pdf (last accessed on 2.2.2017).

Wulfhorst, E. (2015): Selling the Sustainable Development Goals to the media has been tough despite a vigorous publicity campaign; available at: http://news.trust.org/item/20150923170917-sicr2/?source=spotlight (last accessed on 2.2.2017).

About the Author:

Dr. Steve MacFeely is the Head of Statistics and Information at the United Nations Conference on Trade and Development (UNCTAD), Adjunct Professor at the Centre for Policy Studies at University College Cork in Ireland and Deputy-Director of the International Association for Statistical Education's International Statistical Literacy Program. He is also a member of University of London Gender Indicator Advisory Committee. Before joining UNCTAD, he was the Assistant Director General at the Central Statistics Office (CSO) in Ireland and Programme Director of the Professional Diploma in Official Statistics & Policy Evaluation; a joint programme run by the CSO and the Institute of Public Administration in Ireland.

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Friedrich-Ebert-Stiftung | Global Policy and Development
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Friedrich-Ebert-Stiftung | New York Office
747 Third Avenue, 34D | New York, NY 10017 | USA

Responsible:
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