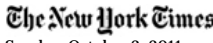



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Predator Drones and Unmanned Aerial Vehicles (UAVs)
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Tom Tschida/Agence France-Presse -- Getty Images

Updated: Aug. 12, 2011

Overview

From blimps to bugs, aerial drones are transforming the way America fights and thinks about its wars. United States intelligence officials call unmanned aerial vehicles, often referred to as drones, their most effective weapon against **Al Qaeda**. The remotely piloted planes are used to transmit live video from Iraq, Afghanistan and Pakistan to American forces, and to carry out air strikes. More C.I.A. drone attacks have been conducted under President Barack Obama than under President George W. Bush.

The Pentagon now has some 7,000 aerial drones, compared with fewer than 50 a decade ago, and has asked Congress for nearly \$5 billion for drones in 2012.

Drones have become more crucial than ever in fighting wars and terrorism. The Central Intelligence Agency spied on Osama bin Laden's compound in Pakistan by video transmitted from a drone. One of Pakistan's most wanted militants, Ilyas Kashmiri, was reported dead in a June 2011 C.I.A. drone strike, part of an aggressive drone campaign that administration officials say has helped paralyze Al Qaeda in the region — and has become a possible rationale for an accelerated withdrawal of American forces from Afghanistan. More than 1,900 insurgents in Pakistan's tribal areas have been killed by American drones since 2006, according to the Web site [longwarjournal.com](#), which closely tracks the strikes as part of its focus on the war on terror.

In April 2011 the United States began using armed Predator drones against Col. Muammar el-Qaddafi's forces in Libya. In May, a C.I.A.-armed Predator aimed a missile at Anwar al-Awlaki, the radical American -born cleric believed to be hiding in Yemen. The Predator missed, but American drones continue to patrol Yemen's skies.

Large or small, drones raise questions about the growing disconnect between the American public and its wars. Military ethicists concede that drones can turn war into a video game and, with no Americans directly at risk, more easily draw the United States into conflicts. Drones have also created a crisis of information for analysts on the end of a daily video deluge.

The number of civilian deaths caused by drone strikes is hotly contested. In June 2011, John O. Brennan, President Obama's top counterterrorism adviser, said that for almost a year, "there hasn't been a single collateral death because of the exceptional proficiency, precision of the capabilities we've been able to develop." Mr. Brennan later backed off that statement somewhat, but other officials say that claim still holds. Since May 2010, C.I.A. officials believe, the drones have killed more than 600 militants and not a single noncombatant.

This assertion meets with deep skepticism from many independent experts, including Bill Roggio, the editor of The Long War Journal. "I believe the people conducting the strikes work hard to reduce civilian casualties," Mr. Roggio said. "They could be 20 percent. They could be 5 percent. But I think the C.I.A.'s claim of zero civilian casualties in a year is absurd."

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The Death Of Anwar Al-Awlaki And The Imperial Presidency

THE ASSOCIATED PRESS
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Drones Weapon of Choice for Obama War on Al-Qaida


AND RIGHTLY SO!
SEPTEMBER 30, 2011
Another one bites the dust

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Obama Kills Again: Assassinate American Citizen

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Al Awlaki Eats A Predator Drone. Succumbs to Heartburn.


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The Pentagon now has about 7,000 aerial drones in its inventory, compared with fewer than 50 a decade ago.



Interactive Feature

From Blimps to Bugs: The Miniaturization of Drone Technology
Aerial drones are transforming the way America fights and thinks about its wars. While the Cessna-sized Predator drones have become a brand name, military researchers are now at work shrinking these devices to the size of insects and birds.




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War Evolves With Drones, Some Tiny as Bugs

By ELISABETH BUMILLER and THOM SHANKER

From blimps to bugs, an explosion in aerial drones is transforming the way America fights and thinks about its wars.

June 20, 2011 | WORLD | NEWS



Interactive Feature

The Changing Shapes of Air Power

Drones are playing an increasingly important role in the American military. Only 10 years ago, the Pentagon had about 50 drones; now there are 7,000 drones in its inventory, ranging in size from large blimps to tiny Hummingbirds. Here are 10 drones currently on the battlefield or on the drawing board

Drones Batter Al Qaeda and Its Allies Within Pakistan

By JANE PERLEZ and PIR ZUBAIR SHAH

A stepped-up campaign of American drone strikes has reportedly cast a pall of fear over an area that was once a free zone for Al Qaeda and the Taliban.

April 5, 2010 | WORLD | NEWS

FOREIGN DESK

In the Skies Over Iraq, Silent Observers Become Futuristic Weapons

By ERIC SCHMITT

On the third day of the Iraq war, a mysterious American aircraft loitered high over Baghdad for hours on end, evading a withering barrage of missile and artillery fire.

April 18, 2003 | WORLD | NEWS

Drones Are Weapons of Choice in Fighting Qaeda

By CHRISTOPHER DREW

War has taken on a video-game quality, as missiles are fired on enemy targets from halfway around the world.

March 17, 2009 | BUSINESS | NEWS



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Drones Transform How America Fights Its Wars

The Pentagon now has about 7,000 aerial drones in its inventory, compared with fewer than 50 a decade ago.

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By SCOTT SHANE and THOM SHANKER

Huge costs and uncertain outcomes in two wars have led the United States to embrace drones, like those used in the strike that killed Anwar al-Awlaki, in the fight against terrorism.

October 1, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: UNITED STATES DEFENSE AND MILITARY FORCES, MILITARY AIRCRAFT, TERRORISM

**Yemen Notes Its Own Role in U.S. Attack on Militant**

By LAURA KASINOF

A government spokesman said that the United States should show more appreciation to Yemen's embattled president for his assistance in finding Anwar al-Awlaki.

October 1, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: ASSASSINATIONS AND ATTEMPTED ASSASSINATIONS, YEMEN, AL QAEDA, AWLAKI, ANWAR AL-, SALEH, ALI ABDULLAH

**Assassinating al-Awlaki Was Counterproductive**

By YASIR QADHI

In silencing Anwar al-Awlaki's voice, not only did America fail to live up to its ideals, but it gave Mr. Awlaki's dangerous message a life and power of its own.

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Obama on Awlaki Death at Mullen Retirement Ceremony

By AT WAR

Comments on the death of Anwar al-Awlaki from the Admiral Mike Mullen's retirement ceremony.

September 30, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: DRONES (PILOTLESS PLANES), YEMEN, AL QAEDA, AWLAKI, ANWAR AL-

A Just Act of War

By JACK L. GOLDSMITH

The Obama administration's decision to order a drone strike against an American citizen in Yemen was legal and justified.

September 30, 2011

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UAVs and Drones Navigator

A list of resources from around the Web about UAVs and drones as selected by researchers and editors of The New York Times.

MQ-1 Predator Unmanned Aircraft System

U.S. Airforce Fact Sheet

Ku-band SATCOM Data Link

(KuSDL) Predator Reconnaissance System
L-3 Communications

General Atomics Aeronautical Systems Unmanned Aircraft Systems home**FROM THE COUNCIL ON FOREIGN RELATIONS****Targeted Killings**

Backgrounder, Mar. 2, 2006

OTHER COVERAGE

Drone 'Surge'; Predator Flights Up 94% in 2008

Danger Room, Wired, Feb. 05, 2009

What it Looks Like When a Predator Drone Vaporizes People

Gizmodo, Nov. 6, 2008

In the Sights of a Joystick Killing Machine

CNN, June 9, 2006

In Las Vegas a Pilot Pulls the Trigger. In Iraq a Predator Fires Its Missile.

Telegraph (UK), June 3, 2006

Drone Aircraft May Prowl U.S. Skies

CNET, Mar. 29, 2006

US Drones Take Combat Role

BBC News, Nov. 5, 2002

Turkey: U.S. to Supply Drones

By THE ASSOCIATED PRESS

The United States has agreed "in principle" to deploy Predator drones on Turkish soil, the Turkish prime minister said Friday.

September 24, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: UNITED STATES, TURKEY, ERDOGAN, RECEP TAYYIP

C.I.A. Kills Top Qaeda Operative in Drone Strike

By MARK MAZZETTI

It was the latest strike in the C.I.A.'s campaign of targeted killings of Qaeda operatives that has intensified under the Obama administration.

September 16, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: PAKISTAN, CENTRAL INTELLIGENCE AGENCY, AL QAEDA, RAHMAN, ATIYAH ABD AL-, ZAWAHRI, AYMAN AL-, OBAMA, BARACK

Civilian Planes Fill Niche in World of Airborne Spying

By CHRISTOPHER DREW

The military has been snapping up used luxury aircraft to fulfill its need for more surveillance planes.

September 7, 2011

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Drone Said to Kill Qaeda No. 2, Atiyah Abd al-Rahman

By MARK MAZZETTI

An American official said that a strike by the Central Intelligence Agency on Aug. 22 killed Atiyah Abd al-Rahman, a Libyan who in the last year had taken over as Al Qaeda's top operational planner.

August 28, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: PAKISTAN, UNITED STATES, LIBYA, CENTRAL INTELLIGENCE AGENCY, AL QAEDA, BIN LADEN, OSAMA



Libyan Rebels Reportedly Used Tiny Canadian Drone

By IAN AUSTEN

Libyan rebels have been coordinating their attacks using a Canadian-made, unmanned surveillance aircraft, the drone's manufacturer announced on Tuesday.

August 25, 2011

MORE ON UNMANNED AERIAL VEHICLE (UAV) AND: MIDDLE EAST AND NORTH AFRICA UNREST (2010-), LIBYA, TRANSITIONAL NATIONAL COUNCIL



As War Moves to Tripoli, Airstrikes Are More Difficult

By ERIC SCHMITT and ELISABETH BUMILLER

With the war in Libya now mostly confined to a densely populated area with rapidly shifting battle lines, a change in tactics is needed, military officials said.

August 24, 2011

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A Spotlight on Drone Strikes in Pakistan

Readers respond to recent coverage on the use of drone attacks by the United States military.

August 19, 2011

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Drones Alone Are Not the Answer

By DENNIS C. BLAIR

Unilateral American strikes in Pakistan won't eliminate Al Qaeda. We must work with Pakistan's government as an equal partner instead.

August 15, 2011

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The C.I.A. and Drone Strikes

To build credibility, the Central Intelligence Agency needs to acknowledge civilian casualties from its drone strikes in Pakistan.

August 14, 2011

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C.I.A. Claim of No Civilian Deaths From Drones Is Disputed

By SCOTT SHANE; PIR ZUBAIR SHAH CONTRIBUTED REPORTING FROM NEW YORK.



The civilian toll of the C.I.A.'s drone campaign in Pakistan has been in bitter dispute since the strikes were accelerated in 2008.

August 12, 2011

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