



Department  
for International  
Development



# Tools for measurement, monitoring and evaluation

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Sources of conflict, crime and  
violence data

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# Practice Products for the CCVRI

## Improving Measurement in DFID Crime, Conflict & Violence Programming

This document is one of a series of Practice Products developed under the ***Conflict, Crime, and Violence Results Initiative (CCVRI)***. The full set of products is intended to support DFID country offices and their partners to develop better measures of programme results in difficult conflict and fragile environments.

DFID recognises the need to focus on the **results** of its work in developing countries. To this end, DFID strives to account better for our efforts on behalf of UK taxpayers, offering clarity regarding the value and impact of our work. The Results Initiative operates under the assumption that we will achieve our development objectives with our national partners more effectively if we generate—collectively—a clear picture of the progress being made.

Within DFID, the Conflict Humanitarian and Security Department has established a partnership with a consortium of leading organisations in the fields of conflict, security and justice to develop more effective approaches to the use of data in the design, implementation and evaluation of programmes that contribute to reducing conflict, crime and violence. In addition to producing these Practice Products, the consortium has established a Help Desk function to provide direct and customized support to country offices as they endeavour to improve measurement of results in local contexts.

The Help Desk can be accessed by contacting [helpdesk@smallarmssurvey.org](mailto:helpdesk@smallarmssurvey.org).

***The views expressed in this Practice Product are the sole opinions of the authors and do not necessarily reflect the opinions of all consortia partners. This Practice Product does not reflect an official DFID position.***

### Members of the consortium

# Document Summary

**Title:**

Conflict, Crime and Violence and Development: A compendium of tools for measurement, monitoring and evaluation. SOURCES OF CONFLICT, CRIME AND VIOLENCE DATA

**Purpose and intended use of this document:**

This document has a focus on sources of conflict, crime and violence data. In particular, the document highlights what types of potential sources of data exist, what the different data measures and what their principal strengths and weaknesses are. It provides a series of case studies to illustrate the data sources' usefulness for the design, implementation and monitoring of programmes that contribute to reducing conflict, crime and violence. This tool will help users to assess in a clear and simple manner the type of data that is available, what this data measures, and what risks and pitfalls may be involved with using such data.

**Key questions this document addresses:**

- What are the main types of data sources on conflict, crime and violence
- What do different sources measure, and with what implications
- What are the main technical considerations for conflict, crime and violence data
- What are the main strengths and weaknesses of conflict, crime and violence data, and how should these be addressed

**Key messages/essential “take aways”:**

- Sources on conflict, crime and violence data vary in terms of what is recorded, the quality of data production, and in the methodologies applied.
- Different contexts lead to different data collection needs and capacities (for example, data collection in conflict settings often has humanitarian goals or addresses human rights issues, crime data is often recorded for crime reduction and prevention).
- A multiple sources approach is usually considered as the best way to go. Comparing and including the largest possible amount of data sources available will help take key decisions for diagnosis, data needs, and will inform programming, monitoring, and evaluation practices most comprehensively.

**Intended audience of this document (including assumed skill level):**

DFID Country Officers, who need to collect, assess, and use conflict, crime and violence data for programmatic purposes. No prior knowledge or experience with statistics or data collection is required.

**Key topics/tags:**

CONFLICT, CRIME AND VIOLENCE DATA, DATA SOURCES, DATA STRENGTHS AND WEAKNESSES

**Authors and their organizations:**

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**Cross-references to other documents in the series:**

Conflict, Crime and Violence and Development: A compendium of tools for measurement, monitoring and evaluation. IN-DEPTH FOCUS ON SURVEYS

Conflict, Crime and Violence and Development: A compendium of tools for measurement, monitoring and evaluation. IN-DEPTH FOCUS ON DATA USES

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## Introduction

This document has a focus on sources for conflict, crime and violence (CCV) data. It is aimed at assisting programme staff and practitioners to identify the relevant data and information on conflict, crime and violence. The document will provide guidance and practical information for assessing which data is useful for design, monitoring and implementation purposes. Furthermore, the document will assist the selection of the relevant indicators for populating logical frameworks (or logframes) in the security and justice area. Finally, this tool will also provide basic insights into the strengths and limits of different data sets, their overall availability, and feasibility.

Generating data in situations of insecurity, violent crime or open conflict is a challenging enterprise. Beyond the physical risks and the difficult access to the sources of the data, there are risks of manipulation by those entrusted with the production of such data<sup>1</sup>. Another aspect is the fact that CCV data typically describe negative events such as, for example, people killed or injured by armed conflict or crime. ‘Progress’, for most CCV indicators, is represented by a reduction rather than an increase in absolute values or rates. However, other CCV data, such as safety perceptions, describe positive events. Progress in these indicators will be represented by increases in values – such as percentage of persons that trust the police, for example. These characteristics make CCV data very difficult to use for monitoring trends. Still, data on conflict, crime and violence are a necessary element for monitoring trends in the phenomena under scrutiny as well as progress in the interventions developed to address the problems. The fact that data on conflict, crime and violence (such as criminal justice as well as public health data on interpersonal violence) are virtually collected in all countries is a testimony to the increased importance given to this type of data at the international and national level and of the pressing need for improving their coverage and quality.

This document represents the first part of a “Toolkit” overviewing CCV data. A second tool provides insights and guidance on how to assess data usefulness and provides basic tips on how to use conflict, crime and violence data for programmatic purposes (see MAKING CONFLICT, CRIME AND VIOLENCE DATA USEFUL AND USABLE).

The first section of this document will introduce **key primary sources** of CCV data and then elaborate their content and relevance. This is followed by reflections on **state-of-the-art administrative data** from the criminal justice and public health sectors, as well as survey-based approaches to data collection. The discussion then moves to the **strengths and weaknesses** of the main datasets. It will also indicate **data gaps and areas for possible improvement** (e.g. possible investments in training and equipment which would enhance the quantity and quality of information collected).

There is abundant literature on CCV data, including a stream of DFID-tailored products in this area (see for example Hext, 2012 and McLean Hilker, Kangas, Vanboegaerde, 2011). Different studies may take different approaches. This document is based on the experience of the Small Arms Survey in carrying out comprehensive assessments in conflict and post conflict areas, based on existing data (such as official statistics) as well as data specifically collected at the local level.

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<sup>1</sup> For example, according to a NYPD whistleblower’s report, some of the crime decline observed in New York over the past few years was due to data manipulation (see Francescani, 2012).

## Data collection and sources for conflict, crime, and violence (CCV)

CCV data is collected by a number of local, national, and international actors. In many cases, data is collected as a part of the effort of states to track and analyse trends and patterns in conflict, crime, and violence. In cases where state capacity or willingness is weak or absent, academic facilities, non-governmental organizations, or civil society may record events for the same goals. This section describes briefly what the main types of CCV data collection efforts are, and what their specificities as well as main strengths and weaknesses are. References related to different data sets can be found in Annex 1 of this document.

### Definitions

**Violence** is defined by the World Health Organization as ‘the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation’ (WHO, 2002, p. 5).

A sub-set of violence that is frequently used in research, policy, and practice is **armed violence**, which refers to ‘the intentional use of illegitimate force (actual or threatened) with arms or explosives, against a person, group, community, or state, that undermines people-centred security and/or sustainable development’ (Geneva Declaration Secretariat, 2008). In practice, looking at *armed* violence implies a focus on the ‘instrument’ of violence used, or the mechanism that resulted in physical harm and injury – in particular the use of Small Arms and Light Weapons (SALW) during acts of violence.<sup>2</sup>

**Conflict** is an important element in human interaction, and does not necessarily involve the threatened or actual use of physical violence. In line with the topic of this manual, however, we focus on ‘violent’ or ‘armed conflict’ in particular. Conflict involves by definition at least two parties, which can be state or non-state organized actors. The conflict may arise around an *incompatibility* over structural (political system, economy, territory) or non-structural (group-identity, minority rights, etc.) issues. In all cases, conflict may arise and violence erupt to maintain or change a given *status quo*. In sum, conflicts arise between organized parties (state or non-state) with different objectives (maintain or change the *status quo*) around particular issues (structural or non-structural) and involve violent means.<sup>3</sup>

**Crime** is usually understood as an act that is illicit or unlawful and contravenes a criminal code. Most criminal codes distinguish between violent and non-violent crime. Of particular interest in a ‘conflict, crime and violence’ perspective are crimes that involve the threat and actual use of physical harm, such as intentional homicide, armed robbery, assault, etc.

### Typology of CCV sources

A first distinction can be made between **primary sources** (entities directly involved in the collection or recording of crime / violence events) and **secondary sources** (entities that compile data provided by different sources). Primary sources would typically be

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<sup>2</sup> OECD. 2009. *Armed Violence Reduction: Enabling development*. Paris: OECD.

<sup>3</sup> Cheldelin, Sandra, Daniel Druckman, and Larissa Fast. 2003. *Conflict*. London: Continuum.

administrative data by the national police or the national health ministry of a country, as well as survey data collected by any relevant institution, whereas secondary sources may be observatories at the local or national level, or academic / international bodies that compile cross-national databases from one or more primary source(s), for example the United Nations Office on Drugs and Crime (UNODC), the World Health Organization (WHO) or the Geneva Declaration Secretariat's *Global Burden of Armed Violence* (GBAV).

### **Box 1. Why homicide may be a more solid indicator than others**

In the criminal justice system, the more serious the offence, the more likely it is that there will be a track of it in official records. Of course this may not be the case when killing is not considered an offence (for example, extrajudicial killings, honour killings, etc.). However, the quality of homicide data is definitely superior to any other criminal justice statistics referring to other events (such as for example, assaults, kidnappings or robberies), which may be subject to different interpretations / definitions by different parts of the criminal justice system, thus unevenly /irregularly recorded. Furthermore, killings – especially those caused by firearms or other weapons – are likely to be identified by public health systems, identifying the cause of death. It is much more difficult to estimate the extent of non-lethal injuries: hospitals are ill-equipped to keep adequate records, and many injured people do not seek hospital assistance (sometimes to avoid revealing the circumstances of violence).

For these reasons, most of the examples in this document will refer to homicide data as a proxy for the measurement of violence.

A second important distinction for CCV sources is between criminal justice and public health sources:

- The **criminal justice** sector gathers primary data on events categorized as a *crime* in the respective legal system (for example homicide, defined as an unlawful killing), at different points of the investigation and trial. In the case of a homicide, the recording can take place as the body of a person is found (police data), as a person's body is autopsied (forensic data), or as the criminal prosecution ends in a judgment (prosecutors' office or ministry of justice).
- The **public health** sector collects primary data on violent deaths as these occur in hospitals or health care facilities (intensive care units, emergency rooms, and ward admission records or discharge summaries) or as deaths are recorded in national vital registration statistics, generally under the supervision of the Ministry of Health (Gilgen and Tracey, 2011, p 57).

The central difference between these two systems of data recollection and data production (this is also valid for the conflict data sources, see below) is their focus on *events* or the focus on *victims* (the unit of count). Some sources focus on violent **events** (e.g. the police records numbers of crimes), whereas other sources focus on **victims** (e.g. emergency room services record injuries and deaths due to violence). This distinction however does not cover all criminal justice and/public health data: forensic institutes for example record number of victims of violence that have been examined by their facilities, and they belong to the criminal justice system. The record of events versus victims has important implications. Table 1 below shows data provided by the United Nations Office on Drugs and Crime's Crime Trends Survey (UNODC CTS). Many states report different numbers of events than number

of victims. This is due to effects of, for example, one event involving several victims and to different counting rules for statistical purposes (e.g. one person kills several others in one event and mass shootings are a good example to illustrate these cases).

**Table 1 - Counting rules in selected number of countries**

Total number of countries: 31	Nr. of countries
Number of intentional homicides <b>equals</b> number of persons killed	11 countries
Number of intentional homicides <b>lower</b> than number of persons killed	14 countries
Number of intentional homicides <b>higher</b> than number of persons killed	6 countries

Source: UNODC, 11th UN-CTS, 2008 (unpublished)

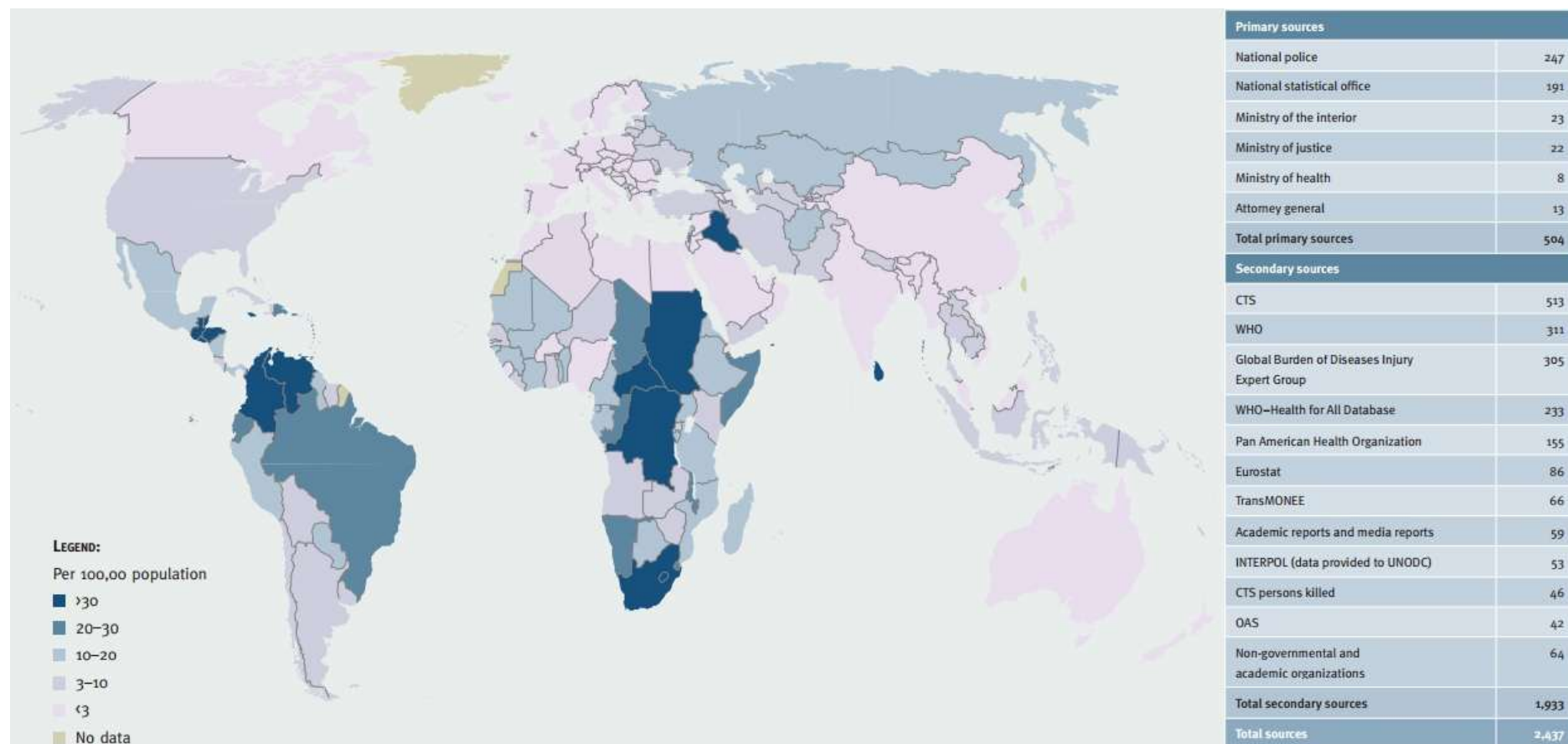
The availability and quality of data varies widely across the globe. In the *Global Burden of Armed Violence 2011* report's methodological annexe, the Geneva Declaration Secretariat assessed the types of sources and their quality in a cross-national comparison. Map 1 below shows the results of this overview (only for homicide data).

### **Box 2. Example of homicide data production in El Salvador**

The Institute of Forensic Medicine (*Instituto de Medicina Lega, IML*) in San Salvador, for example, indicates that in a homicide case, a first step involves the scientific investigation of the crime scene. Once the elements at the crime scene are secured and registered, the body of the victim is transferred to the IML, where the cause of death is identified, and further evidence in and on the body of the victim (e.g. bullets) secured. This evidence is processed by the Laboratory for the Scientific Investigation of Crime (*Laboratorio de Investigación Científica del Delito*) that includes a ballistic examination of the bullets and cartridges recovered at a crime scene, among other relevant evidence. In the Salvadoran case, homicide statistics are produced by the IML and include information on whether a firearm or another instrument was used to commit the homicide (Gilgen, 2012, p. 10).



**Map 1. Source availability and quality for intentional homicide, period 2004-2009.**



Source: Geneva declaration Secretariat, 2011 (for a full discussion of this map, see the methodological annexe at [http://www.genevadeclaration.org/fileadmin/docs/GBAV2/GBAV2011\\_Methodological\\_Annexe.pdf](http://www.genevadeclaration.org/fileadmin/docs/GBAV2/GBAV2011_Methodological_Annexe.pdf))

## ***'Other' sources for CCV data***

Data stemming from **household surveys** is often used in settings with little to no data availability. However, surveys have also been used to complement administrative statistics for many years in 'data rich' environments (National Crime Victimization Survey in the US, for example). Nevertheless, this methodology is particularly suitable for generating information in contexts with weak institutional settings, as surveys can be organized quickly and do not require permanent infrastructure and teams of interviewers can be trained and deployed virtually in any setting.<sup>4</sup> Note that surveys also provide important insights into the *dark figure* of conflict, crime and violence. The 'dark figure' is usually referred to as the 'unknown' portion of crime and violence events or victims (e.g. victims that do not report crimes or violence because of lack of trust in police or because the reporting of a crime is difficult or even dangerous for the victim – such as in the case of sexual assaults or threats by organized crime).

Typically, survey data would record victimization events – and provide an important complement to official data as many crimes and violent events go unrecorded, especially in the presence of weak institutions or populations' distrust in the police. Survey questionnaires can be designed to gather a detailed description of the circumstances of the event (e.g. sexual assault), the relationship between victim and offender (family, friend, intimate partner or unknown), weapons used (firearms, bladed weapons), if injuries (and their severity) were sustained during the event, and what the attitudes towards security providers are, including the propensity to reporting crimes and violence to authorities.

**Model estimations**, such as those produced by the WHO under the Disease and Injury Country Estimates Project, aim at compensating for data gaps in existing official data sets and provide country-level estimates of lethal events linked to conflict, legal interventions (deaths occurring during police intervention) and criminal violence. Despite many methodological shortcomings regarding estimates of lethal victimization (see section below), both survey data and model estimates are sometimes the only available source for data on CCV.

A secondary source for CCV data can be found in **observatories**, or 'armed violence monitoring systems' –AVMS. The monitoring activities of such observatories are defined by the disciplinary approach of each entity (criminal justice, public health, conflict monitoring). Throughout the spectrum of activities, however, the core of the monitoring efforts is the burden of crime/violence/conflict in terms of people injured and/or killed in different events.

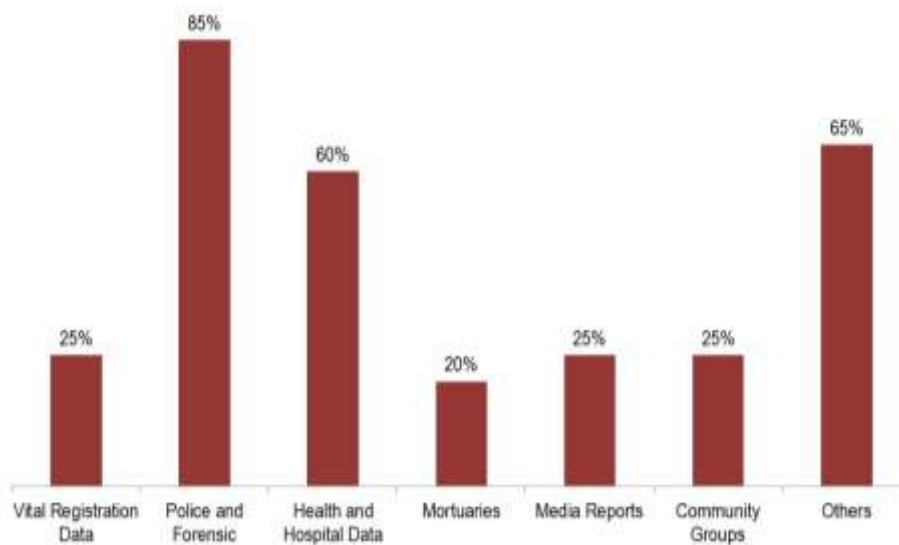
Typically, AVMS collect data on violent deaths and other different violent events. Observatories' data can often complement data stemming from the sources mentioned above. AVMS also play an important role in collecting data in conflict-affected environments, where little to no other actors have access to the field. This is the case for example in Somalia with the *Observatory of Conflict and Violence Prevention*.

AVMS' have been defined as an 'intersectoral system' that gathers data, systematically analyses this data, and disseminates this data to inform policy and programming (Gilgen and Tracey, 2011, p. 10). A survey of 23 AVMS in 16 countries/locations shows that all of them collect data from at least one governmental source (see Figure 1), with police and forensic services being the most common sources (Gilgen and Tracey, 2010, p. 27).

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<sup>4</sup> See also IN-DEPTH FOCUS ON SURVEYS for a thorough discussion on surveys as data collection tools.

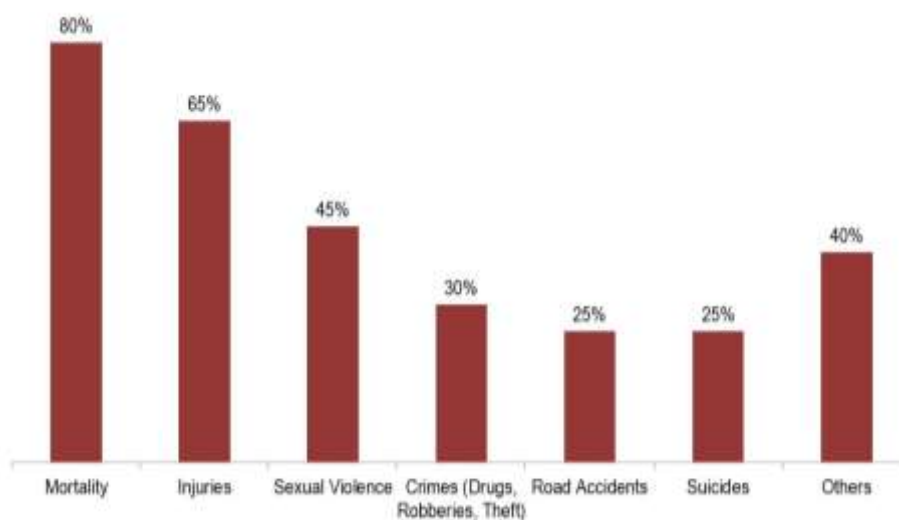
**Figure 1 - Data sources used by AVMs reviewed (N=61)**



Source: Reproduced from Gilgen and Tracey, 2011, p. 27.

The same study found that statistics on mortality are those most frequently collected as they are more generally available (Gilgen and Tracey 2011, p.28 - see Figure 2). Data on (non-lethal) injuries, although crucial for understanding and preventing armed violence, are not as readily available.

**Figure 2 - Percentage of armed violence monitoring systems collecting data on different indicators (multiple response)**



Source: Reproduced from Gilgen and Tracey, 2011, p. 28.

## ***Focus on Conflict data sources***

Data on **conflict-related violence** and deaths can be found principally either through other national / local sources – such as human rights organizations that keep the count on violent events or deaths, or international actors – such as academic institutes that keep records on the number of events and persons killed. National/local sources include organizations such as Iraq Body Count (IBC) and the Syrian Observatory for Human Rights) – and they are often run as networks with local and staff and international coordinators for safety and censorship reasons.

A common approach for conflicts is to categorize them according to their *severity* (intensity of the violence), the *parties to the conflict*, and the *motivations or causes* that are behind the violence. In this sense, both a threshold in terms of numbers of victims associated to the fighting, as well as an analysis of the factions involved in the fighting is usually applied to define a situation as a conflict. Different disciplines and research or policy organizations apply different methodologies, thus the typology of conflicts varies across organizations.

This in turn has important consequences on how conflict deaths are categorized. If only violent conflicts involving some state actors are taken into account, violence between non-state groups is not recorded (e.g. electoral violence in Kenya). On the other hand, if conflict violence only focuses on *two or more* groups in conflict (e.g. dyads), then one-sided violence against civilians is not accounted for (e.g. Egyptian revolution). If only battle deaths are counted, then the count of civilian deaths in the cross fire or during massacres are ignored. In sum, for providing a comprehensive count of victims due to so-called conflict violence an approach should be chosen that renders justice to all victims of all forms of violence by all groups involved in the fighting.

One such approach is used by the Oxford Research Group and its *Every Casualty Counts* initiative. In particular, casualty recording supports ‘the rights and recognition of victims and their families, fuller knowledge of the trends and consequences of conflict’ and ‘processes to uphold the law’ (ORG, 2012).

Understanding what each particular source of conflict data counts, is central for approaching CCV data in a comprehensive manner in conflict and violence-affected settings. A prominent example of a data-collection effort in a conflict setting can be found in the Iraq Body Count initiative (IBC). IBC records civilian casualties since 2003. Based on press cross-checked press reports, IBC’s database records a detailed account of the events leading to deaths. But civilian deaths need to be complemented with armed forces deaths that can be found in the Casualties database. By combining these two databases, an estimate of the human cost of violence in Iraq can be produced.

Another body of sources – such as cross-national, academic efforts (e.g. the Uppsala Conflict Database Project or UCDP) are a different source of conflict events and casualties data. These sources record events based on press reports in different conflict-affected settings. The UCDP database records principally conflict events and so-called battle-related deaths. Recently, ‘one-sided’ killings and non-state conflict databases have been added as the characteristics of war evolved from ‘classical’ inter-state wars toward more irregular types of warfare and violence.

In short, this means that when using databases such as UCDP, it remains important to explore ***other*** sources for the region, country, or location to be researched. As different sources apply

different methodologies and may provide different – and sometimes more accurate – accounts of victims of conflict and violence, all options should be explored before deciding which sources to use. In some cases – such as Afghanistan for example – an approach that combines sources with different scopes is a safe one. By using United Nations Assistance Mission in Afghanistan (UNAMA) data on civilian casualties, iCasualties data on Coalition soldiers deaths, and reports on Afghan soldiers' deaths published by the Congressional Research Services (CRS) in the US, a prudent estimate on the actual trends and numbers of violent deaths linked to conflict in Afghanistan can be obtained.<sup>5</sup>

### **Section Summary:**

Data on conflict, crime and violence may originate from administrative sources, thus they may be developed on the basis of data available as part of regular collection [official statistics] in any country in the world. Typically, government data are likely to be collected:

- as part of law enforcement and criminal justice operations,
- by hospitals as admission records,
- as part of vital statistics in the form of mortality data,
- in the form of population-based surveys.

Data may also originate in non-governmental sources, such as academic institutes, NGOs, and CSOs. Non-governmental sources would be likely to collect:

- data on human rights violations such as massacres or extra-judicial killings,
- surveys on victimization and safety perceptions,
- surveillance of events and casualties in conflict-affected settings,
- surveillance of sources by armed violence monitoring systems (AVMS).

Understanding of what sources of data are available and what each counts is the first step in developing the evidence base for any intervention in the CCV area. A careful approach to the CCV data therefore entails a thorough examination of the types of sources available, what they record, and for whom. The next section provides insights into some of the main strengths and weaknesses of the data sources discussed here.

*See the Annex for examples of how to find the data and lists of data sources.*

## **Data strengths and weaknesses**

Generating data in situations of insecurity, violent crime or open conflict is a challenging enterprise. Beyond the physical risks and the difficult access to the sources of the data, there are risks of manipulation by those entrusted with the production of such data. Another challenge is the fact that CCV data typically describe negative events such as, for example, people killed or injured by armed conflict or crime. 'Progress', for most CCV indicators, is represented by a reduction rather than an increase in absolute values or rates.

Other CCV data, such as safety perceptions, describe positive events. Progress in these indicators will be represented by increases in values – such as percentage of persons that trust the police, for example. These characteristics make CCV data very difficult to use for

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<sup>5</sup> See CRS report at [www.fas.org/sgp/crs/natsec/R41084.pdf](http://www.fas.org/sgp/crs/natsec/R41084.pdf), iCasualties reports at <http://icasualties.org/>, and UNAMA data and reports on civilian casualties at <http://unama.unmissions.org/Default.aspx?tabid=12254&ctl=Details&mid=15756&ItemID=36445&language=en-US>

monitoring trends. Still, data on conflict, crime and violence are a necessary element for monitoring trends in the phenomena under scrutiny as well as progress in the interventions developed to address the problems. The fact that data on conflict, crime and violence (such as criminal justice as well as public health data on interpersonal violence) are virtually collected in all countries is a testimony to the increased importance given to this type of data at the international and national level and of the pressing need for improving their coverage and quality.

Thus, there are a number of technical aspects that are important when dealing with CCV data. This section briefly addresses some ‘technical’ aspects that need to be considered when dealing with CCV sources, and introduces a short overview of each data source’s main strengths and weaknesses.

### *Some preliminary considerations*

There are a series of technical considerations that need to be taken into account when dealing with CCV data sources. When carefully taken into account, these aspects of CCV data sources should help with making decisions about the scope, quality, and the possible use of different types of sources (alone or combined) to provide the information needed for programming, monitoring and evaluation purposes.

First, it is important to understand how crimes are recorded for statistical purposes in the **criminal justice system**– especially as they include ‘legal’ definitions. Thus, when approaching crime statistics, the following technical aspects need to be considered:

- **Unit of count:** each component of the system records information on the basis of its own activities (Police: incidents, charges, suspects, victims and persons charged; Courts: cases, charges, convictions, sentences; Prisons: offenders and inmates);
- **Principal offence rule:** depending on the system, cases of multiple offences committed by a single offender may be recorded differently. For example, the principle offence rule implies that only the most serious offence (the one with the longest length of sentence according to the penal code) is recorded.
- **Moment of inclusion of incidents into statistics:** the moment crime events are translated into statistics may differ from country to country, depending on the position and the level of autonomy of police forces. Data can be included in crime statistics when the offence is reported to the police (input statistics), after the report, to the police, but before investigation (intermediate statistics) or, finally, after investigation (output statistics). The differences in the moment of inclusion in crime statistics have an impact on the amount and type of information provided (e.g. input statistics would include events at the moment they are announced to the police, whereas output statistics would be more accurate on classifying crime types).

These technical aspects are relevant because they impact on the type of information provided by crime statistics. This is even more crucial when statistics of more than one country are considered for comparison. Numbers under same or similar labels may represent very different contents and interpretation should be weighted by relevant background information on the data (metadata).



Second, the recording of data on injuries and deaths from the **public health sector** also includes a series of considerations to be taken into account:

- Health statistics are not subject to legal definitions so an injury or a death is recorded as such and therefore this data can be easier to compare across different contexts.
- Health data provides information on injuries, allowing for a better understanding of the impact of armed violence in terms of both personal safety and societal costs.
- However, information on intentionality and the circumstances of the event that led to injury or death are not usually recorded. Therefore, important information on circumstances and underlying motives that led to victimization remain mainly unknown. On the other hand, data on the victim will generally include information on gender, age, degree of injury and mechanisms that led to the injury (e.g. firearms discharge, blunt object, poisoning, etc.).

### ***Unpacking the main data weaknesses***

The main weaknesses of CCV-related data can be found in the **quality of reporting**. Two commonly cited problems are: *underreporting* and *lack of systematic data capture*. Depending on which type of data is used, one or the other scenario needs to be taken into consideration.

#### **Box 4. Examples of obstacles to efficient data collection in Africa**

- Scattered information produced by a variety of different sources
- Difficulty of having more than one source available to reconcile and verify the data
- Irregular frequency of data collection
- Lack of feedback given to communities in which surveys are carried out
- Poor follow up given to recommendations
- Scarce sharing and dissemination of information
- Lack of training, infrastructures, equipment and logistics.

Source: UNODC-UNECA. Report of the Joint UNODC-UNECA Workshop on Crime Statistics. Addis-Ababa, 9-12 December 2008, p.6. <http://www.unodc.org/unodc/en/data-and-analysis/Data-for-Africa-workshop.html>

### ***Non-systematic methods of capturing health data***

In theory, hospital records should be among the most reliable sources of information on violent events leading to injury and death. In practice, however, particularly in countries with limited financial resources and in those affected by acute violence, health facilities rarely systematically capture the causes of injury and deaths. Rather, the priority is placed on the treatment of patients. Further, in countries with rudimentary public health surveillance systems, many deaths might not be recorded as ‘assault’, but rather as ‘events of undetermined intent’ which may or may not include intentional homicides. The latter category covers all deaths for which ‘available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm and assault’ (WHO, n.d.a). According to researchers, in-depth analysis of the ‘undetermined’ cases would reveal a large portion of violent killings (Bhalla et al., 2012).

## Under-reporting

While often more easily available, criminal justice data is significantly more vulnerable to undercounting than public health data. Criminal justice statistics on intentional homicides frequently capture only events that are considered unlawful. For example, it is often stated that **homicide** is the most ‘solid’ or useful proxy to approach levels and patterns of violence in a country or location. The seriousness of the act suggests mandatory recording by both the medical and the criminal justice systems. Still, underreporting of violent deaths may occur. Some of the **main reasons for underreporting** include the following:

- In the public health system, to establish violent death it is necessary that **cause of death is recorded**. It may require a pathologist to determine it, and pathologists may simply not be available in remote areas. In the best case, data is integrated into a national vital registration system that codes the causes of deaths according to the International Classification of Disease (ICD), currently in its tenth revision (WHO, n.d.a).
- **Vital registration data are not complete**, so recording of births and deaths is inaccurate in many countries. For example, in some African countries the majority of children under 5 do not have a birth registration certificate (see Table 1).

**Table 2 - Percentage of children under 5 whose births were registered (average urban and rural rates)**

Country	%
Somalia	4.5
Ethiopia	18.0
Zambia	21.0
Uganda	22.5
Angola	31.5
Lesotho	32.5
Swaziland	34.0
Mozambique	35.0
Tanzania (United Republic of)	35.0

Source: elaboration from UNICEF (2010) Progress for children and UNICEF (2011) The state of the world’s children.

- In the law enforcement system, data is often more easily available, but significantly more vulnerable to undercounting than public health data.
- For the criminal justice system, a case of assault may be **reclassified** as a homicide if the victim dies up to one year after sustaining injury. So, if an incident is recorded as an assault, it requires the diligence of updating the record, and most probably the presence of a suspect, to reclassify a case of assault into a homicide. The same applies for public health, where an injury is considered fatal when the victim / patient dies as a result of the incident either immediately or after treatment.<sup>6</sup> So, the proper recording of the fatal outcome as connected to the violent injury requires diligence as well (Alvazzi del Frate, 2012).
- On the other hand, if **court data are used instead of police data**, they will capture the final sentence, which may include for example mitigating circumstances reducing a

<sup>6</sup> According to ICD-10, if the patient dies within 30 days from the incident, the case should be classified as fatal.



homicide to manslaughter. As a rule, the accuracy of measurement of the frequency of violent phenomena will be higher if the recording is closer to the time of the events.

- Yet not all countries share categories of what is lawful. Indeed, **legal definitions** of homicide vary across countries and may or may not include assault leading to death, euthanasia, infanticide, or assisted suicide. See Table 3 below for an example of different definitions in a sample of 42 European countries/territories

**Table 3 – Standard definition of intentional killing of a person**

Intentional killing of a person	Standard definition	Exceptions
Assault leading to death	Included	13 countries
Euthanasia	Included	8 countries
Infanticide	Included	5 countries
Attempted homicide	Included	2 countries
Assistance with suicide	Excluded	7 countries

Source: Aebi et al, 2010 (pp. 349-50)

- Furthermore, different parts of the criminal justice system may capture different numbers. See below some examples of crime and criminal justice administrative data and relevant counting units.

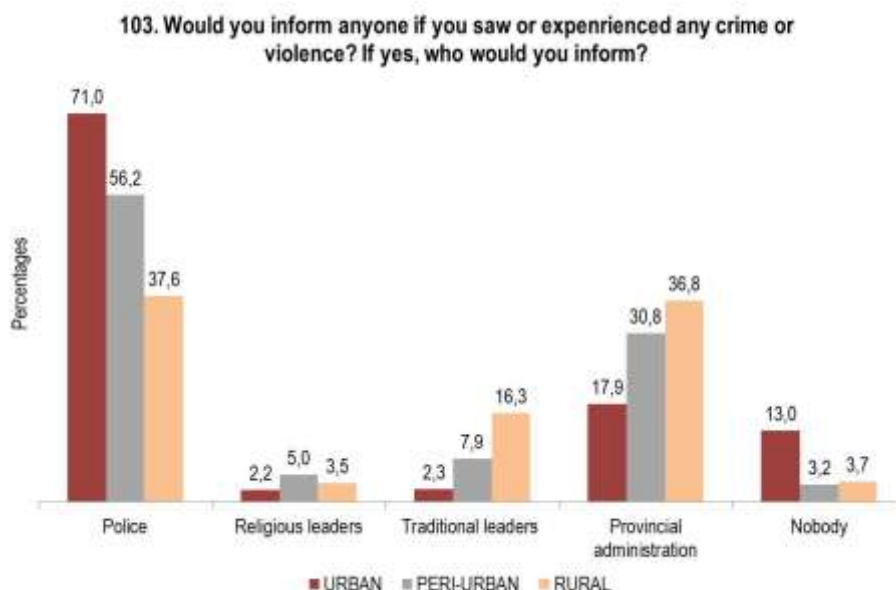
**Table 4 - Examples of crime/ criminal justice data and their relevant counting units**

Definition	Units
Number of crimes recorded	Incidents
Number of persons arrested	Persons
Number of persons prosecuted	Persons
Number of persons convicted	Persons
Number of persons incarcerated	Persons
Number of charges filed by the police	Files
Number of persons charged	Persons
Number of persons appearing in the court	Persons
Number of trials	Trials
Number of admission to correctional facilities	Persons

Source: Small Arms Survey 2012 (unpublished)

- Ultimately, the precision and reliability of criminal justice data—including homicide—may depend on the **willingness of people to report** to the police or other authorities. If citizens do not trust the authorities, they are unlikely to report events they may have experienced or witnessed. Sex, age and location of people may all influence such likelihood. Figure 3 provides an example based on Kenya survey results:

**Figure 3 - Percentage of respondents who would inform different security providers in case of crime or violence, by type of setting**



Source: Small Arms Survey, 2012

- Apart from homicides, many other serious crimes (for example, kidnapping, robbery) may be captured by statistical systems. This may not be the case with **offences of a lesser serious nature**, which may be classified in different ways by different systems (for example, burglary) and their counting may reflect wide variations. There may be differences between a crime in the law and what victims consider a crime. A *crime* is a behaviour so defined by legislation. Therefore, it is both the breaking of a law and the enforcement of that law that make the act a *crime*. Administrative statistics reflect the country's own justice system and are based on the country's own definition of crimes. Population-based surveys are more effective than administrative data to capture conventional crimes.
- The worst possible measure of crime is the so-called “**Total crime**” category, which may contain a mixture of data on more or less serious types of offences, highly depending on local (and momentarily) criminalization policy and capacity to record. This may generate the paradox that high figures show good capacity to record rather than really high crime levels.
- Collecting and analyzing data should not only serve the purpose of documenting ‘caseload’, but also provide a measure of the nature and extent of crime. **Lack of understanding and/or relevant training of personnel** entrusted with the task may determine that recording is done in a lazy and sloppy manner, just to meet the law requirement of record- keeping.

Table 5 below summarizes the main strengths and weaknesses of each data type and how these can be addressed. It is crucial for programme officers and field staff to identify the data sources available, to undertake a brief diagnosis of what the main issues with each of these sources are, and to define strategies to address these issues and thus support the improvement of the data used for programming, monitoring and evaluation purposes.

**Table 5 - Strengths and weaknesses of data sources on conflict, crime, and violence**

Source	Strengths and weaknesses	What can be done
CRIMINAL JUSTICE SECTOR	<ul style="list-style-type: none"> <li>+ Information on circumstances, perpetrators, weapons used (when available)</li> <li>+ Information on victims and relationship to perpetrators (when available)</li> </ul>	<p>a) <b>Increase coverage of both vital registry and criminal justice data</b>, to ensure coverage of both urban and rural areas, as well as poor neighbourhoods;</p> <p>b) <b>Ensure that several sources of data exist</b>, at both public health and criminal justice system levels, including administrative and survey-based sources;</p> <p>c) <b>Ensure that data is properly disseminated</b>, recollected and analysed in a systematic manner by the institutions surveying violence and crime, and increase the public availability of all data collected (for example by highlighting its policy-relevance and their use),</p> <p>d) <b>Strengthen capacities of personnel registering violent events</b> among the police and the public health/vital registry sectors, by providing relevant training,</p> <p>e) <b>Increase the details that are captured in statistics produced</b> on crime and violence, including gender and age of victim, circumstances of the event and relationship of victim to offender, the tools of violence used (firearms, knives, etc.), day of occurrence, socio-economic information on victim, etc.</p> <p>f) <b>Ensure the availability of perception-based surveys</b> for monitoring attitudes to the security sector, perceptions of security, and victimization types that might otherwise go unreported to the police,</p> <p>g) <b>Encourage the establishment of observatories</b>, to collect and analyze a variety of data, carry out qualitative research and triangulation of data, elaborate indicators and monitor trends.</p>
	<ul style="list-style-type: none"> <li>- Undercounting as only cases known to the police (or for which legal action has been initiated) are recorded</li> <li>- Only count cases considered as ‘unlawful’</li> <li>- Often record events, and not number of victims</li> <li>- Complex case evolution through the justice system, a case can evolve from homicide to accident throughout the investigation for example</li> <li>- Definitions of unlawful events vary significantly</li> </ul>	
PUBLIC HEALTH SECTOR	<ul style="list-style-type: none"> <li>+ Records numbers of victims injured or killed</li> <li>+ Records type of injury and weapon used in events (when available)</li> <li>+ Records not only lethal events but non-lethal injuries (when available)</li> <li>+ Most countries legally require the registry of births and deaths</li> </ul>	
	<ul style="list-style-type: none"> <li>- Recording of births and deaths is inaccurate in many countries.</li> <li>- Medical personnel not always knows about the intent that lead to injury or death</li> <li>- Circumstances of an event are often unknown to medical staff</li> <li>- Only few hospitals equipped with injury surveillance systems</li> </ul>	
SURVEY DATA	<ul style="list-style-type: none"> <li>+ Investigates the ‘dark figure’ of victimization not reported or recorded in other instances</li> <li>+ Reports detailed information on circumstances and perpetrators,</li> <li>+ Report information on weapon used and relationship to perpetrators</li> <li>+ Only available reporting mechanism in cases of absence of state or other institutions</li> </ul>	
	<ul style="list-style-type: none"> <li>- Reliant on recollection capacity of respondent</li> <li>- Not fully appropriate to estimate lethal violence</li> <li>- Sampling may not be representative in difficult settings</li> <li>- Survey-related estimates are complex when population data is unknown</li> </ul>	
CONFLICT DATA-SETS	<ul style="list-style-type: none"> <li>+ Gather data on events and number of victims in conflict affected settings in particular</li> <li>+ Often the only source for conflict-affected settings</li> <li>+ Report data on groups involved and motivations of actors in a conflict</li> <li>+ Geo-referenced conflict data exist for easy mapping of trends and patterns</li> </ul>	
	<ul style="list-style-type: none"> <li>- Definitions of conflict-related deaths and events vary in each source</li> <li>- Serious risks of undercounting as only reported cases and events are recorded</li> <li>- Coverage is often sparse and data is censored,</li> <li>- In armed conflicts, factions are also likely to apply political pressure,</li> <li>- In many contemporary war zones media and NGO coverage is sparse and limited, official statistics are not kept, and survival takes priority over data gathering</li> </ul>	

## Annexure 1: Finding the data

### Homicide Data

#### Checklist for availability of crime statistics (UNODC, 2006)

A. Is there a national organization responsible for collecting crime statistics?
B. How are crime statistics reported (periodicity, coverage, time lag before they are available, year of most recent statistics, etc.)?
C. Are the following statistics available on an annual or other periodic basis? Do they cover the whole country or part of it? What are the most recent data available?
<ul style="list-style-type: none"> <li>• Crimes reported to the police by type of crime, seriousness of offences, or region</li> <li>• Cases that have been solved or cleared (the offender has been identified)</li> <li>• Crime reported to the police by type of offenders (age, gender, ethnicity, etc.)</li> </ul>
D. Is police data available on victims?

#### Examples of national sources of crime data

Country	Website
Bangladesh	<a href="http://www.police.gov.bd/">http://www.police.gov.bd/</a>
Barbados	<a href="http://www.barbadospolice.gov.bb/_sec_x.cfm?category=Police%20statistics&amp;section=CRIME">http://www.barbadospolice.gov.bb/_sec_x.cfm?category=Police%20statistics&amp;section=CRIME</a>
Belize	<a href="http://www.belizepolice.bz/index.php?option=com_ionfiles&amp;Itemid=170">http://www.belizepolice.bz/index.php?option=com_ionfiles&amp;Itemid=170</a>
Bermuda	<a href="http://www.police.bm/">http://www.police.bm/</a>
Bolivia	<a href="http://www.policia.bo/">http://www.policia.bo/</a>
Brunei Darussalam	<a href="http://www.polis.gov.bn/">http://www.polis.gov.bn/</a>
Cape Verde	<a href="http://www.policianacional.cv/">http://www.policianacional.cv/</a>
Colombia	<a href="http://oasportal.policia.gov.co/portal/page/portal/UNIDADES_POLICIALES/Direcciones_tipo_Operativas/Direccion_de_Investigacion_Criminal/Documentacion">http://oasportal.policia.gov.co/portal/page/portal/UNIDADES_POLICIALES/Direcciones_tipo_Operativas/Direccion_de_Investigacion_Criminal/Documentacion</a>
Costa Rica	<a href="http://www.poder-judicial.go.cr/planificacion/Estadisticas/policiales.html">http://www.poder-judicial.go.cr/planificacion/Estadisticas/policiales.html</a>
Hong Kong	<a href="http://www.police.gov.hk/ppp_en/02_er_room/otherpolice.html">http://www.police.gov.hk/ppp_en/02_er_room/otherpolice.html</a>
India	<a href="http://ncrb.nic.in/crimeinindia.htm">http://ncrb.nic.in/crimeinindia.htm</a>
Jamaica	<a href="http://www.jcf.gov.jm/crime-stats">http://www.jcf.gov.jm/crime-stats</a>
Kenya	<a href="http://www.kenyapolice.go.ke/crime%20statistics.asp">http://www.kenyapolice.go.ke/crime%20statistics.asp</a>
Nicaragua	<a href="http://www.policia.gob.ni/">http://www.policia.gob.ni/</a>
Nigeria	<a href="http://www.npf.gov.ng/npf/">http://www.npf.gov.ng/npf/</a>
Peru	<a href="http://www.pnp.gob.pe/anuario.html">http://www.pnp.gob.pe/anuario.html</a>
Philippines	<a href="http://pnp.gov.ph/main/">http://pnp.gov.ph/main/</a>
Puerto Rico	<a href="http://www.policia.gobierno.pr/">http://www.policia.gobierno.pr/</a>
Rwanda	<a href="http://www.police.gov.rw/">http://www.police.gov.rw/</a>
Saint Kitts and Nevis	<a href="http://www.police.gov.kn/default.asp?pageidentifier=6">http://www.police.gov.kn/default.asp?pageidentifier=6</a>
Saint Lucia	<a href="http://www.rslpf.com/crimestatistics.htm">http://www.rslpf.com/crimestatistics.htm</a>
South Africa	<a href="http://www.saps.gov.za/">http://www.saps.gov.za/</a>
Sri Lanka	<a href="http://www.police.lk/">http://www.police.lk/</a>
Thailand	<a href="http://www.royalthaipolice.go.th/index.php">http://www.royalthaipolice.go.th/index.php</a>
Trinidad and Tobago	<a href="http://www.unodc.org/pdf/research/Cr_and_Vio_Car_E.pdf">http://www.unodc.org/pdf/research/Cr_and_Vio_Car_E.pdf</a>
Uganda	<a href="http://www.upf.go.ug/">http://www.upf.go.ug/</a>
Venezuela	<a href="http://www.guardia.mil.ve/">http://www.guardia.mil.ve/</a>

Source : Geneva Declaration Secretariat, 2011 (unpublished)

## **Conflict Data**

Data collection and monitoring trends in countries affected by armed conflict is a difficult task. While some sources focus exclusively on direct conflict events, the indirect effects of conflict-related violence on the population are frequently underreported.

Several datasets exist dealing with conflict-related incident reports, in particular conflict-related deaths. The Global Burden of Armed Violence (2008 and 2011) includes conflict deaths to assess levels of lethal violence across the world. The following sources of data on conflict deaths have been used to cover the period 2004-09 (Geneva Declaration Secretariat, 2011, pp. 9-11):

### **Cross-country datasets**

- The Armed Conflict Database of the International Institute for Strategic Studies.  
<http://www.iiss.org/publications/armed-conflict-database/>
- The Armed Conflicts Report of Project Ploughshares.  
<http://www.ploughshares.ca/content/armed-conflicts-report-0>
- The Battle Deaths Dataset version 3.0 of the Peace Research Institute Oslo. Lacina and Gleditsch (2005). 'Monitoring Trends in Global Combat: A New Dataset of Battle Deaths.' European Journal of Population, Vol. 21, No. 2–3, pp. 145–66.  
<http://www.prio.no/pd/GenericPage.aspx?id=790>
- 'State Failure: Internal Wars and Failures of Governance, 1955–Most Recent Year' of the Political Instability Task Force. <http://globalpolicy.gmu.edu/pitf/>
- The state, non-state, and one-sided violence databases of the Uppsala Conflict Data Program  
<http://www.pcr.uu.se/research/ucdp/datasets/>

### **The Armed Conflict Location and Event Dataset (ACLED)**

<http://www.acleddata.com/>

ACLED tracks events through media reports (real-time data) for a many conflict-affected areas. Data contain information on:

- Dates and locations of conflict events,
- Specific types of events including battles, violence against civilians, riots, protests and recruitment activities
- Events by a range of actors, including rebels, governments, militias, armed groups, protesters and civilians;
- Changes in territorial control
- Fatalities.

The exact location and date of events, disaggregated by type of violence—including battles between armed actors, and rioting—and a wide variety of actors—including government forces, rebel groups, militias, and civilians. ACLED includes data from 1997-2012,

The All-Africa file 1997-2012, with real-time conflict data updated weekly, is downloadable in excel format from the Climate Change and African Political Stability Project website (<http://strausscenter.org/ccaps/>).

## National datasets

- Afghanistan and Iraq: iCasualties <http://icasualties.org/OEF/index.aspx>
- Colombia: Centro de Recursos para el Análisis de Conflictos (CERAC). 2011. 'Base de datos sobre Conflicto Armado Colombiano V. 10.2.' Bogotá: CERAC.
- Iraq: Iraq Body Count, <http://www.iraqbodycount.org/>
- Nepal: INSEC (Informal Sector Service Center). 'Trend Analysis.' <http://www.inseconline.org/index.php?type=reports&id=3&lang=en>
- Palestine: B'Tselem, (n.d.). Fatalities. <http://www.btselem.org/english/Statistics/Casualties.asp>
- Somalia: Elman Peace Center. <http://www.elmanpeace.org/>
- South Asia (India, Nepal, Pakistan, and Sri Lanka): SATP (South Asia Terrorism Portal). <http://www.satp.org/>
  - 'India Datasheets.' <http://www.satp.org/satporctp/countries/india/database/index.html>
  - 'Nepal Datasheets.' <http://www.satp.org/satporctp/countries/nepal/database/index.html>
  - 'Annual Fatalities in Terrorist Violence in Pakistan, 2003–2010.' <http://www.satp.org/satporctp/countries/pakistan/database/casualties.html>
  - 'Fatalities in Terrorist Violence in Sri Lanka.' [http://www.satp.org/satporctp/countries/shrilanka/database/annual\\_casualties.htm](http://www.satp.org/satporctp/countries/shrilanka/database/annual_casualties.htm)

Furthermore, other data on conflict events were found from the following sources:

- The Conflict Barometer 2009: 'High-Intensity Violent Conflicts in 2009' of the Heidelberg Institute for International Conflict Research. [http://www.hiik.de/en/konfliktbarometer/pdf/ConflictBarometer\\_2009.pdf](http://www.hiik.de/en/konfliktbarometer/pdf/ConflictBarometer_2009.pdf)
- 'Crisis Watch No. 81' (ICG, 1 May 2010). <http://www.crisisgroup.org/en/publication-type/crisiswatch/2010/crisiswatch-81.aspx>
- The Global Peace Index 2009<sup>7</sup>, identifying 20 countries with the lowest rank (Vision of Humanity, 2009, pp. 10–11, table 2). <http://www.visionofhumanity.org/wp-content/uploads/PDF/2009/2009%20GPI%20Results%20Report.pdf>
- The 'Highest Estimated Risk for Instability 2008–2010' (Hewitt, Wilkenfeld, and Gurr, 2010, p. 8, table 2.1). [http://www.cidcm.umd.edu/pc/executive\\_summary/exec\\_sum\\_2010.pdf](http://www.cidcm.umd.edu/pc/executive_summary/exec_sum_2010.pdf)
- The Index of State Weakness in the Developing World 2008: 28 countries at the bottom quintile (Rice and Patrick, 2008, pp. 10–11, table 2). [http://www.brookings.edu/reports/2008/~media/Files/rc/reports/2008/02\\_weak\\_states\\_index/02\\_weak\\_states\\_index.pdf](http://www.brookings.edu/reports/2008/~media/Files/rc/reports/2008/02_weak_states_index/02_weak_states_index.pdf)
- Kriege und bewaffnete Konflikte 2009 (Wars and Armed Conflicts of 2009) of the Institut für Friedenspädagogik (Schreiber, 2009). [http://friedenspaedagogik.de/blog/wp-content/uploads/2009/12/akuf\\_analysen\\_2009.pdf](http://friedenspaedagogik.de/blog/wp-content/uploads/2009/12/akuf_analysen_2009.pdf)
- Center for Systemic Peace. Major Episodes of Political Violence, 1946–2011. <http://www.systemicpeace.org/warlist.htm#>
- Political Terror Scale Ratings 1976–2010. <http://www.politicalterrorscale.org/download.php>
- The State Fragility Index and Matrix 2008: countries with a state fragility score higher than 15 (Marshall, Goldstone, and Cole, 2009, pp. 1–2). <http://www.systemicpeace.org/SFI/matrix08c.pdf>
- Stockholm International Peace Research Institute Yearbook 2009: 'Patterns of Major Armed Conflicts, 1999–2008'. Appendix 2A. <http://www.sipri.org/yearbook/2009/02/02A>

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<sup>7</sup> A 2012 edition of the GPI was published at <http://www.visionofhumanity.org/gpi-data/>

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