



The aftermath of a suicide bomb attack in Kabul on 6 December 2011 that claimed several dozen lives.

# The rising toll

Newly released data reveal that the war in Afghanistan is becoming more dangerous for civilians

By John Bohannon

**A**s troops head home from the war in Afghanistan, the longest in U.S. history, the growing death toll for Afghan civilians is coming into focus. Last year, the occupying military coalition—the International Security Assistance Force (ISAF)—recorded 1685 Afghans killed and 3554 wounded. It is the highest number of civilian casualties since rigorous counting began in 2008. Those figures come from a previously undisclosed data set, drawn from reports from ISAF soldiers, that details the past 4 years of civilian casualties.

The death toll for ISAF troops is public information: As this issue went to press, 3465 coalition soldiers have died on duty in Afghanistan since the war against al-Qaida and the Taliban began in October 2001. Similar clarity exists for the civilians who died in the 11 September 2001 terrorist attacks on U.S. soil that ignited the war: Those 2977 names are now inscribed in bronze plaques where the World Trade Center once stood. But for

Afghan civilians, the human cost of the war has been more elusive.

The number of Afghan civilians killed between 2001 and 2006 will never be known—no one was counting. Starting in 2007, the United Nations Assistance Mission in Afghanistan (UNAMA) has noted an annual figure of civilian deaths. But beyond that, says Danielle Bell, a UNAMA human rights officer, “we only release detailed data sets when it serves a precise humanitarian purpose. [And] in such cases, the detailed information is not made public.”

UNAMA’s reports offer little to researchers who study asymmetric warfare, in which a traditional army is pitted against a weak but highly adaptable insurgency. “What do you do with national yearly numbers?” asks Nils Weidmann, a political scientist at the University of Konstanz in Germany. To study the relationship between civilian casualties and the ebb and flow of an insurgency, he says, “you need variation both in space and in time.”

Researchers received just such a windfall 3 years ago, when *Science* obtained data from three organizations tracking Afghan civilian casualties: ISAF, UNAMA, and the nongovernmental organization Afghanistan Rights Monitor (*Science*, 11 March 2011, p. 1256). It was the first data release of its kind, and it seemed to be the last. ISAF and UNAMA have refused to publicly divulge more civilian casualty data, and Afghanistan Rights Monitor has since folded.

But some ISAF partners have set their own rules on data sharing. In January, Neil Shortland, a research psychologist at the Center for Terrorism and Security Studies at the University of Massachusetts, Lowell, obtained ISAF’s civilian casualty data—known as CIVCAS—from the U.K. Ministry of Defence. The ministry authorized Shortland to openly use the data, covering January 2010 through December 2013, for research and to share with collaborators, enabling *Science* to make them available at <http://scim.ag/Afghandata>.

The data trace the war’s trajectory through

## Civilian casualties in Afghanistan

This graph shows the monthly tally of civilian casualties in Afghanistan caused by insurgents and coalition military forces (ISAF). It is based on data released by the U.K. Ministry of Defence for a study conducted by Neil Shortland of the Center for Terrorism and Security Studies at the University of Massachusetts, Lowell. The entire data set is available at <http://scim.ag/Afghandata>.

By Neil Shortland and John Bohannon

**May 2009** ISAF airstrike in Granai



**July 2009** General Stanley McChrystal, ISAF commander, declares the civilian population the "center of gravity" in Afghanistan

**May 2011** Osama bin Laden killed by U.S. Special Forces raid

**June 2011** President Barack Obama announces schedule for troop withdrawal

**November 2011** Mullah Mohammed Omar calls on Taliban to "take every step to protect the lives" of civilians

**December 2011** Suicide bombing in Kabul



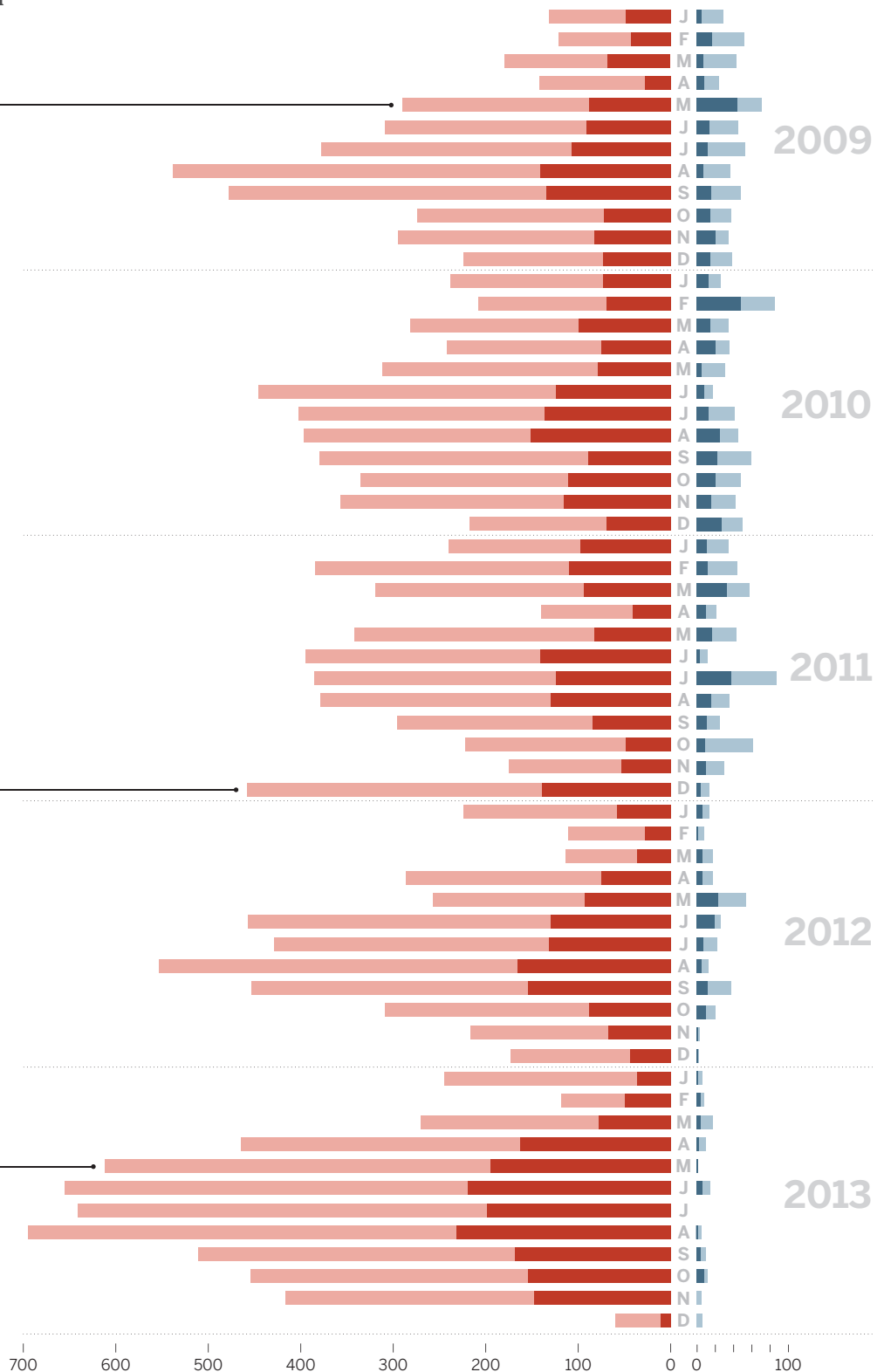
**June 2012** General John Allen, ISAF commander, limits aerial bombings

**September 2012** The Afghan government is leading over 80% of security operations

**May 2013** Double IED attacks in Kabul



**Caused by insurgents**  
Deaths Injuries  
**Caused by ISAF**  
Deaths Injuries



PHOTOS: (TOP TO BOTTOM) JOAO SILVA/THE NEW YORK TIMES/REDUX; S. SABAWOON/EPA/CORBIS; REUTERS; OMAR SOBHANI



the lens of civilian death and injury. The original military mission of ousting the Taliban, a fundamentalist regime that harbored the al-Qaida terrorists, expanded to a full military occupation of Afghanistan with the goal of providing security to its civilians.

By 2011, many analysts believed that the tide was turning in this war against a protean enemy, which melts in and out of the civilian population. A surge in troop numbers was yielding palpable gains, raising hopes that the insurgency would be weakened long enough for Afghanistan's fragile government and its forces to take over security. In June 2011, U.S. President Barack Obama announced plans for a phased troop withdrawal. (In May of this year, Obama said that the current force would be reduced to fewer

than 10,000 by the end of 2014.) According to the newly released CIVCAS data, 1320 Afghan civilians were killed in the conflict in 2011, 7% fewer than in 2010 and a promising reversal of the upward spiral in casualties.

That decrease was ephemeral. An ill omen came in December 2011, when insurgent bombings killed 115 civilians and wounded 301. The massacres happened well outside the "fighting season"; as the CIVCAS data show, the Taliban tend to lie low over the harsh Afghan winter (see p. 723). And since then, casualties have grown year by year.

As UNAMA has long noted, insurgents are responsible for the majority of deaths and injuries, accounting for two-thirds of the civilian casualties last year. Improvised explosive devices (IEDs) are largely to blame. Analyz-

ing incident counts in the new data—these were not part of the 2011 release—Shortland learned that IEDs have become more numerous and more lethal. Insurgents launched 868 IED attacks last year: 50% more than in 2010. And they have conducted more complex attacks, often with multiple coordinated explosions that compound the toll.

The newly released data also suggest that recent ISAF airstrikes have caused less collateral damage, in contrast to costly mistakes earlier in the war. In 2008, for example, ISAF jets mistakenly targeted at least two wedding parties, killing dozens of women and children and prompting Afghan President Hamid Karzai to demand an end to airstrikes. ISAF never halted them, but the newly released CIVCAS data recorded 16 civilian deaths caused by jets, helicopters, and drones last year, compared with 89 in 2010. And the number of deaths per airstrike declined by half.

The latest CIVCAS data offer a window on how the military revises its casualty counts as investigations play out. Comparing casualty numbers for the year 2010 in the data released in 2011 and in the new data shows that final casualty counts for individual events can change dramatically. This is especially true for IED attacks, with monthly totals revised up or down by dozens of deaths. On balance for 2010, ISAF-caused casualties increased by 15% and insurgent-caused decreased by 7%.

Today's release more than doubles the amount of casualty data available for researchers. "The big question is how civilian casualties trigger withdrawal of support from the population," says Konstanz's Weidmann. Anger at civilian deaths caused by the military may be driving an increase in "green-on-blue" incidents in which men in Afghan army uniforms attack ISAF personnel, including last week's slaying of a U.S. two-star general. And though most civilian casualties are caused by insurgents, the nature of their attacks—an ambush of a military convoy versus an IED exploding in front of a mosque—may have vastly different effects on popular support for the Taliban. Far from being simply a tragic byproduct of the conflict, civilian casualties also perpetuate it, says Neil Johnson, a physicist at the University of Miami in Florida who models asymmetric warfare. "We definitely find the causal arrow goes both ways."

The data made public today end in December 2013, but the civilian casualties continue. On 15 July, a car bomb exploded near a busy market and mosque in Paktika province, near Afghanistan's border with Pakistan. Eighty-nine people were killed, making it the single deadliest attack by insurgents on record. ■



## How to count the dead

From old-fashioned surveys to Twitter scraping, researchers who tally civilian casualties have more options than ever for data sources. Each technique has its pluses and minuses.

### Real time

The coalition in Afghanistan was the first military force to count civilian casualties systematically. U.N. informants and journalists report what they observe.

### From soldiers

**Pro:** Most casualties are at the front lines

**Con:** Data treated with suspicion

### From informants

**Pro:** Data viewed as trustworthy

**Con:** Methods opaque

### From journalists

**Pro:** Rapid; open

**Con:** Biased toward the largest casualty events

### After the fact

Surveys and interviews in the wake of conflicts have been a mainstay for approximating the death toll. But the information evaporates as people migrate.

### Household cluster surveys

**Pro:** Rigorous

**Con:** Dangerous for researchers; huge error bars because of sampling

### Refugee interviews

**Pro:** Safer for researchers

**Con:** Difficult to extrapolate results to whole country

### A future of counting

The body count is climbing in Iraq, Syria, and Ukraine. They are becoming grim natural experiments for new casualty tracking methods.

### Crowdsourcing

Online mapping platforms like Ushahidi are being adapted for war zones, with casualties reported almost immediately on social media.

### Collaboration

The group everycasualty.org is improving casualty recording by standardizing methods for researchers and promoting transparency.