

## ARMS CONTROL

### Iraq Joins the Chemical Weapons Convention

The government of Iraq has deposited its instrument of accession to the Chemical Weapons Convention (CWC) with the Secretary General of the United Nations and within 30 days, on February 12, 2009 became the 186th State Party to the Convention

“Iraq’s accession draws us closer to the Convention’s goal of the universal ban on chemical weapons, and we call upon those nine States that have not yet adhered to the Convention to do so without delay,” Ambassador Pfirter said.

All States Parties declare to the OPCW the extent of specific activities which could pose a risk to the object and purpose of the Convention. These activities are then subject to international verification and monitoring by the OPCW Secretariat, primarily through inspections, to ensure non-proliferation. States Parties also agree to abide by a verification regime for certain toxic chemicals and their precursors in order to ensure that such chemicals are only used for purposes not prohibited.

Iraq will now be eligible to benefit from the OPCW’s international cooperation and assistance programmes, which provide support in drafting and enacting the legislation necessary to implement the Convention at the national level. This legislation enables States Parties to detect, prosecute and punish any breach of the chemical weapons ban committed on their territory or by their nationals anywhere in the world.

<http://www.opcw.org/news/news/article/iraq-joins-the-chemical-weapons-convention/>

### G8 cash not enough for arms disposal, says Russia

Russia said on January 28, that it might have to slow down destruction of its huge Soviet-

era stocks of chemical and other weapons of mass destruction because its G8 partners were not providing enough funds to carry out the work.

The Group of Eight industrialized nations clinched a \$20 billion deal in 2002 to help Russia get rid of chemical, nuclear and other weapons of mass destruction and stop them falling into the wrong hands.

The program, dubbed “the G8 Global Partnership,” aims to help destroy chemical weapons, dismantle aging reactors aboard decommissioned nuclear-powered submarines and dispose of fissile materials.

“The problem is, while Russia meets its obligations in full, the rest of the G8 nations which made this commitment up to now have met these obligations by 40-45 percent,” said Andrei Bokarev, a senior finance ministry official and one of Russia’s G8 point men.

“Taking into account the current situation shaping up amid the global crisis, naturally there appear big doubts that these funds will be made available in the volume needed,” he said.

“In this case we will be forced to either slow down the earlier announced tempo of processing chemical and other types of weapons, or we will start looking for additional funds in Russia in order to offset a lack of funds from our G8 partners.”

Russia’s then President Vladimir Putin, who is now a powerful prime minister, said after reaching the 2002 deal Russia had no security problems and denied that weapons of mass destruction could pass into the hands of militant groups or “rogue states” like Iran, Iraq or North Korea.

But Moscow admitted at the time that there was an ecological threat from remaining Soviet-era stocks of chemical weapons and nuclear waste.

<http://www.reuters.com/article/GCA-Russia/idUSTRE50R5NE20090128>

## DISARMAMENT

### Indian Cabinet nod to MoU with Sweden on healthcare

The government approved signing a pact with Sweden for bilateral cooperation in the field of healthcare and public health. The Memorandum of Understanding for cooperation in healthcare and public health is a result of discussions Health Minister Anbumani Ramadoss had with Swedish ministers during various meetings spread over during 2008.

A meeting of the Union Cabinet, chaired by External Affairs Minister Pranab Mukherjee, gave its nod to the Health Ministry's proposal to sign the MoU with Sweden, Home Minister P Chidambaram told reporters here. The pact is expected to be signed during the visit of Swedish Secretary of State.

The Cabinet also approved four amendments to the Chemical Weapons Convention Act and a Bill to carry out the changes will be introduced in Parliament session. "The amendments are required to bring the Act in line with the Chemical Weapons Convention," Chidambaram said.

<http://www.hindu.com/thehindu/holnus/002200902111676.htm>

### Discrepancies Found in U.S. Nerve Agent Storage, Destruction Numbers

Figures for the storage of lethal nerve agents at bases around the United States do not match accountings for disposal of the material, creating a small chance that some might be lost.

A U.S. Army Audit Agency report indicates that officials believe the material was eliminated rather than missing.

While it generally lauded the bases' accounting, the report said the figures for storage of nerve agent in bulk containers did not line up with destruction figures.

"They did not have effective procedures in place to ensure amounts destroyed were accurately recorded in the (electronic recording) system. Consequently, CMA didn't have complete assurance that amounts recorded in the system were accurate," the report said.

The redacted version of the report did not indicate all the specific storage depots at which problems were found, but the Deseret Chemical Depot in Utah was among that group.

The depots should develop databases for recording disposal figures and quickly addressing any accounting problems, auditors said. The Chemical Materials Agency said it accepted the auditors' findings and would make the recommended fixes unless they necessitated amendments to international agreements.

The Chemical Weapons Convention requires destruction of the full U.S. chemical arsenal by April 2012. Pentagon officials have acknowledged that the United States will miss the deadline by several years.

[http://www.globalsecuritynewswire.org/gsn/nw\\_20090209\\_8393.php](http://www.globalsecuritynewswire.org/gsn/nw_20090209_8393.php)

### India destroys its chemical weapons stockpile

India has informed the United Nations that it has destroyed its stockpile of chemical weapons in compliance with the international Chemical Weapons Convention. With this India has become third country after South Korea and Albania to do so.

The government notified the Organisation for the Prohibition of Chemical Weapons (OPCW) on March 26 of the fulfilment of its obligations to 'completely destroy' its declared chemical weapons stockpile.

'The OPCW inspectors finalised all necessary on-site activities to allow termination of systematic verification of destruction, and ceased their physical presence at the facility as of the end of March 2009,' Michael Luhan, OPCW's head of Media and Public Affairs,

told IANS in an e-mail from The Hague in The Netherlands, where the regulator is based.

‘In addition, our inspectors confirmed the completion of destruction of the former chemical weapons production facility, which had been temporarily converted for chemical weapons destruction purposes,’ he added.

After denying the possession of chemical weapons for years, India in June 1997 declared a stockpile of 1,044 tonnes of sulphur mustard. At that time, less than two percent of the chemical was filled into artillery shells and the remainder was stored in bulk containers.

India’s declaration came after the entry into force of the Chemical Weapons Convention (CWC) that created the OPCW. On Jan 14, 1993 India became an original signatory to the CWC.

Applauding India’s compliance to the international convention the OPCW Director-General Rogelio Pforrter said during the opening of the 56th Session of the OPCW on April 21: ‘A key result achieved (in the area of chemical disarmament) during the last three months is... the fulfilment by India of its obligations to completely destroy its declared chemical weapons stockpile. On 26 March 2009, India notified the Technical Secretariat accordingly.’

‘I wish to sincerely, warmly, and emphatically congratulate India on this laudable achievement, which is the result of a consistent and unwavering commitment shown by India since entry into force of the Convention. This attainment further strengthens the Convention as an effective instrument for promoting the objectives of peace and security,’ Pforrter said.

The Chemical Weapons Convention divides toxic chemicals and precursors that could be used as chemical weapons or that could be used in the manufacture of chemical weapons into three categories.

Category one comprises chemicals that have been used as weapons in the past and/or have very few or no peaceful uses, and thus pose the most direct threat to the convention.

Category two chemicals are primarily precursors to category one chemicals, and most have some industrial uses.

Chemicals in the third category are produced in large quantities commercially but in some cases were used as chemical warfare agents and can also serve as precursors to category one or two chemicals.

Giving details of the elimination process, CBW Magazine published by Indian defence ministry funded think tank Institute of Defence Studies and Analyses, said that by 1999, India destroyed one percent of its stockpile to meet the CWC’s phase one requirements.

Phase two of the convention required the destruction of 20 percent of the stockpile by April 2002. By November 2003, India had destroyed 45 percent of its declared category, one stockpile six months ahead of schedule.

And in January 2008 the government declared it had destroyed over 75 percent of its chemical weapons stockpile and reiterated its commitment to eliminate the balance by 2009.

<http://in.news.yahoo.com/43/20090514/812/tnl-india-destroys-its-chemical-weapons.html>

## NATIONAL AND INTERNATIONAL DEVELOPMENTS

### Panel experts say bio terrorism imminent

On January 28, 2009 the NYU School of Law hosted a panel discussion about weapons of mass destruction and the future of terrorism.

The event, which featured members of the Commission on the Prevention of WMD Proliferation and Terrorism, showcased the commission’s newest report on the challenges posed by all forms of WMD — chemical, biological, radiological and nuclear — and its

recommendations for the new administration's responsive action.

Among the report's most startling declarations is the prediction that at least one nuclear weapon will be detonated in the next five years. The panel members also asserted that the threat of nuclear and biological warfare to the United States is on the rise rather than decline.

Commission members including Frances Townsend, former assistant to former President Bush for Homeland Security and Counterterrorism, Michael Sheehan, former Deputy Commissioner for Counterterrorism at the NYPD, and Robin Cleveland, former counselor to the president of the World Bank, were present at the event.

In opening the discussion, Cleveland said a biological terror attack is much more likely than a nuclear war.

"For terrorists, biological weapons are much more easy to obtain due to the lax security of scientific laboratories and more importantly, the psychological effects of bioterrorism," she said.

Townsend believes the American government can be more effective in controlling the world's supply of WMDs if "the diffusion of accountability that currently exists in our government's bureaucracy be abolished."

[http://www.nyunews.com/news/university/panel\\_experts\\_say\\_bio\\_terrorism\\_imminent-1.1316720](http://www.nyunews.com/news/university/panel_experts_say_bio_terrorism_imminent-1.1316720)

## **Al Qaeda threatens to attack India for the first time**

The Al Qaeda for the first time has directly trained its guns on India, warning of a Mumbai-style attack if there is a strike on Pakistan. The support for Pakistan from the global jihad syndicate is not expected as Islamabad has been indulgent towards the efforts to make Quetta and the so-called Federally Administered Tribal Areas the incubating ground of a reorganised and protected Al Qaeda.

Using its usual style of communication, the Al Qaeda shot off the warning to India through a video that was received by the BBC in London. "India should know that it will have to pay a heavy price if it attacks Pakistan," said Mustafa Abu Al-Yazid, who is reportedly the Al Qaeda's military commander in Afghanistan and is ranked behind No. 2 Ayman al-Zawahiri. What is also being noted here is that Pakistan had claimed that Al Yazid was killed in fighting last August Bajaur tribal region in Pakistan.

In the 20-minute video, the Al Qaeda commander, speaking in Arabic, spews venom against India and its armed forces.

"The Mujahideen will sunder your armies into the ground, like they did to the Russians in Afghanistan. They will target your economic centres and raze them to the ground." The terrorists further criticised the ban on the Jamaat Ud Dawa, which was imposed after the Mumbai attacks.

Experts believe that it is this connection that has proved dangerous for India with the most recent example being the Mumbai terror attacks.

Al Qaeda in the video also targets Pakistani President Asif Ali Zardari asking the people in Pakistan to rise up and overthrow the government, according to the BBC.

The Al Qaeda commander in the video is suspected to have been involved in a number of terror attacks. According to reports, he last surfaced in August 2008 to confirm the death of Al Qaeda chemical-weapons expert Midhat Mursi al-Sayid Umar.

[http://economictimes.indiatimes.com/News/PoliticsNation/Al\\_Qaeda\\_threatens\\_to\\_attack\\_India\\_for\\_the\\_first\\_time/articleshow/4109243.cms](http://economictimes.indiatimes.com/News/PoliticsNation/Al_Qaeda_threatens_to_attack_India_for_the_first_time/articleshow/4109243.cms)

## **Al Qaeda's bio-war experiment - one that went wrong**

An al Qaeda affiliate in Algeria closed a base earlier this month after an experiment with unconventional weapons went awry, a senior U.S. intelligence official said.

The official, who spoke on the condition he not be named because of the sensitive nature of the issue, said he could not confirm press reports that the accident killed at least 40 al Qaeda operatives, but he said the mishap led the militant group to shut down a base in the mountains of Tizi Ouzou province in eastern Algeria. He said authorities in the first week of January intercepted an urgent communication between the leadership of al Qaeda in the Land of the Maghreb (AQIM) and al Qaeda's leadership in the tribal region of Pakistan on the border with Afghanistan. The communication suggested that an area sealed to prevent leakage of a biological or chemical substance had been breached, according to the official. "We don't know if this is biological or chemical," the official said.

AQIM, according to U.S. intelligence estimates, maintains about a dozen bases in Algeria, where the group has waged a terrorist campaign against government forces and civilians. In 2006, the group claimed responsibility for an attack on foreign contractors. In 2007, the group said it bombed U.N. headquarters in Algiers, an attack that killed 41 people. Al Qaeda is believed by U.S. and Western experts to have been pursuing biological weapons since at least the late 1990s. A 2005 report on unconventional weapons drafted by a commission led by former Sen. Charles Robb, Virginia Democrat, and federal appeals court Judge Laurence Silberman concluded that al Qaeda's biological weapons program "was extensive, well organized and operated two years before the September 11" terror attacks in the U.S. Another report from the Commission on the Prevention of Weapons of Mass Destruction Proliferation, released in December, warned that "terrorists are more likely to be able to obtain and use a biological weapon than a nuclear weapon." British authorities in January 2003 arrested seven men they accused of producing a poison from castor beans known as ricin. British officials said one of the suspects had visited an al Qaeda training camp. In the investigation into the case, British authorities found an undated al Qaeda manual on assassinations with a recipe for making the poison. The late leader of al Qaeda in Iraq, Abu Musab Zarqawi, was suspected of developing ricin in northern Iraq. Then-Secretary of State Colin L. Powell referred to the poison in his presentation to the U.N. Security Council in February 2003

that sought to lay the groundwork for the U.S. invasion of Iraq. Roger Cressey, a former senior counterterrorism official at the National Security Council under Presidents Bill Clinton and George W. Bush, told The Washington Times that al Qaeda has had an interest in acquiring a poisons capability since the late 1990s. "This is something that al Qaeda still aspires to do, and the infrastructure to develop it does not have to be that sophisticated," he said. Mr. Cressey added that he also is concerned about al Qaeda in the Land of the Maghreb, which refers to the North African countries of Algeria, Morocco and Tunisia. "Al Qaeda in the Maghreb is probably the most operationally capable affiliate in the organisation right now," he said.

[www.blogrunner.com/snapshot/D/3/7/al\\_qaeda\\_bungles\\_arms\\_experiment/-31k](http://www.blogrunner.com/snapshot/D/3/7/al_qaeda_bungles_arms_experiment/-31k)

## **NSG women terror alert**

National Security Guard chief J.K. Dutt warned that al Qaeda could use women suicide bombers and biological weapons against India.

Mustafa Abu al-Yazid, an al Qaeda leader believed to be dead, threatened in a video made public on 10 February that India could expect more Mumbai-style strikes if it attacked Pakistan.

India sees the Mumbai attacks as a convergence of al Qaeda, Taliban and the Lashkar-e-Toiba.

Dutt told a seminar that al Qaeda's reported training of 80 women suicide bombers should raise the question if any of them could be sent to India. Later, the director-general linked this to the need for a bigger role for women in security agencies.

Sources said the Intelligence Bureau and Research and Analysis Wing had been alerted on these potential threats alongside warnings about possible use of biological weapons.

"The Mumbai attack was an audacious attempt by the Taliban-al Qaeda-LeT combine to shape policies of three sovereign nation states that include the oldest democracy and the largest democracy," Dutt said.

The NSG chief said it was evident after the 9/11 attacks in the US that at least one group would stop at nothing. "This thought process has been reinforced with the terror attack in Mumbai on November 26, 2008," he said.

Dutt also expressed concern about the threat from biological weapons, last known to be used in 1995 in Japan when over 10 people were killed in a Sarin gas attack in a subway by a domestic terrorist group.

[http://www.telegraphindia.com/1090212/jsp/nation/story\\_10521767.jsp](http://www.telegraphindia.com/1090212/jsp/nation/story_10521767.jsp)

## **Senior UN Counter-terrorism Official Visits the OPCW**

Mr Mike Smith, Executive Director of the United Nations Counter-Terrorism Committee Executive Directorate (CTED), visited the OPCW on February 5, 2009 for meetings with the OPCW Director-General, Ambassador Rogelio Pfirter, and other senior OPCW officials.

CTED was created to support the UN Counter-Terrorism Committee in its assessment, monitoring and promotion of Member States' implementation of resolution 1373 (2001). In that role it reviews the reports submitted by States, dialogues with them on aspects of implementation, and in some cases carries out field visits to assess how the counter-terrorism measures are working on the ground.

On September 5, 2008, the UN General Assembly reaffirmed the UN Global Counter-Terrorism Strategy adopted in 2006, which "encourages the International Atomic Energy Agency and the OPCW to continue their efforts, within their respective mandates, to help States to build capacity to prevent terrorists from accessing nuclear, chemical, or radiological materials, to ensure security at related facilities, and to respond effectively in the event of an attack using such materials."

<http://www.opcw.org/news/news/article/senior-un-counter-terrorism-official-visits-the-opcw/>

## **Al-Qaeda cell killed by Black Death 'was developing biological weapons'**

The group of 40 terrorists were reported to have been killed by the plague at a training camp in Algeria earlier in the month of June.

It was initially believed that they could have caught the disease through fleas on rats attracted by poor living conditions in their forest hideout.

But there are now claims the cell was developing the disease as a weapon to use against western cities.

Experts said that the group was developing chemical and biological weapons.

Dr Igor Khrupinov, a biological weapons expert at Georgia University, told The Sun: "Al-Qaeda is known to experiment with biological weapons. And this group has direct communication with other cells around the world.

"Contagious diseases, like ebola and anthrax, occur in northern Africa. It makes sense that people are trying to use them against Western governments."

Dr Khrupinov, who was once a weapons adviser to the Soviet president Mikhail Gorbachev, added: "Instead of using bombs, people with infectious diseases could be walking through cities."

It was reported last year that up to 100 potential terrorists had attempted to become postgraduate students in Britain in an attempt to use laboratories.

Ian Kearns, from the Institute for Public Policy Research, told the newspaper: "The biological weapons threat is not going away. We're not ready for it."

<http://www.telegraph.co.uk/news/worldnews/africaandindianocean/algeria/4294664/Al-Qaeda-cell-killed-by-Black-Death-was-developing-biological-weapons.html>



## **Iran accuses Israel of using chemical weapons in Gaza**

Iran is seeking for United Nations' serious action over Israel's use of chemical weapons in Gaza, the semi-official Fars news agency reported.

Foreign Minister Manouchehr Mottaki made the accusation against Israel in a letter to UN Chief Ban Ki-moon, urging for a "serious and effective action" over Israel's use of chemical weapons in Gaza, according to the report.

"In recent attacks by the Zionist regime's troops on Gaza, the regime's army has several times used banned weapons, including dangerous, toxic materials causing painful deaths, incapacitation or physical disabilities," Mottaki was quoted as saying in the letter.

He also called the use of the chemical weapons as the "examples of war crimes."

Earlier Iran's Ministry of Defense and Armed Forces Logistics also issued a statement to denounce the Israeli use of chemical weapons in Gaza, saying that "the Zionist regime" had fired "white phosphorus into Gaza."

After about three weeks of an unprecedented military air and ground offensive of Israel on Gaza since December 27, where around 1, 240 Palestinians killed and more than 5, 200 others wounded.

[http://news.xinhuanet.com/english/2009-01/18/content\\_10678977.htm](http://news.xinhuanet.com/english/2009-01/18/content_10678977.htm)

## **Allegations of Israel's use of chemical weapons not yet proved: UN**

UN will not make premature statements, but will await the international organisations' final report on Israel's use of chemical weapons during the hostilities in Gaza, said a spokesperson for UN Secretary-General Ban Ki-moon Brenden Varma.

"Until any determination of possible crimes is made, it is premature to talk about UN follow-up action [on Israel]," Varma wrote Trend News via e-mail.

The Israeli Defense Ministry confirmed the allegations of the illegal use of banned white phosphorus during the three-week offensive in Gaza against Hamas, but has not yet presented exact data. Defense Minister Ehud Barak said it had launched investigation into the numerous allegations of human rights and media organisations on the use of chemical weapons against the civilian population.

The UN has not spoken out on Israel's use of phosphoric weapons, as is awaiting the final reply of the UN Human Rights Council, which has its own independent mandate and is probing allegations against the Israel Defense Forces, Varma said.

Arab media reported at least 200 phosphorous bombs were dropped on the Gaza Strip during the Operation Cast Lead. BBC quoted Palestinian medics as saying that 1,300 Palestinians were killed and 5,500 wounded as a result of the offensive.

The total damage is assessed at 1.5 billion dollars.

<http://news.trend.az/index.shtml?show=news&newsid=1406055&lang=en>

## **RECENT DEVELOPMENTS IN SCIENCE AND TECHNOLOGY**

### **Combat on the cutting edge: Military plans to sink big bucks into high-tech gear for the battlefield**

Canada's soldiers of tomorrow could have assault rifles that are lighter, share pictures and come with a central power source to charge high-tech sighting, magnification, laser aimers and grenade launchers.

And new uniforms could include tourniquet bandages and anti-microbial drugs, as well

as built-in protection from chemical and biological weapons in sensitive areas where soldiers sweat.

These are some of the concepts Ottawa is spending a fortune on to make Canadian soldiers more lethal.

It issued a tender worth about \$4.75 million for what the military calls human factors engineering support. The three-year contract is meant to usher several high-tech projects worth well over \$1 billion from the lab to the battlefield.

“Canadian soldier modernization efforts to date have resulted in dramatic improvements in the areas of soldier survivability, mobility and sustainability,” says the tender. “Further efforts are now underway to achieve significant improvements in soldier lethality.”

The work is meant to apply knowledge of soldiers’ abilities and limitations to the design of weapons and other gear, said Maj. Linda Bossi, an ergonomics expert at Defence Research and Development Canada.

“If you don’t do this, it may work in the lab, but it won’t work in the mud,” Maj. Bossi said in an interview.

“So we’re not just talking about better spear-chuckers or better bullet-chuckers. We’re talking about network-integrated systems that are sensors and weapons.”

There is one potential drawback to adding too much gear to a soldier’s kit, said Terry Liston, the military’s former chief of planning and operations.

“There’s always a concern because the infantryman has so much stuff to carry,” said Mr. Liston, a retired major-general. “It’s a trade-off. If you’re going to have more soldier protection, for example, you’re going to severely restrict his mobility on foot.”

He cautioned that better-equipped soldiers, dubbed “force-multipliers,” don’t trump large numbers of boots on the ground.

Making it easier for soldiers to kill people doesn’t sit well with Steven Staples of the Rideau Institute, a left-leaning Ottawa think-tank.

“Any notion of the Canadian Forces, it seems to me, of excelling in excellence in peacekeeping is being replaced in an excellence in being able to kill people. This is really worrisome.”

<http://thechronicleherald.ca/Front/1106088.html>

## **Is pollution driving antibiotic resistance?**

Infections caused by superbugs - such as Methicillin-resistant *Staphylococcus aureus* known as MRSA. The media often blame over-prescription of antibiotics and poor hygiene standards, but these are just two of the reasons why bacteria now resist many antibiotics.

We have been investigating antibiotic resistance genes in bacteria living in soils, and how pollution may influence the way resistance evolves.

Bacteria have existed on Earth for at least three billion years. In this time they have evolved complex strategies to adapt to different habitats and compete with other bacteria for every available niche. One strategy involves attacking rivals with chemical weapons - which we call antibiotics. Logically, any bacterium attacking a competitor needs to protect itself and its species from its own antibiotics.

Antibiotics and other chemicals that could drive antibiotic resistance enter rivers and soils in many ways.

One strategy involves attacking rivals with chemical weapons - antibiotics.

Horizontal gene transfer has the power to drive the spread of resistance genes when bacteria are faced with antibiotics, disinfectants or other pollutants in waste from towns, cities and agriculture.

Antibiotics and other chemicals that could drive antibiotic resistance enter rivers and soils



in many ways. Industry uses large volumes of detergents and disinfectants - including quaternary ammonium compounds (QACs) - known together as biocides. Nearly all domestic cleaning products and shampoos also contain QACs. They wash out in large volumes with the waste water from factories and homes. QAC resistance genes are significant because they are often located with antibiotic resistance genes on the same piece of DNA, so exposure to one will co-select for the other.

Using molecular techniques to analyse bacteria in soils, we compared the number of integrons and genetic diversity of resistance genes in polluted samples with those from control agricultural soils. Polluted samples had a significantly higher number of integrons. We also found new genes - similar to known antibiotic resistance genes - were more numerous in polluted samples than in unpolluted control soils.

It appears that certain methods of waste disposal such as sludge and slurry application introduce genetic elements known to carry antibiotic resistance genes into agricultural soil. Further research is needed to study survival of bacteria carrying these elements in soil contaminated with waste, and the risk of transmission to people through meat and vegetables in the same way as food poisoning bacteria such as *E. coli* and *Salmonellae*.

The number of bacteria on Earth has been estimated by scientists from the University of Georgia as five million trillion trillion - if each bacterium were a penny, the stack would reach a trillion light years. Because this huge number of bacteria can freely exchange genes that have evolved over billions of years it is not too surprising that new genes giving resistance to clinical antibiotics appear soon after an antibiotic is introduced. But what is surprising is that it is not just antibiotics driving resistance - pollutants and waste disposal practices may also be contributing to this process.

<http://planetearth.nerc.ac.uk/features/story.aspx?id=207>

## Quality of life in chemical warfare survivors with ophthalmologic injuries: the first results from Iran Chemical Warfare Victims Health Assessment Study

Iraq used chemical weapons extensively against the Iranians during the Iran-Iraq war (1980-1988). The aim of this study was to assess the health related quality of life (HRQOL) in people who had ophthalmologic complications due to the sulfur mustard gas exposure during the war.

**Methods:** The Veterans and Martyrs Affairs Foundation (VMAF) database indicated that there were 196 patients with severe ophthalmologic complications due to chemical weapons exposure.

Of these, those who gave consent (n = 147) entered into the study. Quality of life was measured using the 36-item Short Form Health Survey (SF-36) and scores were compared to those of the general public.

In addition logistic regression analysis was performed to indicate variables that contribute to physical and mental health related quality of life.

**Results:** The mean age of the patients was 44.8 (SD = 8.7) ranging from 21 to 75 years. About one-third of the cases (n = 50) reported exposure to chemical weapons more than once.

The mean exposure duration to sulfur mustard gas was 21.6 years (SD = 1.2). The lowest scores on the SF-36 subscales were found to be: the role physical and the general health.

Quality of life in chemical warfare victims who had ophthalmologic problems was significantly lower than the general public ( $P < 0.001$ ). The results obtained from logistic regression analysis indicated that those who did not participate in sport activities suffer from a poorer physical health (OR = 2.93, 95% CI = 1.36 to 6.30,  $P = 0.006$ ).

The analysis also showed that poor mental health was associated with longer time since exposure (OR = 1.58, 95% CI = 1.04 to 2.39, P = 0.03) and lower education (OR = 3.03, 95% CI = 1.21 to 7.56, P = 0.01).

**Conclusion:** The study findings suggest that chemical warfare victims with ophthalmologic complications suffer from poor health related quality of life. It seems that the need for provision of health and support for this population is urgent.

In addition, further research is necessary to measure health related quality of life in victims with different types of disabilities in order to support and enhance quality of life among this population.

[http://7thspace.com/headlines/302213/quality\\_of\\_life\\_in\\_chemical\\_warfare\\_survivors\\_with\\_ophthalmologic\\_injuries\\_the\\_first\\_results\\_form\\_iran\\_chemical\\_warfare\\_victims\\_health\\_assessment\\_study.html](http://7thspace.com/headlines/302213/quality_of_life_in_chemical_warfare_survivors_with_ophthalmologic_injuries_the_first_results_form_iran_chemical_warfare_victims_health_assessment_study.html)

## Oregon Firm Prepares Smallpox Drug

Oregon biopharmaceutical firm Siga Technologies hopes next year to receive federal approval to distribute a new smallpox antiviral treatment, the *Oregonian* reported.

The company began work on the drug prior to 2001 and received an infusion of federal funding in the wake of the September 11 attacks. It has now received \$100 million worth of contracts from Washington.

Should the company's product, ST-246, receive authorization from the Food and Drug Administration, it would primarily be supplied to the military or placed in the Strategic National Stockpile. Hospitals or other sizable private firms might also have access to the drug.

Siga indicated this week that it would compete for a U.S. Health and Human Services Department

contract to provide between 1.7 million and 12 million doses of smallpox antiviral medication.

Meanwhile, the Indian government has signed off on marketing and sales plans there of the BioThrax anthrax vaccine produced by Maryland-based Emergent BioSolutions, the company announced.

"The government of India has been explicit in expressing its commitment to protect its population from the continuing threat of bioterrorism. We are certainly pleased that BioThrax will be a valuable countermeasure available to the government of India to achieve that goal," Emergent chief Fuad El-Hibri said in a release.

[http://www.globalsecuritynewswire.org/gsn/nw\\_20090212\\_1299.php](http://www.globalsecuritynewswire.org/gsn/nw_20090212_1299.php)

## University Develops Medical "Surge" Calculator for WMD Strikes

Researchers at Johns Hopkins University in Baltimore have developed a free programme to help public health organisations anticipate the "surge" of patients they would face after a chemical, biological or radiological attack, the school announced.

The Web-based program, dubbed Electronic Mass Casualty and Planning Scenarios, accounts for factors such as wind conditions, germ incubation periods and health care resources to determine the potential impact on hospitals of terrorist attacks and other major disasters.

"Biological, chemical, radiological or explosive attacks can bring hospitals and local health agencies to their knees, quickly overwhelming their ability to care for mass casualties," Johns Hopkins University emergency medicine head Gabor Kelen said in a statement. "Our software lets users put their own information into the modeling software, customize it to their needs, and predict what they will need to handle a surge in casualties".

## Plant diseases threaten woodland

Some of the finest gardens and woodlands in Britain are under threat from two closely related and aggressive fungus-like plant diseases.

Environment minister Jane Kennedy said they were attacking “pristine” locations and could potentially damage the landscape and the tourism industry.

The government has allocated £25m in a bid to eradicate the diseases which are spreading across the country.

They are *Phytophthora kernoviae* and *Phytophthora ramorum*.

Rhododendrons, a carrier of both diseases, are likely to be removed in woodland to combat the problem.

The flowering shrubs, popular as an ornamental species in many gardens, also grow wild in wooded areas and an area of the New Forest has already been cordoned off to allow rhododendrons to be cut down and burned.

*Phytophthora kernoviae*, first found in the south-west of England in 2003, reached Scotland five years later. It attacks and kills many trees and shrubs, including the oak and beech trees which make up so much of Britain’s woodlands.

### Devastated

The Department of Environment, Food and Rural Affairs says 69 sites in England and Wales are currently affected, with Cornwall the worst-hit region.

*Phytophthora ramorum*, first identified in 1995, has devastated woodland on the west coast of the United States where it has been responsible for the syndrome known as sudden oak death.

Few control mechanisms exist for the disease, so the importance of early detection - and proper disposal of the infected plant material - is key.

The government is to earmark some of the money for new research and development, and there will be a campaign to make landowners aware of the threat.

[http://news.bbc.co.uk/2/hi/uk\\_news/7920199.stm](http://news.bbc.co.uk/2/hi/uk_news/7920199.stm)

## Afghanistan: Schools Targeted by Chemical Weapons

### Summary

Three attacks that took place over the course of a two-week period in an area just north of Kabul, Afghanistan, involved poisonous chemical gas. The attacks targeted several girls’ schools in the area and have sent nearly 200 students, faculty and police officers to the hospital for reactions to the chemical ranging from itchy eyes to loss of consciousness. It appears that local forces opposing female education — most likely linked to the Taliban — are experimenting with a new weapon, but its ineffectiveness may limit its further use.

### Analysis

A chemical attack that took place May 12 at the Aftab Bachi girls’ school in Mahmud Raqi, Kapisa province in Afghanistan sent 98 students, teachers and other employees to the hospital after they complained of headaches, vomiting, shivering and watery eyes. Several of the girls lost consciousness, although 60 of those admitted to the hospital have already been released, and the rest are recovering and are expected to be released later today.

The incident follows two similar incidents that occurred in two different girls’ schools in Charikar, Parwan province, located approximately 11 miles from Mahmud Raqi. On April 26, around 40 students, teachers and a police officer went to the hospital after experiencing symptoms that included headaches and dizziness. An eyewitness reported that an unidentified man threw a bottle into the school compound shortly before the symptoms were observed. On May 11, approximately 60 girls went to the hospital after suffering from headaches, dizziness and stinging

eyes, with several girls losing consciousness. In the May 11 incident, the girls described smelling something sweet “like flowers” and seeing a gaseous cloud shortly before the onset of symptoms. The nature of all three attacks points to the use of a chemical gas. All of the victims were released shortly after each incident, and none showed signs of life-threatening symptoms.

The Taliban have frequently targeted schools for attacks; 92 people were killed in 292 separate school attacks in 2008, and several girls were blinded when a group of men threw acid in their faces in Kandahar. Girls’ schools are contentious in Afghanistan because forces that are more conservative have denounced such schools; the Taliban banned them during their rule from 1996 to 2001.

Because all three apparent chemical attacks targeted girls’ schools and occurred in approximately the same area within a 16-day period, it is possible that the same group — or even one person — is behind these attacks. The similarity in symptoms exhibited in each incident suggests that the attacker is using the same chemical agent in each attack. While details on the delivery of the agent are unclear, the facts evident thus far — that the first attack appeared to have been delivered when a man threw a bottle into a courtyard, and that in the second attack the girls complained of strange odors — imply that the agent is some sort of improvised chemical weapon.

The specific type of chemical is unknown and will remain a mystery until tests on blood samples taken from the victims are complete. Al Qaeda is known to have experimented with weaponized chemicals, such as when the group’s Iraqi franchise carried out a series of chlorine truck bombings in 2007 that failed to inflict more damage than a traditional attack. Al Qaeda also has been known to experiment with cyanide. Such chemical weapons can be lethal if administered in sufficient concentrations, but the fact that most of the victims were exposed outdoors may have prevented concentrated exposure.

This brings up one of the key weaknesses of chemical and biological weapons. While such weapons are highly lethal in favorable

conditions, deploying them in the real world has serious limitations. Many different variables that can alter exposure to the material, such as wind patterns, temperature and crowd density, typically make exposure less lethal. As STRATFOR has pointed out before, while improvised chemical weapons are not technically difficult to make, their drawbacks make them less attractive than the more battle-proven automatic weapons and explosives commonly used in most Taliban attacks. However, such weapons remain alluring due to excessive media attention associated with chemical and biological weapons. Because of this, some jihadists have maintained a fixation on chemical weapons because they mistakenly believe them to be superweapons capable of functioning as weapons of mass destruction.

These recent attacks in Afghanistan demonstrated a combination of Taliban tactics (targeting schools) and al Qaeda tactics (using chemical agents). Chemical weapons are not necessarily that difficult to make and use, so it is feasible that Taliban militants have learned how to create such weapons from al Qaeda members, or that they are experimenting with the simple chemical reaction weapons themselves. If a weapon is deemed successful, then STRATFOR would expect its use to spread fairly quickly as other militants in the battlespace adopt the tactic. Because these attacks have not been lethal, it appears that the perpetrators have some more work to do to improve the weapon’s lethality, or they might abandon the weapon for the Taliban’s more traditional and efficient arsenal of automatic rifles and explosives. STRATFOR will continue to monitor these attacks and work to gather additional information.

[http://www.stratfor.com/memberships/137815/analysis/20090512\\_afghanistan\\_schools\\_targeted\\_chemical\\_weapons](http://www.stratfor.com/memberships/137815/analysis/20090512_afghanistan_schools_targeted_chemical_weapons)

## INFECTIOUS DISEASES

### **H1N1 flu has killed 23, infected 1,023 in 20 countries**

The first wave of the H1N1 outbreak, presently circulating across the world, has

already infected over 1,023 people and killed 26 others in 20 countries.

Some nations, including Mexico, the country where the diseases originated and has caused maximum damage, have now started to believe that the worst is over with the outbreak having peaked between April 23 and 28.

But what most nations and WHO are now most worried about is what they call “the second wave of the H1N1 pandemic”.

Behavioral studies conducted on earlier pandemics have shown that it comes in two phases — the first wave usually being mild followed by a more devastating wave, sometime around autumn and winter months.

All four of the well-known pandemics have come in waves. That’s what happened during the deadly 1918 Spanish flu outbreak that killed over 50 million people.

Keiji Fukuda, WHO’s acting assistant director-general, told a global press conference that TOI was part of, “People imagine that a pandemic spreads everywhere at the same time a simultaneous wave of infections across the world. However, that’s not true.”

“You will see peaks of activity in some places at some time, valleys and lulls in some other. And probably that is what we will see in this pandemic too,” said Dr Fukuda who expressed concern about the infection travelling to the southern hemisphere now, as that part of the world was heading into the winter months, when influenza viruses usually thrive.

“Monitoring and surveillance is, therefore, critical as we will then know how far and wide the virus is spreading,” Dr Fukuda said.

A similar warning has also come from the head of the WHO, Dr Margaret Chan. Dr Chan, who on Monday told the UN General Assembly there was no indication that the present outbreak is similar to a pandemic in 1918, however, warned that the swine flu may re-emerge stronger than ever later, even if the current outbreak appears to be declining.

According to her, the apparent decline in mortality rates did not suggest the pandemic was coming to an end.

She said the end of the flu season in the northern hemisphere meant an initial outbreak could be milder, but a second wave would be more lethal, striking with a vengeance.

“I’d rather over-prepare than not prepare,” Dr Chan said.

Indian officials say the slowing of the H1N1 virus is due to the response of nations in setting up effective containment measures.

Joint secretary at the health ministry Vineet Chawdhry said, “We are prepared for a second wave but I hope it does not happen. It’s not just the issue of logistics. It could become the case of crying wolf another time. There is a possibility that people start thinking our threat perception was exaggerated and stall preparations.”

Union health secretary Naresh Dayal told TOI, “By the time the next wave comes, hopefully we will have a vaccine.”

WHO pandemic diseases spokesman Gregory Hartl said though the current epidemiology in Mexico might show a slowdown, history has to be studied when evaluating the virus’s potential to come back.

Hartl said, “In 1918, the Spanish flu showed a surge in the spring and then disappeared in the summer months only to return in the autumn of 1918 with a vengeance. It eventually killed 50 million people. So we cannot lower our guard.”

Initial studies conducted by the CDC suggest we are currently dealing with an H1N1 strain that’s not as lethal as the virus that was responsible for the Spanish flu.

According to Peter Palese, a microbiologist at Mount Sinai School of Medicine in New York City, “There are certain characteristics, molecular signatures, which this virus lacks. In particular, the 2009 H1N1 lacks an amino acid that appears to increase the number of virus

particles in the lungs and make the disease more deadly.”

<http://timesofindia.indiatimes.com/India/H1N1-flu-has-killed-23-infected-1023-in-20-countries/articleshow/4483774.cms>

## **India better prepared to tackle swine flu: official**

Even as the government claims that India is now better prepared to deal with influenza A(H1N1) outbreak than it was four years ago, three persons are being kept under observation here and two in Kochi.

Reports of swab samples of the three admitted to government hospitals in Delhi are being awaited, while the samples from Kochi are yet to reach the National Institute of Communicable Diseases (NICD) in Delhi and the National Institute of Virology (NIV), Pune. Vineet Chowdhry, Joint Secretary, Ministry of Health and Family Welfare, told journalists.

Earlier, 12 samples tested negative for swine flu, he said, adding no patient was under observation in Hyderabad.

Of the three admitted to the Delhi hospitals, one had volunteered to get himself tested. Two of them had arrived from the United States and the other from Germany. The two in Kochi had visited the U.S., Europe, and came to India via Dubai.

Mr. Chowdhry said screening might be required at road transition points in Uttar Pradesh and Bihar following reports that 84 passengers had entered India via the land route from Nepal. They were now being tracked down. He, however, ruled out sealing of the borders as there was no infection in any of the neighbouring countries. Sealing would only cause inconvenience.

## **Seaports under watch**

Pointing out that seaports were also under observation but no additional medical staff had been deployed there, Mr. Chowdhry said sea travel took longer and it was mainly the crew

who arrived at the ports. The Port Health Office was adequate to handle them.

Meanwhile, over 45,000 passengers had been screened at 22 airports. The 2,000 passengers who had arrived from Mexico and Canada in the past two weeks were now being screened. The Integrated Disease Surveillance Programme was being further activated to maintain a regular check on passengers.

As many as 192 doctors and paramedical staff members were on duty round the clock. Rejecting the suggestion that testing be decentralised, Mr. Chowdhry said samples were being sent to the NICD and the NIV for parallel testing. Only when both reports matched would the results be announced.

<http://www.hindu.com/2009/05/05/stories/2009050557180100.htm>

## **WHO says 1,003 swine flu cases in 20 countries**

WHO officials estimate there are 1,003 cases of swine flu spread through 20 countries, but are not planning to raise the alert level yet, top WHO official Margaret Chan said.

“There are now 1,003 confirmed cases of H1N1 in 20 countries,” the World Health Organisation chief told senior UN officials in New York during an audio-conference.

“We don’t know how long we have till we move to phase six. Six indicates we are in a pandemic. We are not there yet,” she added.

Chan was speaking from Geneva during an informal meeting of the UN General Assembly to evaluate WHO preparations to confront the A(H1N1) virus.

The WHO said there were 985 confirmed cases of swine flu in 20 countries, including 590 cases in Mexico where 25 people have died, and 226 cases in the United States where one toddler has succumbed to the disease.



<http://timesofindia.indiatimes.com/World/WHO-says-1003-swine-flu-cases-in-20-countries/articleshow/4483314.cms>

## Mexico starts China flu airlift

A Mexican plane has arrived in China to collect dozens of Mexicans who have been quarantined because of fears they may be infected with swine flu.

About 70 Mexicans were confined despite just one confirmed case of the virus.

The issue sparked a diplomatic row, with Mexico accusing China of targeting its citizens unfairly, and Beijing saying it was a “purely medical” issue.

Some 26 people have died of the virus in Mexico and more than 1,000 cases have been reported in 20 countries.

But just one fatality has been recorded outside Mexico - a two-year-old Mexican boy who died in the US while on a visit.

### In other developments:

- The World Health Organisation says 1,124 people around the world have so far contracted the H1N1 swine flu virus. However, WHO figures often lag behind those announced by national government laboratories.
- Mexico puts the number of infections within its borders at 727, higher than the WHO's figure of 529.
- President Felipe Calderon appears on Mexican TV praising the country's precautions against swine flu. “Thousands of lives have been saved not only in Mexico but in the world,” Mr Calderon said.
- In the UK, delivery begins of specially-produced leaflets offering advice on swine flu and advice on how to prevent its spread.
- South Korea reports its second confirmed case of swine flu, the first instance of human-to-human transmission in Asia.

## Second row brewing

The row between Mexico and China developed after a 25-year-old man who had flown from Mexico to Shanghai and Hong Kong was diagnosed with swine flu - or H1N1.

### Confirmed Cases

**Mexico:** 101 suspected deaths - 26 confirmed; 727 confirmed cases

**US:** One death, 286 confirmed cases

**Canada:** 140 confirmed cases

**Spain:** 54 confirmed cases

**UK:** 27 confirmed cases

## Hetero Drugs close to receiving orders for its swine flu medicines

Hyderabad-based Hetero Drugs is close to receiving orders from foreign countries for its swine flu medicines worth at least \$10 million in the next few days, a top company executive said. The privately held pharma company has the licence from Swiss drug major Roche to develop and sell the generic version of Tamiflu (Oseltamivir).

Following the global outbreak of H1N1 Flu, commonly known as swine flu, governments of several countries are stockpiling Oseltamivir the antiviral drug widely used to combat the disease. The outbreak which originated in Mexico has now spread to 18 countries, including the US, several European countries and some Asian countries.

“We are in final stages of discussions with several countries, including some whom we have supplied flu drugs in the past. We will have a clarity on supply and expect drug orders of at least \$8-10 million,” Hetero Drugs director (Marketing) Srinivas Reddy told ET.

The company is in discussions to supply drugs to about 40-50 countries which include Argentina, Columbia, Venezuela, Honduras, Thailand, Philippines, Egypt, Saudi Arabia and over 10 countries in Africa. Hetero claims to

have the capacity to supply 40 million capsules of Oseltamivir in two weeks time. But for this, it may have to halt production of some of its other drugs.

“We can sacrifice some other product lines,” Mr Reddy said. He added that the company will not face any raw material constraints to churn out the drug as it has agreements with firms who supply the same intermediates to Roche, the global supplier of the drug.

American company Gilead Sciences developed the antiviral drug Oseltamivir and has given the marketing license to Roche, which sells the drug under the brand Tamiflu. In India, Roche has sub-licensed the manufacturing rights to Hetero Drugs.

Other Indian companies such as Ranbaxy, Cipla, Natco and Roche India have all expressed their capabilities to supply lakhs of drugs in a few days notice. They are also in discussions to supply drugs to many countries who want to buy low cost version of Tamiflu.

Roche does not hold a patent for Tamiflu in India. Its patent application was rejected by the India patent office in March 2009 which paved the way for Indian companies to legally manufacture and sell their generic version of the drug.

<http://economictimes.indiatimes.com/News/News-By-Industry/Healthcare-Biotech/Pharmaceuticals/Hetero-Drugs-close-to-receiving-orders-for-its-swine-flu-medicines/articleshow/4483001.cms>

## **Swine flu leaves Southern Hemisphere out in cold**

The Southern Hemisphere has been mostly spared in the swine flu epidemic. That could change when winter starts in coming weeks with no vaccine in place, leaving half the planet out in the cold.

So far, the most affected nations have been in North America and Europe, which are heading into summer. But flu is spread more easily in the winter, and it's already fall down south. Experts fear public health systems could be overwhelmed — especially if swine flu and

regular flu collide in major urban populations.

“You have this risk of an additional virus that could essentially cause two outbreaks at once,” Dr. Jon Andrus said at the Pan American Health Organisation's headquarters in Washington.

There's also a chance that the two flus could collide and mutate into a new strain that is more contagious and dangerous.

“We have a concern there might be some sort of reassortment and that's something we'll be paying special attention to,” World Health Organisation spokesman Dick Thompson said in Geneva.

Flu spreads more readily during the winter because people congregate indoors as the weather gets colder, increasing the opportunity for the virus to hop from person to person, said Raina MacIntyre, public health director at the University of New South Wales in Australia. Colder temperatures also may make it easier for the virus to infect people.

“The highest peaks of influenza activity occur in winter,” MacIntyre said. “For us in the Southern Hemisphere, it's particularly concerning.”

And while New Zealand is the only southern nation with confirmed swine flu cases, “it's almost inevitable that it will come to Australia,” she said. Health officials in Brazil also say it's a near-certainty swine flu will hit Latin America's largest nation, where there are 25 suspected cases but none confirmed so far.

Humans have only limited natural immunity to the never-before-seen H1N1 swine flu virus, which is a blend of bird, pig and human viruses that jumped from pigs to humans and began spreading easily. The strain has killed relatively few people in its current form compared to traditional flu, which kills about 36,000 people each year in the U.S. and more than 250,000 worldwide.

The timing is particularly challenging for vaccine makers. A vaccine for swine flu is still months from being produced, and will likely be available just as flu season is ending in southern countries.

“The vaccine won’t come in time for South America,” said Dr. Gonzalo Vecina of Sao Paulo’s prominent Hospital Sirio-Libanes.

In addition, many companies may switch to making swine flu vaccine instead of seasonal flu vaccine, potentially jeopardizing the southern countries’ regular flu vaccine stocks for next year.

“This is a concern we are working on,” Andrus said. “We want to prevent it from being a potential barrier to getting it to the people who need it most.”

Even in normal years, vaccine makers don’t have the capacity to make enough shots for more than a fraction of the world’s population.

Some experts think health officials in Southern Hemisphere countries should be more concerned with seasonal flu than with swine flu.

John Mackenzie, a flu expert at Curtin University in Australia, said countries should focus on regular flu vaccines for high-risk populations, including the elderly and those with chronic illnesses, since swine flu appears relatively mild so far.

But Thompson said WHO is also concerned about a possible “reassortment” — or mixing of regular and swine flu viruses.

“Governments have to step up their actions to protect their populations, especially in the absence of a (swine flu) vaccine,” said Thompson. “Latin American countries may have a somewhat stronger surveillance system than in Africa. Africa’s going to need some additional support and surveillance.”

Brazil announced it was authorizing \$67 million in emergency funding to combat swine flu, much of it for public information campaigns on how people can prevent its spread through basic means, like frequent hand-washing.

In Africa, which has yet to confirm a swine flu case, an outbreak during traditional flu season will make diagnosing and treating the

two viruses a challenge, said Barry Schoub, director of South Africa’s National Institute for Communicable Diseases.

Even in the absence of cases, officials are preparing. Johannesburg’s O.R. Tambo International Airport, a regional gateway that handles millions of travelers each year, has plans to get a thermal image detection system running to check passengers for fever. A supply of masks has been provided to that airport and others, as well.

Hospitals have been given guidelines on how to handle suspected cases. South Africa, the richest country in the region, is poised to assist its neighbors should they need help with testing or treatment.

South Africa has stockpiled about 100,000 courses of the antiviral drug Tamiflu, used to treat those infected, and has access to more if needed, Schoub said.

Other countries said they’re well-prepared, too. Australia has a stockpile of 8.7 million courses of Tamiflu and Relenza to treat its population of 22 million, MacIntyre said. Brazil says it is well-prepared but has Tamiflu for just 9 million people in a nation of more than 190 million.

Argentina, population 40 million, has 500,000 treatments with another 110,000 on order. Chile, with 16 million, has 300,000 treatments and has asked for 500,000 more. Venezuela has boasted of having plenty of Tamiflu but has not responded to repeated requests to say how much is available for the nation of 26 million.

And in Bolivia, one of the hemisphere’s poorest nations, Health Minister Ramiro Tapia announced that the country has only 100 treatments but that WHO has promised an emergency shipment of 12,000. Tourists feared they might not be given Tamiflu if they fall ill, but Tapia said the government would provide it free to anyone in need.

The greatest risk to South American nations are its most vulnerable populations, who live in slums ringing big cities and often have little access to health care.

“You can’t talk about at-risk countries, but rather populations at risk, and that’s the families of eight people who live together in a single room,” said Dr. Mauricio Espinel, an epidemiologist at Ecuador’s University of San Francisco.

<http://www.google.com/hostednews/ap/article/ALeqM5jV2XVgYGNQGZTfFbcTJV-uv3p6nBQD97VOOJOo>

## **FAO urges countries to closely monitor A/H1N1 in pigs**

The Food and Agriculture Organisation (FAO) said that national authorities and farmers should carefully monitor pigs and investigate any possible occurrences of influenza-like symptoms in domestic animals.

The Rome-based agency of the United Nations made the appeal after transmitting of the A/H1N1 virus between pigs and humans has been confirmed in Canada.

“The human-to-animal transmission that occurred in Canada does not come as a surprise as influenza viruses are capable of transmitting from humans to animals,” FAO’s Chief Veterinary Officer Joseph Domenech said.

“The Canadian event should therefore not be a matter of panic, but it should remind us of the human-animal link in virus transmission on which we definitely need to keep an eye open,” he added.

Influenza viruses, whether in humans or among animals, are constantly evolving genetically along with changes in their ability to cause morbidity and mortality in humans or animals. Therefore the current A/H1N1 situation should be carefully monitored as many of the virus characteristics and developments are still unknown, Domenech said.

Surveillance for porcine respiratory disease should be intensified and all cases of porcine respiratory syndrome are recommended to be immediately reported to veterinary authorities, the FAO recommended.

The UN body also suggested governments inform any occurrence of outbreaks of the new A/H1N1 Influenza virus in pigs to international agencies concerned.

Strict bio-security measures including restriction of movements of pigs, goods and people should be applied on all farms or holdings with swine showing signs of clinical respiratory illness until diagnosis of the illness have been made, the FAO said in a press release.

Where A/H1N1 influenza is confirmed, movement restrictions should be in force for seven days after the last animal has recovered, the agency said.

Governments are required to provide full support in improving bio-security measures particularly to small and medium pig farmers, it emphasized.

Persons who work directly with swine should be urged not to go to work if they have any signs of respiratory disease, fever or any influenza-like illness, while animal handlers and veterinarians should wear protective clothing to minimize the risk of being infected, it said.

The FAO also stressed that there is absolutely no need to slaughter animals in view of preventing circulation of the A/H1N1 virus.

The UN organisation said the A/H1N1 virus cannot be transmitted to humans by pork or pork products, which will not be a source of infection under good hygienic standard.

[http://news.xinhuanet.com/english/2009-05/05/content\\_11313697.htm](http://news.xinhuanet.com/english/2009-05/05/content_11313697.htm)

## **Egypt garbage men clash with police over pig cull**

Egyptian police fired tear gas at garbage collectors who pelted them with rocks and bottles over fears they had come to seize their pigs as a precaution against a new flu virus.

At least 10 people were injured in the clashes in Manshiet Nasr, a shantytown on Cairo's outskirts where residents burnt trash barriers in the street to keep police at bay. Security sources said up to 15 people were detained.

Three police were also injured in clashes with pig farmers in another area of the capital.

Egypt, already hit hard by bird flu, ordered the slaughter of all Egypt's roughly 300,000 to 400,000 pigs on April 29 as a precaution against the H1N1 swine flu virus, a move the United Nations said was "a real mistake."

Egypt, which has not reported any H1N1 cases, fears another flu virus could spread quickly in a country where most of the roughly 80 million population live in the densely packed Nile Valley, many in crowded slums around Cairo.

One security source said police had gone to the Manshiet Nasr neighbourhood, a mix of concrete and brick apartment blocks and makeshift shanties, to seize pigs belonging to garbage collectors who make their living sorting trash.

But another security source said police were simply surrounding the neighbourhood to prevent residents from moving their animals outside the neighbourhood to hide them from officials seeking to enforce a cull.

"We serve the people and they come and cut off our livelihood. The pigs don't have any disease. The country is diseased. Take samples from the pigs and if they have disease, we would cull them," Manshiet Nasr resident Marzouk Badr Adli said after the clashes, complaining about the cull.

The new virus strain — a mix of swine, avian and human viruses — is being spread by people, not pigs. But culling swine, largely viewed as unclean in Muslim Egypt, could help quell any public panic in the most populous Arab country.

Pigs are mainly raised by the Christian minority, and government officials have complained that some farmers are trying to hide their

pigs, making it harder for officials to carry out the cull.

The World Health Organisation has identified 787 H1N1 infections in 17 countries, including in Egypt's neighbour Israel, and said there were 19 confirmed deaths in Mexico.

***<http://www.reuters.com/article/newsMaps/idUSTRE5421R020090504>***

**Compiled by:** Wg. Cdr. Ajey Lele, Dr. Monalisa Joshi and Gunjan Singh.