Counting Conflict Deaths: Options for SDG 16.1

Briefing Note to Members of the Inter-Agency and Expert Group on SDG Indicators

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Executive summary

It is impossible to register global progress in achieving peace without some basic measure of the frequency and intensity of armed conflict. The fundamental unit of armed conflict is the number of deaths arising over a period of time. Although a single indicator on conflict deaths is incomplete and insufficient to convey the manifold consequences of warfare, it is nevertheless the best proxy available. It should be central to monitoring Sustainable Development Goal (SDG) 16 and its target to: "significantly reduce all forms of violence and related death rates everywhere".

Counting conflict deaths is a moral, legal and humanitarian imperative. While conceptually challenging, measuring the deaths arising from armed conflict is methodologically feasible. Recent advances in counting and estimating direct and indirect conflict deaths show that global monitoring is possible. This briefing note is intended to assist the Inter-Agency and Experts Group (IAEG) on SDG indicators in developing an indicator to track the number of "conflict-related deaths per 100,000 people". It is advisable that the selected metric (or metrics) account for both direct and indirect deaths.

Key findings include:

- **The IAEG has a clear mandate to measure conflict deaths:** Alongside the adoption of Goal 16, peace was identified as one of five crosscutting priorities in the 2030 Agenda. Target 16.1 focuses on *all* forms of violence *everywhere*. Omitting an indicator on conflict deaths – in spite of its technical feasibility – would amount to a political decision to dilute the target. The proposed indicator on "number of conflict-related deaths per 100,000" should be retained.

- **The global direct and indirect costs of conflict are extensive**: Up to 180,000 people are violently killed in more than 42 armed conflicts around the world each year. At least another 200,000 people die indirectly from armed conflict, mostly due to war-related malnutrition, disease and preventable illness. It is likely that the number of indirect deaths is considerably higher. While armed conflict does not affect every country equally, nor do other priorities that the IAEG is mandated to monitor (e.g. malaria).

- **Although the most commonly used unit of "direct conflict deaths" is a verified killing occurring during a clash or attack, other forms of violent death occurring outside a "battle" should also considered:** Direct conflict deaths consist at a minimum of "battle-related deaths" and can include combatants and/or civilians violently killed as a result of

"normal" warfare. Other forms of direct conflict deaths that may occur outside a "battle-related" confrontation include mass atrocities, war crimes and acts of genocide.[2]

- **There are standardized approaches to measuring direct deaths at the global and national levels:** Measurement tends to be based on tabulating discrete and verified incidents of killings of soldiers and civilians. The source of registered incidents includes hospitals, morgues, news reports, military records and human rights assessments. Several established research organizations document trends globally and at the national level.

- **Significantly more civilians are victims of "indirect conflict deaths"**: Indirect conflict deaths are generally estimated on the basis of population-based surveys, health surveillance and multiple systems estimation in war-affected areas. Efforts to measure indirect conflict deaths are typically based on statistical models and probabilistic sampling techniques.

- **The measurement of indirect conflict deaths is a grey area that requires more standardization and precision:** Some research organizations often claim to include indirect conflict deaths in their counts and estimates without offering adequate clarity and evidence of how their figures were determined. The IAEG or UN Statistical Commission (UNSC) could set out clear protocols for standardizing the measurement of indirect conflict deaths.

- **Some social scientists and public health experts disagree on the best ways of counting both direct and indirect deaths due to different assumptions about methods:** Whatever approach recommended by the IAEG, a conservative approach to measurement is advisable.

- **A global standardized indicator on conflict-related deaths could catalyse capacity development to improve monitoring:** It is feasible to measure direct deaths using incident counting techniques and indirect deaths no the basic of statistical estimates and health surveillance. The implications of such a development are potentially revolutionary in filling gaps in global knowledge.

[2] See Milante (2015) for a review of other categories that are included in the "direct conflict death" category,

Introduction

Armed conflicts kill hundreds of thousands of people every year. Some of these deaths are more visible than others. A minority consist of direct deaths due explicitly to organized political violence. Cross-border and civil wars[3] kill soldiers and civilians immediately as a result of military action. The majority of deaths, however, occur indirectly owing to owing to longer-term injuries and war-exacerbated illness, disease and malnutrition. Indirect deaths tend to be greater in long wars in poorer contexts (e.g. DRC) than in short wars in more developed settings (e.g. Kosovo).

This briefing note considers the state of the art on measuring direct and indirect conflict deaths.[4] Following a brief consideration of the IAEG mandate, it reviews global and national approaches to highlight areas of convergence and divergence. Mapping conflict deaths is a challenging enterprise, often taking place in settings where data collection infrastructure is in long-term decline and ruins. The politics of measuring lethal violence in war zones cannot be overstated and is discussed in the second section. The note is not intended to reconcile competing approaches but rather generate clarity about their respective advantages and limitations.

IAEG Mandate

The IAEG has a mandate and responsibility to develop metrics to measure conflict deaths. In September 2015 world leaders gathered at the United Nations (UN) in New York to sign-up to the 2030 Agenda for Sustainable Development. The ambitious new development framework's 17 Sustainable Development Goals and 169 targets cover a wide range of development issues. Included is Goal 16 which aims to "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels." Moreover, the 2030 Agenda's preamble identifies peace as one of five crosscutting priorities for the international community.

The IAEG was tasked to develop a global indicator framework for consideration by the Statistical Commission in March 2016. A significant challenge for the IAEG is to identify indicators that can accurately and reliably measure progress on expanded range of issues included in the new

[3] International law distinguishes between international and non-international armed conflict. See ICRC for a review of the definitions. https://www.icrc.org/eng/resources/documents/article/other/armed-conflict-article-170308.htm. Other social science groups use different classification systems to discriminate between cross-border and internal or civil wars.

[4] An underlying assumption of the author is that SDG 16 target 1 will include a metric to track intentional homicides and direct and/or indirect conflict deaths. In other words, these two variables will not be merged into a composite indicator, warranted or not. See Milante (2015) for the case for a composite indicator based on meta data.

development agenda, some of which have not been measured on a universal basis before. However, even the measurement of seemingly basic issues that are already covered by the MDGs – for example poverty – are challenging. The MDGs have, nonetheless, demonstrated that where collective ambition and technical capacity are mobilized, these challenges can be overcome.

An indicator on the "**number of conflict-related deaths per 100,000 people**" was originally proposed by the IAEG under target 16.1. Given the centrality of peace to the SDGs, this indicator on conflict related deaths is essential. The centrality of peace to the SDGs, the inclusion of Goal 16, and the specific wording of target 16.1 – to "reduce *all* forms of violence and *related death rates everywhere*" – means that omitting such an indicator would amount to a political decision to dilute the ambition of what member states have collectively agreed to.

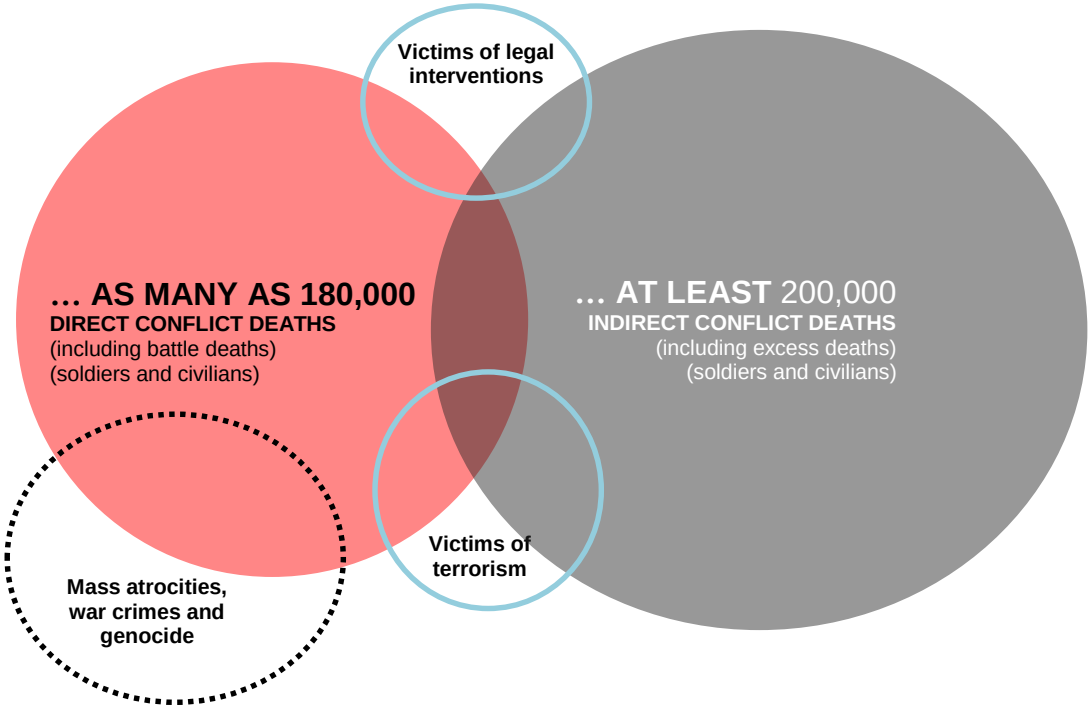
The impacts of armed conflict are global in scope. While conflict does not affect every country equally, this is also the case for other themes where IAEG will allocate global indicators to, including malaria. Failing to account for deaths resulting from armed conflict would mean letting hundreds of thousands of lost lives go unnoticed. At a minimum, the IAEG is advised to track direct conflict deaths since they are the accessible and straight-forward to count. Even so, a genuinely legitimate assessment of the human costs of conflict should also account for the indirect deaths. While more challenging to tabulate, the combination of direct and indirect death offers the fullest assessment of the extent to which armed conflict undermines peace.

Conceptualizing direct and indirect conflict deaths

A necessary first step is to achieve consensus on measuring direct and indirect conflict deaths. What is also required is agreement on the most appropriate indicators, methodologies, capacities and resources to gather, analyse and disseminate data. As is the case with monitoring many development processes, statistical irregularity is the norm when it comes to counting the direct and indirect human cost of armed conflict. Although social and health scientists are getting better at measuring the numbers of people killed during armed conflicts, they often disagree over the most effective way to go about it.[5] This discord is partly semantic and mostly methodological.

[5] See http://www.theguardian.com/global-development-professionals-network/2015/sep/08/from-syria-to-sudan-how-do-you-count-the-dead.

Figure 1. Conceptualizing direct and indirect conflict deaths*[6]



**The figures of direct and indirect deaths are based on the latest counts and estimates available and vary according to the time series used. Blue lines imply they are excluded from the count. It should be noted that in some assessments – particularly Iraq, Syria and Yemen – victims of terrorism are included. The dotted line implies that these types of killings are sometimes included in direct death counts and sometimes not.*

Global indicators to track conflict-related deaths are both necessary and feasible. These metrics should proxy for the frequency, intensity and related pain and suffering generated by warfare. The establishment of appropriate global indicators by the IAEG will also galvanize national and non-governmental entities to strengthen common standards and capacities to gather disaggregated data. While there are already impressive efforts underway to track conflict deaths from the global to the local levels, there is no doubt that establishing baselines of the number of people dying directly and indirectly will take time. The alternative, however, is to sidestep the issue and leave 1.5 billion people affected by conflict and violence behind.

[6] It is worth noting that both terrorism and legal interventions (including extra-judicial killings) are included in some conflict death indices as well as in the ICCS guidelines on intentional homicide. See https://www.unodc.org/documents/data-and-analysis/statistics/crime/ICCS/ICCS_Draft_for_consultation_August_2014.pdf.

Global direct deaths

Global investment in counting conflict deaths expanded considerably over the past two decades. An array of international research institutes such as the Uppsala Conflict Data Program (UCDP)[7], Armed Conflict Event Location Database (ACLED), International Institute of Strategic Studies (IISS)[8], the Peace Research Institute in Oslo (PRIO)[9], the Center for Systemic Peace[10], and the Correlates of War project[11] annually report on the number, type and intensity of conflicts around the world.[12] There are dozens of initiatives underway around the world that also refine, analyse and publicize research on the human costs of armed conflict. There are currently no official UN or government entities systematically tracking global direct conflict deaths.

Most international research efforts adopt a common approach and set of standards to measuring lethal violence in war zones. All of them define armed conflicts on the basis of a verified number of direct deaths arising over encounters between warring parties over a designated period of time. All of them use the number of war-related violent deaths to determine the annual intensity of conflict ranging from a minimum of 25 to over 1,000 battle deaths a year.[13] Estimates of the total number of direct deaths from the world's roughly 42 on-going conflicts[14] vary from around 70,000[15] to roughly 180,000[16] a year depending on the method and time-series used.

Social scientists counting direct deaths typically focus on a specific type of mortality. Central to their framework are battle-related deaths, arising due to "normal" warfare and reserved to members of the fighting forces and civilians.[17] In some cases, researchers also include terrorism in their counts.[18] Each recorded incident of a battle death is supposed to be verified by coders in

[7] See http://www.ucdp.uu.se/gpdatabase/search.php and http://www.cfr.org/global/global-conflict-tracker/p32137#!/.
[8] See https://acd.iiss.org/.
[9] See https://www.prio.org/Data/Armed-Conflict/ only collects data up to 2008.
[10] See http://www.systemicpeace.org/inscrdata.html.
[11] See http://www.correlatesofwar.org/, though it also no longer undertakes routine counts.
[12] Other groups such as the Human Security Report, Institute for Economics and Peace (IEF) and the Geneva Declaration on Armed Violence do not collect original data, but do improve on, refine and disseminate information and analysis on trends in political violence.
[13] According to some groups, there must be a minimum of 25 such battle deaths for a contested incompatibility to be designated an "armed conflict".
[14] See https://acd.iiss.org/ and http://www.theguardian.com/world/2015/may/20/armed-conflict-deaths-increase-syria-iraq-afghanistan-yemen.
[15] This estimate was based on the average number of direct conflict deaths over multiple years. See http://www.genevadeclaration.org/measurability/global-burden-of-armed-violence/global-burden-of-armed-violence-2015.html.
[16] This estimate is based on a count of all direct deaths for all reported conflicts in 2014. See https://www.iiss.org/en/about%20us/press%20room/press%20releases/press%20releases/archive/2015-4fe9/may-6219/armed-conflict-survey-2015-press-statement-a0be.
[17] Battle-related deaths occur between warring parties in a conflict dyad, usually involving the armed forces of a state and other non-state armed groups. This may be due to traditional battlefield fighting, guerrilla activities or related incidents. See http://www.pcr.uu.se/research/ucdp/definitions/#Battle-related_deaths.
[18] For example, Uppsala's one-sided violence category includes terrorism.

order to discriminate from other kinds of violent death, including homicide and terrorism.[19] Ideally all direct conflict deaths are disaggregated on the basis of gender and untrustworthy figures are discarded.

On the basis of this common definition, these and other organizations report common historical trends.[20] Generally, the frequency and intensity of international wars has declined since the middle of the twentieth century, increasing slightly in the past five years. The incidence of civil wars also dropped significantly over this period, rising again for the past decade. There was a sharp increase in the number of conflict deaths overall in the past few years[21] due in large part to the flaring up of conflicts in Syria, Iraq, Ukraine and Yemen.[22]

National direct deaths

A more detailed analysis of direct conflict deaths occurs at the national and subnational levels. Nationally-based systems are almost exclusively operated by non-governmental organizations and draw on a wide array of local sources to track discrete incidents of battle deaths. Because there are no reliable public systems to monitor conflict-related violence, their results are often heavily contested. For example, in Syria, there are considerable disputes over the total toll. The Violations Documentation Center in Syria claims that 122,683 Syrians were killed as of September 2015.[23] Meanwhile, the Syrian Observatory for Human Rights claims the number is likely closer to 330,000.[24] While initially reluctant to issue figures, the UN recently stated that 250,000 Syrians died violently in the armed conflict.[25]

Research entities documenting direct deaths frequently focus on concrete incidents where there are multiple sources of evidence to corroborate specific cases. A prominent incident counting group is the Iraq Body Count (IBC).[26] Counters sift through information gathered from morgues, hospitals and media outlets, and frequently work with vast networks of human rights organizations. Because their death counts are restricted to verified killings of civilians alone, they

[19] See http://data.worldbank.org/indicator/VC.BTL.DETH for the reproduction of UCDP data of estimated battle-related deaths per country.
[20] See https://www.iiss.org/en/about%20us/press%20room/press%20releases/press%20releases/archive/2015-4fe9/may-6219/armed-conflict-survey-2015-press-statement-a0be and http://www.pcr.uu.se/research/ucdp/datasets/ucdp_prio_armed_conflict_dataset/ for more complete lists of warms and serious armed conflicts.
[21] Conflict death tolls rose 28 per cent between 2013 and 2014 due in large part to violence in Syria, Afghanistan and Iraq. See http://time.com/3748778/death-toll-world-conflicts-syria-ukraine/.
[22] According to IISS, there were an estimated 42 active conflicts in 2014, with as many as 180,000 direct deaths. This compares to 41 armed conflicts with roughly 67,000 deaths in 2013.
[23] See https://www.vdc-sy.info/index.php/en/home.
[24] See http://www.syriahr.com/en/2015/08/more-than-330000-people-die-while-about-13000000-wounded-and-displaced-since-the-beginning-of-syrian-revolution/.
[25] See http://www.theguardian.com/world/2015/aug/17/un-condemns-syria-market-attack-douma-air-strike.
[26] See https://www.iraqbodycount.org/analysis/numbers/ten-years/.

are often accused of undercounting the extent of lethal violence.[27] For example, IBC registered 206,000 violent Iraqi deaths from 2003 to 2014.[28] These numbers represent a reasonably accurate account of reported deaths and were neither extrapolated nor estimated.

There is a proliferation of non-governmental research groups focusing on tracking direct conflict deaths in specific locations. Traditionally, the focus was limited to counting deaths of soldiers in action.[29] These estimates were highly politicized since governments wished to minimize information on casualties for fear of losing public support and generating opposition. Over the past decades, however, there has been a growing preoccupation with tracking so-called "collateral" damage. In Afghanistan, for example, a number of groups have emerged to track killings associated with coalition partners including International Security Assistance Force (ISAF) itself, the United Nations Assistance Mission in Afghanistan (UNAMA) and Afghanistan Rights.[30] The Libyan Body Count is also devoted to tracking battle-related deaths.[31]

The quantity and quality of reporting on direct conflict deaths is rapidly improving. There are literally thousands of groups monitoring lethal violence, many of them enabled by new technologies.[32] Initiatives such as Every Casualty are seeking to ensure standardization of efforts in different settings.[33] There are nevertheless persistent political and methodological questions about the validity and independence of many of these organizations. It is worth noting that there is nothing stopping national governments and independent research groups from collecting and reporting on the findings generated by vetted non-governmental organizations. What is more, there are large numbers of skilled scholars, practitioners and specialists prepared to measure conflict. They could be deployed either by the UN, regional organizations and even national governments to advise on the best ways of counting direct deaths.

Global indirect deaths

In virtually all contemporary conflicts, the number of indirect victims of armed violence is many times larger than the number of battle deaths. This is especially the case in Africa and

[27] Though claiming to focus on civilians alone, some groups sometimes conflate combatant and civilian deaths because some combatants do not wear uniforms and are thus counted as civilians. This is the case for both the IBC and the Syrian Observatory for Human Rights.
[28] Op cit.
[29] See, for example, http://www.statista.com/statistics/262894/western-coalition-soldiers-killed-in-afghanistan/ and http://icasualties.org/oef/fatalities.aspx for a review of coalition deaths in Afghanistan.
[30] See http://www.sciencemag.org/site/feature/data/hottopics/afghanistan/.
[31] See http://www.libyabodycount.org/.
[32] There are, for example, over 90,000 uses of Ushahidi – a crowd-source map tracking political violence - around the world. These kinds of new technologies are designed to encourage citizen reporting on violence and use a combination of methods to verify submitted information. See http://www.ushahidi.com/about.
[33] See http://www.everycasualty.org/.

Asia where public and medical health infrastructure may be particularly weak. Although male and female combatants are the most visible casualties, armed conflicts also result in excess mortality and morbidity in the civilian population — due in large part to the spread of infectious disease, deterioration of assets, widespread cross-border and internal displacement, the loss of entitlements, and the diversion of scarce resources away from basic services.[34] While a very general estimate, it is likely that there are on average four indirect deaths to every direct death in contemporary conflicts.[35]

A number of public health organizations track collective or organized violence arising from armed conflict. The World Health Organization (WHO), for example, reviews direct and indirect deaths arising from global health risks.[36] In the case of direct deaths, the WHO focuses on intentional injuries and collect data from health systems. The WHO then models overall conflict deaths through estimation techniques since there are significant gaps in reporting. Drawing on a global sample with data up to 2008, they found that intentional injuries resulted in at least 184,000 direct and indirect deaths due to war and civil conflict.[37]Their estimates tend to have a level of uncertainty built into their models.[38]

Other public health groups also measure global conflict deaths based on calculations of excess mortality. Excess deaths are those that would not have occurred in the absence of an armed conflict. They include both direct and indirect deaths. In terms of indicators, the focus is often on crude mortality rates (CMR) that are “above” what might ordinarily be expected in the absence of warfare.[39] It is a clean measure to the extent that pre and post population data is available and accurately recorded. Depending on the setting, CMR can vary many times the natural baseline. The extent of CMR itself is also heavily influenced by the extent of health infrastructure and underlying social and economic conditions.

The estimation of indirect conflict deaths is a relatively new – and yet influential – enterprise. The goal is to capture deaths that might otherwise have been preventable.[40] Currently the best global estimate drawing from available data in over a dozen conflicts between 2004 and 2007 and then projecting globally suggests that at least 200,000 people died indirectly from

[34] See http://www.thelancet.com/pdfs/journals/lancet/PIIS0140673602118071.pdf and https://www.wilsoncenter.org/sites/default/files/Burkle.pdf for a summary of the impacts of infectious disease in shaping mortality in conflicts.
[35] See Global Burden of Armed Violence (2015, 2011, 2008) estimates.
[36] See http://www.who.int/healthinfo/statistics/bodprojectionspaper.pdf.
[37] See http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf.
[38] See http://www.who.int/healthinfo/statistics/bodprojectionspaper.pdf.
[39] The difference between above average CMR and the baseline CMR is called excess mortality.
[40] See http://www.genevadeclaration.org/fileadmin/docs/GBAV/GBAV08-CH2.pdf.

armed conflict.[41] The number likely varies dramatically from year to year depending on the intensity of warfare, the extent of relief assistance and the conditions of the population. Indeed, estimates generated from conflicts in the DRC alone suggest the number could be significantly higher.[42]

At the moment it is difficult to capture at the global level owing to weak data collection and challenges in attributing excess deaths specifically to conflict.[43] It is also hard to establish baseline CMR in many settings affected by chronic violence owing to the breakdown of health information systems, including vital registration, epidemiological surveillance and health service data systems. [44] Although periodic estimates are available there are, at present, no global datasets tracking excess deaths from war.[45] An indicator on conflict deaths per 100,000 would generate significant political will to strengthen and properly resource data collection efforts.

National indirect deaths

As in the case of direct conflict deaths, the most accurate measurement of indirect deaths occurs at the national and subnational scale. The quantification of indirect deaths typically involves a combination of retrospective mortality surveys (RMS), prospective surveillance through health information sources (HIS) and the analysis of multiple data sources. All three methods are ideally combined, though this may not always be possible. Indeed, in societies affected by conflict HIS and other data sources may be dysfunctional. This can affect death counts described above, as well as basic surveys.

Public health specialists and epidemiologists frequently use RMS, especially verbal autopsies, to estimate indirect mortality.[46] The approach often involves random or semi-random cluster

[41] For a breakdown of the ratios of direct and indirect deaths in selected conflicts, consult the Global Burden of Armed Violence (2008). For example, in Kosovo (1998-1999) the ratio of direct to indirect deaths was 1:0. In Iraq (2003-2007), the ratio was 1:3, while in DRC (1998-2002) the ratio was estimated at 1:9 and in Sierra Leone (1991-2002) the ratio rose to 1:15.7. Ibid, page 40).
[42] See http://www.odihpn.org/humanitarian-exchange-magazine/issue-35/mortality-surveys-in-the-democratic-republic-of-congo-humanitarian-impact-and-lessons-learned.
[43] As noted by the Geneva Declaration (2008), the loss of livelihoods, poor diets, lack of food, displacement, poor sanitation, and countless other factors are often treated as the underlying determinants of mortality within an armed conflict.
[44] There is no simple method for generating baseline mortality rates to calculate excess mortality in settings where there are no public services and limited data collection (Guha-Sapir and van Panhuis, 2004; Utzinger and Weiss, 2007). Ibid.
[45] See http://www.hsrgroup.org/our-work/security-stats/Deaths-from-Organized-Violence.aspx.
[46] Surveyors affiliated with UNICEF, the International Rescue Committee (IRC), and the Center for Research on the Epidemiology of Disasters (CRED) routinely undertake rapid assessments in areas where prospective surveillance is in short supply. See https://epianalysis.wordpress.com/2011/04/07/conflictepi/.

sampling of the national and/or area-specific population. Literally hundreds if not thousands of such surveys have been pursued in war zones.[47] RMS methods are increasingly standardized, including through an inter-agency humanitarian initiative.[48] While routinely administered in humanitarian crises to rapidly assess mortality, RMS also feature some limitations. For one, they may not capture the true medical causes of death since information cannot be independently verified. It is also often difficult to distinguish between violent and non-violent causes. Logistical challenges may also frustrate RMS since data is often politically sensitive in nature.

Meanwhile, HIS methods are ideal for capturing mortality in ostensibly stable or more peaceful environments. Researchers gather data from health facilities, death registries, and other reliable sources that produce basic information on the conditions of the population. However, HIS are widely acknowledged to be weak in conflict settings where national statistics departments may be politicized or when information collection capacities are in short supply. It is worth underlining that deaths are not counted (and causes of death remain unregistered) for more than two thirds of the world's population.[49] In many war zones there is a veritable blackout. In some cases, relief agencies develop *ad hoc* morality detection systems in refugee and internally displaced person (IDP) camps, though there are invariably problems related to under-reporting.

Some researchers are charting out a middle way to count civilian deaths with a high level of accuracy. Patrick Ball is a pioneer of what's called multiple systems estimation (MSE).[50] His team statistically combines death records, testimonial evidence, human rights reports and population survey data to establish overall mortality counts. Their research was used in war crimes trials and tribunals in Guatemala, Sierra Leone and the former Yugoslavia.[51] Many believe that the Human Rights Data Analysis Group (HRDAG) has come as close to the gold standard as is currently possible when it comes to monitoring subnational trends in direct and indirect conflict violence. However, it can also take years to generate a one-off estimate and such approaches are not conducive to measuring trends over time.

[47] See http://www.cedat.be/ for a review of existing mortality surveys conducted in conflict and ostensibly stable settings.
[48] See Working Group for Mortality Estimation in Emergencies (2007).
[49] See http://www.globalhealthaction.net/index.php/gha/article/view/1926.
[50] See https://hrdag.org/wp-content/uploads/2013/04/Manrique_Price_Gohdes_WorkingPaper.pdf.
[51] The group also combined incident counting and population surveys in Timor Leste. See http://hsrgroup.org/docs/Publications/Additional-Publications/HSRP_Est.Battle_Deaths.pdf.

Figure 2. Approaches to counting direct and indirect deaths

	Indicator	Method	Example
Global direct deaths	Direct conflict deaths (soldiers and civilians)	Incident counting using multiple sources and verifying each data point.	ACLED, IISS, PRIO, UCDP with data disaggregated by time and space.
National direct deaths	Direct conflict deaths (soldiers and civilians), Collateral deaths (civilians)	Incident counting, multiple systems estimation (MSE) depending on the context.	HRDAG, IBC, Syrian Observatory for Human Rights, Afghanistan Casualty Monitor with data disaggregated by time, space, and demographic variables.
Global indirect deaths	Intentional injuries, child mortality rates (all population)	Health Information Systems (HIS), national health surveillance where feasible.	WHO Global Burden of Disease (International Classification of Disease) on a periodic basis and reporting disaggregated by time, space and some demographic variables.
National indirect deaths	Excess deaths (crude mortality rates above the natural baseline)	Retrospective surveys or verbal autopsies usually done as cross-sectionals.	IRC, MSF, Lancet, BMJ, etc. with data estimated on the basis of cluster surveys.

Challenges in measuring conflict deaths

While technically feasible, it is important to stress that measuring direct and indirect deaths during and following armed conflicts is neither simple nor straightforward. This is not to suggest that counting conflict deaths should not be pursued – to the contrary. Rather than relying on a single method, research groups frequently combine different approaches to positive effect. After weighing the pros and cons, some researchers argue that only verified cases of direct deaths should be included, thus excluding for the most part indirect deaths.[52] Advocacy groups such as Every Casualty encourage researchers to restrict their counts to incidents where there is evidence of a corpse and the circumstances of the individual's death.[53] And because they limit

[52] See https://www.icrc.org/eng/assets/files/other/irrc-868_daponte.pdf.
[53] See http://www.everycasualty.org/.

their counts to precisely documented cases of violent deaths, they are often criticized for under-counting the scale of lethal violence.[54]

Whatever the recommendations of the IAEG, there are several basic considerations when measuring direct and indirect conflict deaths. Clarity and precision over the content of basic variables is essential. Basic agreement on what constitutes a "battle death" and what types of mortality are included in the category of "excess death" is essential. Ultimately, there need to be clear boundaries about what is included and excluded. It is also critical that counts and estimates are transparent about their methodologies, including the biases and limitations that may emerge. In the case of the MDGs there are many imprecisions and flaws in national statistical assessments. This is to be expected and improving collection capacities should be central to the agenda.

The case of Iraq in the wake of the 2003 US-led invasion provides a useful illustration of the challenges with counting direct and indirect conflict deaths.[55] Estimates of the civilian death toll range from the tens of thousands to more than one million.[56] Indeed, at least nine research groups have rendered competing estimates of the violent death toll.[57] A group of public health specialists also published two widely circulated peer-reviewed studies on the Iraqi mortality rate, in 2004[58] and 2006.[59] Based on survey-generated data, the first estimated 98,000 excess deaths while the second, more controversially, predicted closer to 650,000 deaths, or 2.5% of the entire Iraqi population.[60] There are several reasons for these statistical discrepancies, not least the fact that they focus on different time periods and are based on very different methodological assumptions.[61]

Controversies over death counts are not isolated to Iraq, but also occurred in the Democratic Republic of the Congo (DRC) and Darfur. In the case of DRC, the International Rescue Committee (IRC) commissioned a series of mortality surveys between 2000 and 2007.[62]
The research team initially claimed that 5.4 million Congolese died as a result of the armed conflict from 1998 to 2006. Soon after, the DRC surveys came under criticism.[63] Critics put the

[54] See https://epianalysis.wordpress.com/2011/04/07/conflictepi/.
[55] See http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3039686/.
[56] See http://www.psr.org/assets/pdfs/body-count.pdf.
[57] These include IISS, Ploughshares, PITF, PRIO, SIPRI, UCDP, IBC, Iraq Coalition Casualty Count, Global Burden of Armed Violence and others.
[58] See http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17441-2/abstract.
[59] See http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(06)69491-9/abstract.
[60] See http://www.nature.com/news/2006/061009/full/news061009-9.html.
[61] See http://www.bmj.com/content/bmj/suppl/2005/03/11/330.7491.557.DC1/statement.pdf
[62] Enumerators were told to document all deaths, not just those due to bullets or machetes. By subtracting pre-war mortality from their estimate, they came up with a death toll above what would be expected in the absence of war.
[63] See http://www.huffingtonpost.com/georgianne-nienaber/data-bombshell-crushes-co_b_433552.html.

death toll to be closer to 900,000, far lower than the original estimate.[64] Meanwhile, following allegations of genocide in Darfur, the Sudanese President claimed that less than 9,000 people were killed.[65] Activists countered that over 450,000 people died between 2003 and 2005.[66] An evaluation of the Darfur death count by the US General Accounting Office reviewed the evidence. Drawing on a statistical analysis they determined that there were probably closer to 134,000 deaths, 35,000 due to violence.[67]

A way forward

There are several reasons why measuring conflict deaths is critical. Most importantly, body counts treat every life as equally precious. The numbers are thus a moral imperative. What is more, death counts are an excellent proxy for other human costs of armed conflict. As Pinker observes: "even if the ratio of direct to indirect deaths is unknown, or varies from one conflict to another, it will surely track war deaths because war deaths vary over orders of magnitude".[68] While precision is important to strive for, conflict death counts and estimates don't necessarily have to be exact to be useful. Indeed, a "correct" record of conflict deaths is to some extent less important than a constant yardstick.[69] The latter allows for a better sense of trends, comparisons and the relative effectiveness of interventions to make societies more peaceful.

This Briefing Note shows that it is possible to measure the extent of conflict deaths. The introduction of an indicator tracking direct and/or indirect conflict deaths is feasible, but will come with several important caveats. It is important to see such an exercise as part of a necessary long-term process of building capacity at the global, regional, national and local levels. The implications are potentially revolutionary in filling a gap in global knowledge. Such a metric might also encourage more extensive mapping not just globally, but at the local scale where data collection facilities are often in short supply. While disagreements over methodologies will persist, it is no longer a question of whether it is possible to measure

[64] Andy Mack found that the pre-conflict baseline mortality rate was under-estimated, consequently marking-up the IRC estimates. For their part, the IRC defended its findings citing that their work was published in respected medical journals. The downward trends in under-five mortality throughout the war were also confirmed by UNICEF using DHS approaches. See http://childmortality.org/.
[65] See http://www.sudantribune.com/spip.php?article25670.
[66] Responding to public outcry, the U.S. provided over $1 billion in aid and the United Nations established a peacekeeping force of around 20,000 troops costing $100 million a month. See http://www.theguardian.com/commentisfree/2007/aug/20/howmanydeadindarfur.
[67] The panel observed that a precise death count would likely never be established since estimating mortality – especially in crises involving mass malnutrition, epidemics and violence – was notoriously difficult.
[68] Steven Pinker also notes that "as most opinions about the world and policy are quantitative – without proper measures we are shooting in the dark". Furthermore "human cognition is poor at appreciating risk. People judge probabilities according to available examples from memory (the availability heuristic) and are often concerned with the wrong things". Interview with Pinker in October 2015.
[69] Ibid.

conflict deaths. The key question is whether there is adequate will and resources to see the job through.

Of course, all counts and estimates should be approached with caution. It is advisable that global and national monitoring mechanisms adopt a conservative approach when considering inclusion and exclusion criteria. It is essential that a panel of experts also be developed to ensure standardization of methods and metrics. This is a caution that applies to many of the proposed IAEG indicators, and not just those related to interpersonal and collective violence. As is the case with MDG indicators in the past 15 years, the next 15 years will be an opportunity to improve how we measure issues that the international community has decided are of critical importance.

Ultimately, all researchers agree about the importance of mapping direct and indirect conflict deaths.[70] The collection of event data and generation of estimates is allowing for ever more precise understandings of how armed conflicts affect populations, governance and development.[71] That there are disagreements is hardly surprising given the complexity of armed conflict and the very real data collection limitations in such circumstances. More fundamentally, there is considerable standing and readily mobilized capacity to measure conflict-related deaths around the world. The process of gathering and interpreting data can be part of the wider conversation about building peace. Validating data across multiple sources serves an empirical function, but can also improve policy and programming performance.

Whatever the approach, data should be collected and analyzed by nonpartisan, objective, scientifically minded observers.[72] These are the same standards that the IAEG would expect of all indicators. Many indicators – including on conflict-related deaths – will require more work. Nevertheless, there is sufficient experience and expertise to chart a path first towards consensus, then to building capacities, then to a global baseline and, finally, to a system that ensures no conflict death goes uncounted. Not all that matters can be measured, and not all that can be measured matters. Even so, with a clear mandate to do so, the IAEG has an opportunity to make sure the lives lost in conflict matter and are properly counted.

[70] See http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60752-2/abstract.
[71] There are potentially also important insights to be gained from comparing the relative distribution of direct and indirect deaths in different types of conflicts. In large conflicts such as Iraq or Syria there are significantly high direct and indirect death tolls. There is likely a correlation between both. However, in smaller conflicts or settings with temporary increases in high-intensity violence, there may be less strong relationships. In such environments there may be fewer direct deaths and less known about the extent of indirect casualties. Interview with Clionadh Raleigh, October 2015.
[72] Interview with Steven Pinker, October 2015.