Rationale

On 16 November, the UN Secretary General presented a report to the General Assembly entitled ‘Promoting Development through the Reduction and Prevention of Armed Violence’ (A/64/228). In his report the Secretary General highlighted the destructive influence of armed violence on poverty reduction and human development. The UN Secretary-General describes armed violence as the intentional, threatened or actual, use of arms to inflict death or injury. As such, the concept of armed violence encompasses a wide spectrum of conflict, post-conflict, crime-related, and interpersonal – including gender-related – forms of violence.

More than 740,000 men, women, and children die each year as a result of armed violence. The majority of these violent deaths – an estimated 490,000 – occur in countries that are not affected by war. They are victims of homicidal and interpersonal violence. In addition to intentional mortality and morbidity, the socio-economic impacts of armed violence are vast and far-reaching. The cost of lost productivity from criminal violence alone is roughly USD 95 billion and can reach as high as USD 163 billion per year. Armed violence associated with armed conflict can contribute to a decrease in the annual economic growth of a country by more than two per cent.

The negative effects of armed violence extend well beyond these human and economic costs. Armed violence can trigger forced displacement, erode social capital, and destroy infrastructure. It can impede investment in reconstruction and reconciliation. Armed violence undermines the quality and service-delivery capacities of public institutions, facilitates corruption and is conducive to a climate of impunity. It contributes to and is sustained by transnational crime including the trafficking of persons, drugs, and arms. When associated with interpersonal and gender-based violence, it dismantles the fabric of families and communities and leaves lasting psychological and physical scars on survivors.

Armed violence is today recognized as a significant obstacle to the achievement of the Millennium Development Goals (MDGs) in many different countries and contexts. Yet there are few reliable, comprehensive or relevant indicators used to measure the global burden of armed violence and its implications for human development, much less the attainment of the MDGs. The Millennium Development Goal Review Process, starting in 2010, provides an opportunity to consider the reduction of armed violence as an important requisite to meeting the MDGs. The establishment of an evidence base on the scope, scale, distribution, and types of armed violence, and the risks that give rise to and sustain it, will be crucial. It will enable better measurement of the impacts of armed violence on development and productivity, and
help the international community to develop and implement more effective armed violence reduction and prevention strategies.

The forthcoming ‘expert workshop on indicators of armed violence’ brings together a selection of participants with expertise in statistics, demographics, epidemiology, criminology, economics and development studies to review critically a preliminary set of indicators of armed violence. A premium will be placed on thinking outside of the box and reviewing possibilities (and obstacles) for developing and refining city-level, national and global indicators. A key output of the workshop should be progress towards an agreed set of indicators that will build that evidence base, define its parameters, provide a basis for long-term initiatives, and make a meaningful contribution into the MDG Review Process and beyond. This background paper offers an overview of some of the preliminary work initiated by the Geneva Declaration Secretariat, the Small Arms Survey, the World Bank, the WHO, the UNODC, UNDP and the Armed Violence Prevention Programme (AVPP) and others to measure the global burden of armed violence. It also considers a range of key questions to be discussed during the workshop.

**Applying evidence to armed violence prevention and reduction**

The Geneva Declaration on Armed Violence and Development represents a high-level diplomatic initiative designed to support states and civil society actors to achieve measurable reductions in the global burden of armed violence and improvements in human security by 2015 (and beyond). The declaration was signed in June 2006 and is now supported by 108 states. The signatory states highlight the need for clear evidence of the scale and distribution of armed violence and its underlying risk factors in order to design effective preventive and reduction strategies. Moreover, the Geneva Declaration notes that by setting clear and unambiguous benchmarks and targets, the outcomes of specific initiatives can be compared across countries, cities and communities.

Homicide rates are a core measure that is regularly applied to determine overall levels of armed violence in a community, city or country.\(^1\) Indeed, intentional mortality and morbidity are widely considered the most accurate proxy measure of the incidence of violence in a given environment. For example, in 2002 the World Health Organisation (WHO) published a study on the human costs of violence associated with interpersonal, collective and self-directed violence, and the settings in which this violence occurred. The report featured gender- and age-disaggregated data of intentional mortality rates.\(^2\) Likewise, the United Nations Office on Drugs and Crime (UNODC) presented a dataset on national homicide rates in the year 2004, with the aim of achieving as broad a geographic coverage as possible, and released publicly estimates of national homicide rates in late 2008.\(^3\) Although existing data is often weak, and seldom comparable, it is still possible to work towards a credible set of goals, targets and indicators (see page 6 for possible goals, targets and indicators).

The public health approach goes beyond mere homicide rates. It makes use of sentinel surveillance and victimization surveys to gather information on the proportion of a given population that has been a victim of armed violence. The advantage of this approach is that it accounts for death as well as related injury, disability and morbidity resulting from armed

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\(^1\) Inter-American Development Bank (1999).
\(^2\) See the World Health Organization (2002).
violence. Data on victimization may be collected at health centres through hospital-based surveillance and vital registration systems, or through household and community surveys, police surveillance systems, morgues and from organizations working with victims (see Box 1). But such systems are not in place in many parts of the world.

The Geneva Declaration and AVPP recognizes the need for a comprehensive approach to measure the overall impact of armed violence worldwide that includes indicators beyond intentional mortality and morbidity data and victimization. It aims to include indicators on the economic costs of armed violence as well as more indirect symptoms such as reduced access to basic services, gender-based violence or crime reporting rates. In 2008, the WHO published a manual on ways of estimating the economic costs of violence on the basis of mortality and morbidity data, highlighting the ways relevant data could be collected and tabulated in low and medium-income settings. In 2009, the World Bank presented a report on the direct and indirect costs of violence, including the costs of destroyed public infrastructure, costs of health care, brain drain or reduced tourism from abroad.

Building on previous research conducted by criminologists, public health specialists, statisticians, economists and analysts in conflict studies, the Geneva Declaration Secretariat worked closely with a wide range of partners such as the WHO, CRED, UNDP, UNODC and others to develop a set of preliminary indicators that allowed for some tentative estimates of the scope, scale, intensity, and cost of armed violence worldwide. The Global Burden of Armed Violence (2008) report focused on ‘hard’ indicators, including homicide rates and number of direct and indirect violent deaths in armed conflicts, and provided an overview of the different approaches to calculate the economic costs of armed violence. More indirect symptoms of armed violence, including sexual violence and reduced access to basic services health, education, and welfare, have not yet been fully considered, though relevant data was collected by the Geneva Declaration Secretariat and featured in its 2008 report.

The Millennium Development Goals and other evidence-based initiatives

The approach towards measuring and monitoring the scope and scale of armed violence and its impact on development that is advocated by the Geneva Declaration and AVPP builds upon other international initiatives that highlight the importance of evidence-based programming, and ongoing monitoring and evaluation of global initiatives. For example the World Bank presents an annual report on World Development Indicators (WDI) that includes more than 800 variables tracking governmental performance, population profiles, environmental issues, economic growth and market health. The Vera Institute of Justice defined indicators within the justice system to assess progress towards the goals of good governance.

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4 Diego E. Zavala and Jennifer Hazen (2009).
7 Geneva Declaration Secretariat (2008).
8 The World Bank (2009a).
9 The Vera Institute of Justice (2003).
Likewise, a range of research institutes and advocacy groups have developed various types of indexes to monitor state fragility as well as efforts to enhance governance and human rights.\(^\text{10}\) For example, the Global Peace Index (GPI)\(^\text{11}\) is composed of 23 qualitative and quantitative indicators, which combine internal and external factors ranging from a nation’s level of military expenditure to its relations with neighbouring countries and the level of respect for human rights. These indicators are selected by an international panel of experts including academics and leaders of peace institutions.\(^\text{12}\) The Multiple Indicator Cluster Survey (MICS) programme developed by UNICEF assists countries in filling data gaps for monitoring the situation of children and women through statistically sound, internationally comparable estimates of socioeconomic and health indicators.\(^\text{13}\)

A prominent example of a UN effort to develop concrete indicators is the Human Development Report (HDR), based in part upon a wealth of statistical indicators on different aspects of human development collected by the UNDP. As part of its annual Human Development report, the Human Development Index (HDI)\(^\text{14}\) provides a composite index of three dimensions of human development, including (i) life expectancy, (ii) adult literacy and gross enrolment in education and (iii) standard of living as measured by GDP per capita at purchasing power parity. The index is not a comprehensive measure of human development, but it provides a prism for assessing the complex relationships between income and wellbeing. It should also be noted that the HDI also focuses on those indicators for which data is routinely collected and comparable.\(^\text{15}\)

The Millennium Development Goals (MDGs) are the most widely recognised example of an evidence-based initiative to mobilise public opinion and track substantive improvements in social and economic wellbeing across countries. The eight MDGs are designed to (i) eradicate extreme poverty and hunger; (ii) achieve universal primary education; (iii) promote gender equality and empower women; (iv) reduce child mortality; (v) improve maternal health; (vi) combat HIV/Aids, malaria and other diseases; (vii) ensure environmental sustainability; and (viii) develop a global partnership for development. These headline goals are translated into 21 separate targets and 48 clearly defined indicators.

Although objectives such as reducing poverty, ensuring maternal health and promoting education may be associated in one form or another with armed violence prevention and reduction initiatives, none of the eight MDGs, 21 targets or 48 indicators focus specifically on the challenge of insecurity or armed violence. This is problematic, given that the Millennium Declaration, which inspired the Millennium Development goals, has an entire section on peace, security and disarmament in which, alongside their commitment to “spare no effort to free our peoples from the scourge of war, whether within or between States”.\(^\text{16}\) Despite this commitment, most programmes targeting the MDGs focus on socio-economic indicators, and the political challenges posed by conflict, armed violence and insecurity were not taken into account when defining the MDG goals, target and indicators.

\(^\text{10}\) See Malhotra Rajeev and Nicolas Fasel (2006).
\(^\text{11}\) See http://www.visionofhumanity.org/.
\(^\text{12}\) Other initiatives include the State Fragility Index (http://www.systemicpeace.org/), the Failed State Index (http://www.fundforpeace.org/), the Ibrahim Index of African Governance (http://belfercenter.ksg.harvard.edu/publication/18541/strengthening_african_governance.html), and others.
\(^\text{15}\) See, for example, United Nations Development Programme (2009).
In contrast to the HDI, the goals, targets and indicators of the MDGs are monitored by states themselves together with an independent body, the Inter-Agency and Expert Group (IAEG) on MDG Indicators. This group draws on various Departments within the United Nations Secretariat, a number of UN agencies from within the United Nations system and outside, various government agencies and national statisticians, and other organizations concerned with the development of MDG data at the national and international levels including donors and expert advisers. A significant effort is involved in data collection and analysis.\footnote{See the official United Nations site for the MDG indicators (\url{http://millenniumindicators.un.org/}), the MDG Monitor that has been created by UNDP and partners (\url{http://www.mdgmonitor.org/}) or the online atlas of the World Bank that visualizes the MDGs (\url{http://devdata.worldbank.org/atlas-mdg/}).}

**Goals, Targets and Indicators of Armed Violence**

The Millennium Development Goals with their focus on establishing clear targets and indicators for reducing underdevelopment, also often address risk factors often associated with armed violence onset and severity. Although the linkage between armed violence and development is not explicit in the Millennium Development Goals, they offer entry-points for development agencies to consider. The Millennium Development Goal Review Process, starting in 2010, provides an opportunity to consider the reduction of armed violence as an important requisite to meeting the MDGs. It also offers a chance to carefully examine the specific impacts of armed violence in relation to the achievement (or not) of the MDGs. Developing measurable goals on armed violence towards 2015 can further offer an opportunity to integrate security-related themes into the possible follow-up of the MDGs and beyond.

Based on the set of indicators that has been developed for the 2008 Global Burden of Armed Violence report, the Geneva Declaration Secretariat has undertaken some preliminary work on how to define appropriate goals, targets and indicators for armed violence, and on evaluating the relationship between armed violence and the MDGs.\footnote{Geneva Declaration Secretariat (2008).} While the indicators are essential for measuring the scope, scale, intensity, and cost of armed violence worldwide, setting clear and unambiguous benchmarks and targets are crucial to compare the outcomes of specific initiatives across countries, cities and communities. As such, the definition of goals, targets and indicators of armed violence are a prerequisite to link the issue of armed violence to the MDGs and to firmly anchor armed violence reduction and prevention efforts within a wider development context (Table 1). The possible goals, targets and indicators listed below are only “food for thought”; they have not been assessed for their feasibility, nor have they been evaluated against standard criteria for evaluating indicators.\footnote{For example, a recent study of indicators for violence against women makes the point that indicators must be valid, specific, reliable, comparable, non-directional, precise, feasible and programmatically relevant. The latter is not necessarily applicable for global indicators. See Bloom (2008) and \url{http://www.cpc.unc.edu/measure}.}
Table 1: Possible Goals, Targets and Indicators of Armed Violence

<table>
<thead>
<tr>
<th>Goals</th>
<th>Targets</th>
<th>Indicators</th>
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<tbody>
<tr>
<td>1. Reduce the direct burden of conflict and post-conflict armed</td>
<td>Implement effective weapons reduction, post-conflict disarmament, demobilization and</td>
<td>Number of direct conflict deaths/year per 100,000</td>
</tr>
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<td>violence</td>
<td>reintegation (DDR) and armed violence prevention strategies</td>
<td>Percentage of (ex-) combatants in DDR programmes or gang members/at-risk groups in</td>
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<td></td>
<td>Identify and assist other groups associated with fighting forces (non-combatants) through targeted</td>
<td>violence reduction initiatives</td>
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<tr>
<td></td>
<td>assistance programs</td>
<td>Monitoring and evaluation of DDR and armed violence prevention/reduction programmes to assess</td>
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<tr>
<td></td>
<td></td>
<td>success and develop best practices</td>
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<td>2. Reduce the indirect impact of conflict and post-conflict armed</td>
<td>Reduce the number of children involved in and affected by armed conflict and chronic armed</td>
<td>Number of child soldiers/children involved in armed conflict</td>
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<tr>
<td>violence, in particular affecting non-combatants and vulnerable groups</td>
<td>violence</td>
<td>Total indirect conflict deaths/year(s) per 100,000</td>
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<td></td>
<td>Reduce indirect conflict-related deaths by one-third</td>
<td>Displacement and resettlement/return rates</td>
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<tr>
<td>3. Reduce the burden of armed violence in non-conflict settings</td>
<td>Reduce victimization from armed violence</td>
<td>Homicide rate per 100,000, nationally and locally</td>
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<td></td>
<td></td>
<td>Reported victimization rates for crimes against the person</td>
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<td></td>
<td></td>
<td>Reduction in lost product due to violent death.</td>
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<td>4. Reduce the burden of armed violence against girls and women in</td>
<td>Reduce the incidence of gender-based violence and victimization</td>
<td>Gender insecurity index (legal/institutional analysis of equality in law, protection against</td>
</tr>
<tr>
<td>conflict, post-conflict and non-conflict settings</td>
<td>Improve security of women against armed violence</td>
<td>violence, etc.)</td>
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<td></td>
<td></td>
<td>Victimization rates for gender-based violence in conflict and post-conflict setting</td>
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<tr>
<td>5. Foster effective and accountable public security institutions and</td>
<td>Increase the reporting, prosecution and conviction rate for armed violence and crimes against</td>
<td>Reporting rate for armed violence/crimes against persons</td>
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<tr>
<td>address a climate of [judicial] impunity</td>
<td>persons</td>
<td>Probability of conviction</td>
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<td></td>
<td>Improve civilian oversight of security institutions</td>
<td>Levels of victimization</td>
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<td></td>
<td></td>
<td>Level of trust in state security institutions</td>
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<td></td>
<td></td>
<td>Degree of civilian oversight and democratic control of security institutions</td>
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<tr>
<td>6. Reduce specific risk factors and groups in armed violence</td>
<td>Violence prevention programmes directed against risky behaviour among young men</td>
<td>Reduced number of gang/militia/armed group members</td>
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<td>prevention and reduction initiatives</td>
<td>Violence prevention programmes that address socio-economic risk factors</td>
<td>Reduced income inequality</td>
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<td></td>
<td></td>
<td>Reduce unemployment rate among young men</td>
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<tr>
<td>7. Integrate armed violence prevention and reduction programmes into</td>
<td>States affected by armed violence include violence mitigation in their development frameworks</td>
<td>Number of PRSPs including/need to include armed violence reduction and conflict prevention</td>
</tr>
<tr>
<td>development frameworks, as well as into humanitarian relief and crisis</td>
<td>All humanitarian and crisis operations include an armed violence prevention and mitigation</td>
<td>programmes</td>
</tr>
<tr>
<td>management initiatives.</td>
<td>strategy</td>
<td>Percentage of humanitarian relief and crisis operations that include an armed violence prevention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and mitigation strategy</td>
</tr>
</tbody>
</table>
Challenges of gathering and monitoring indicators of armed violence

Gathering and monitoring indicators of armed violence are institutionally and practically challenging tasks. National surveillance and data-gathering capacity are weak in many parts of the world. Many governments have yet to put in place common practices for collecting data and using this information towards improved violence prevention. Even when data are available, the quality of the information may be inadequate for comparative analysis, for measuring progress, and for identifying strategies for prevention of armed violence. Likewise, generating sufficient political will to convert evidence to action is often lacking.

Another challenge is that data on violence generally come from a variety of organizations that operate independently of one another. In many cases these organisations lack the common definitions or understandings, and/or institutional arrangements to effectively coordinate activities. For example, notwithstanding important efforts to strengthen the capacities for public institutions to share data in many countries affected by armed violence, information prepared by police investigators and forensics specialists is often not adequately connected to data collected by medical specialists. Because of these and other challenges, governments and local officials often do not have sufficient information about the particular risk factors of armed violence that may be affecting their communities. In such circumstances, it is difficult to design evidence-based programmes and policies for armed violence reduction and prevention.20

At the very least, obtaining quality data requires investment in solid survey and surveillance tools at local, national and international levels. The Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) is involved in developing guidelines on how to prevent and reduce armed violence. It emphasizes that it is essential to develop indicators in partnership with local stakeholders and that they must be context-specific and project-specific indicators.21 Likewise, the WHO has developed a host of manuals and best practice guides to assist public health authorities to enhance their data collection capacities with respect to injury surveillance.22

Owing to these and other efforts, governments and civil society actors are increasingly aware of the importance of collecting solid empirical data on patterns and trends of armed violence.23 As noted above, indicators of armed violence can be gathered and monitored by governmental institutions or independently. In some middle and upper-income countries, crime and health observatories collect a wide variety of data, from intentional injury to theft, assault and homicide.24

Expert Workshop on Indicators of Armed Violence

In order to guide critical reflection on measuring armed violence, the UNDP – in collaboration with the Geneva Declaration Secretariat – is hosting an expert workshop on indicators in Geneva on 14-15 December 2009. The workshop brings together leading experts in the fields of public health, social policy, economics and criminology in order to review

23 See, for example, Diego E. Zavala and Jennifer Hazen (2009).
24 A background report on crime and health observatories will be released by the Geneva Declaration Secretariat in 2010.
indicators related to armed violence. One goal of the workshop is to review a preliminary set of goals, targets and indicators on armed violence (see Table 1, Page 6) and reach consensus on the steps required to produce a rigorous and feasible set of goals, targets and indicators that can be used over time. Another is to reflect on the needs, challenges and opportunities for developing a methodologically robust system to track armed violence world-wide, and to link armed violence metrics to the goals, targets and indicators elaborated as part of the MDGs.

The first day of the workshop is dedicated to setting the scene and to discussing the core indicators that were highlighted in the 2008 Global Burden of Armed Violence report and other publications:

(i) Armed conflict and the incidence of direct and indirect conflict deaths;
(ii) Criminal violence and homicide rates and clearance rates;
(iii) Indirect indicators of armed violence such as gender-based and sexual violence
(iv) The consequences of armed violence on development, including loss of productivity and life expectancy, delivery of services and access to justice

The second day of the workshop will be devoted to examining key themes in small working groups. A premium will be placed on thinking out of the box and reviewing possibilities (and obstacles) for developing and refining local-level, national and global indicators.

The entire discussion over the two days will be organized around the following questions:

• What are the key indicators to measure the incidence and scale of armed violence? What key indicators are missing?
• What are the most appropriate proxy indicators to capture social and economic costs?
• To what extent are real and proxy indicators of armed violence geographically, temporally and thematically comparable?
• What are the challenges of gathering snapshot and longitudinal data on armed violence?
• What are the obstacles to comparative assessment?
• What are the most appropriate data harvesting systems, including their cost-effectiveness and scalability?
• What are the appropriate monitoring mechanisms for the indicators of armed violence?
• What are the best benchmarks, means and thresholds against which indicators can be assessed?
• Could the indicators of armed violence be tested as independent or mediating variables against key MDG goals?

On the basis of the expert workshop, UNDP and the Geneva Declaration Secretariat at the Small Arms Survey will develop a short paper for widespread distribution. The paper will include a section on metrics and indicators with a focus on setting benchmarks, thresholds and targets against which these variables can be evaluated. The paper will also include a section on appropriate data harvesting systems, including methods, cost-effectiveness and scalability. The paper will be circulated to workshop participants and a critical review panel. It is expected that the paper will form the basis for a more comprehensive assessment of the influence of armed violence on the achievement of the MDGs in 2010. In this latter exercise, key metrics will be carefully tested against MDG progress (in 1990, 1995, 2000, 2005) in order to assess relationships and changes over time. A key objective will be to establish how
and to what extent MDG attainment is affected (or not) by armed violence. The final paper will contribute to ongoing multilateral activities associated with the MDG review processes starting in 2010.

**Additional reading**


Inter-American Development Bank (1999), Technical Note 2 – How is Violence measured?. Washington DC: IADB.


United Nations Office on Drugs and Crime (2004), Intentional homicide, rate per 100,000 population. Vienna: UNODC.

United Nations Office on Drugs and Crime (2004), Metadata and Methodological Text for Intentional homicide, rate per 100,000 population, Vienna: UNODC.


United Nations Secretary-General (2009), Promoting Development through the Reduction and Prevention of Armed Violence (A/64/228).

Bank.


