NATIONAL AND INTERNATIONAL DEVELOPMENTS

Allegations of toxic chemical attacks in Syria

25 March 2015

Commenting on recent reports about alleged toxic chemical attacks in Syria, the OPCW Director-General, Ambassador Ahmet Üzümcü, said, "We have been monitoring the recent reports suggesting that toxic chemicals may have been used as weapons in the Idlib province of the Syrian Aran Republic. This matter is of serious concern".

Ambassador Üzümcü noted his decision to continue with the Fact Finding Mission, which is mandated to look into all serious allegations of use of toxic chemicals for hostile purposes in the Syrian Arab Republic. The continuation of the Mission's work has been endorsed by the OPCW Executive Council and United Nations Security Council resolution 2209 (2015).

http://www.opcw.org/news/article/allegations-of-toxic-chemical-attacks-in-syria/

Course for Analytical Chemists from Laboratories supporting Customs Service held in Warsaw, Poland

29 April 2015

The OPCW and the Institute of Industrial Organic Chemistry (Instytut Przemystu Organicznego (IPO)) organised the fourth Course for Analytical Chemists from Laboratories supporting Customs Service from 13-17 April 2015. Participants from 13 States Parties* attended the programme. The objective of the training programme was to assist qualified analytical chemists from laboratories that support, or plan to support customs services in acquiring further experience and practical knowledge of the analysis of chemicals related to the Chemical Weapons Convention. In addition, it facilitates the adoption of good laboratory practices for the implementation of the Convention.

The training programme structure was designed to further expose qualified analytical chemists and scientists to enhance their knowledge on the role of customs-service laboratories in implementation of Article XI of the Convention and promoting chemical safety in laboratory. The course provided sound knowledge in general aspects of the OPCW and the Convention; chemical structure and properties of scheduled chemicals; methods of separation and structure elucidation; and detection and analysis of scheduled chemicals at various concentration levels.

The IPO also provides basic training on the OPCW Central Analytical Database (OCAD) for the analysis of Scheduled Chemicals under the Chemical Weapons Convention. The feedback from the participants was very positive and they expect to apply the knowledge and experience gained from this course in line with their scope of work.

* Algeria, Burundi, China, Costa Rica, India, Kenya, Malaysia, Nigeria, Paraguay, Serbia, Sudan, Tunisia and United Arab Emirates.

http://www.opcw.org/news/article/course-for-analytical-chemists-from-laboratories-supporting-customs-service-held-in-warsaw-poland/

The Fourth Regional Training Course on Emergency Response to Chemical Incidents for Asian States Parties Held in Singapore

17 March 2015

The Government of Singapore and the OPCW jointly organised the Fourth basic training course on emergency response to chemical incidents for Asian States Parties. It was held with the support of the Singapore Customs and Civil Defence Forces from 9 to 12 March 2015. Twenty experts from 10 countries* were trained.

This basic training course is related to national and regional emergency response capacity building within the framework of Article X of the CWC for States Parties in the Asian region. The training course was held at the Civil Defence Academy of Singapore. The aim was to train participants in planning for, and building a support team in, civil protection, civil defence and decontamination operations, as well as responses to chemical weapon attacks and other incidents involving the release of toxic industrial chemicals.

This course was the first part of a tailored programme of training based on annual training cycles conducted at the regional level. In line with this approach to capacity building projects under Article X, it is expected that participants selected for this course will participate in advanced training to be held in the Republic of Korea in June 2015 and an exercise in Indonesia in November 2015.

The Technical Secretariat also conducted an outreach event for members of the Singapore Chemical Industry Council to underline the importance of the CWC and the role played by partnerships with chemical industry.

*Australia, Bhutan, China, Fiji, India, Iran, Malaysia, Philippines, Republic of Korea, Sri Lanka and 2 participants from Myanmar as observers.

http://www.opcw.org/news/article/the-fourth-regional-training-course-on-emergency-response-to-chemical-incidents-for-asian-states-p/

Fourth Advanced Regional Assistance and Protection Course on Chemical Emergency Response for GRULAC States Parties held in Argentina

30 April 2015

The Fourth Advanced Regional Assistance and Protection Course on Chemical Emergency Response for States Parties in Latin America and the Caribbean was held from 20 to 25 April in Buenos Aires, Argentina. The course was co-organised by the Technical Secretariat of the OPCW and the Argentine National Authority to the Chemical Weapons Convention, the Ministry of Foreign Affairs, with the support of the Ministry of Security, namely the Cadet School of the Federal Police. The course benefitted also from contributions made by instructors from Costa Rica and Spain Thirty three participants first responders from 17 States Parties in the Region attended the course*.

The training relates to the offer made by Argentina in line with paragraph 7 of Article X of the CWC and was the second stage of an Assistance and Protection full training cycle designed for the GRULAC region that begun in Brazil last March for the same group of participants.

Different scenarios of growing complexity provided for advanced training of the participants on the proper use of individual

and protective equipment which included SCBA, as well as containment, rescue and decontamination techniques. The course provided extensive training in the practice of the incident command system approach, aimed at the improvement of coordination and effectiveness of response during incidents with chemical warfare agents and toxic industrial chemicals.

The training also built on the continuous discussion and exchange of information and experiences that contributed to the strengthening of the team spirit of this new group of trainees.

*Argentina, Barbados, Brazil, Colombia, Costa Rica, Dominica, Ecuador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Spain and St Lucia.

http://www.opcw.org/news/article/fourth-advanced-regional-assistance-and-protection-course-on-chemical-emergency-response-for-grulac/

Top-secret military warning on Ebola biological weapon terror threat

Porton Down memo marked 'UK secret UK eyes only' reveals scientists analysed use of virus by al-Qaida or Isis

Jamie Doward

21 February 2015

Scientists at the top-secret military research unit at Porton Down, Wiltshire, have been assessing the potential use of Ebola as a bioterrorism weapon, according to confidential documents.

A three-page memo, marked 'UK secret UK eyes only', reveals that the unit, where chemical, radiological and biological threats are analysed, was tasked with evaluating whether terrorist organisations such as al-Qaida and Islamic State (Isis) could use the deadly virus to attack western targets.

The heavily redacted document, which has been released under the Freedom of Information Act, reveals that the unit was asked last October to provide "guidance on the feasibility and potential impact of a non-state actor exploiting the Ebola outbreak in west Africa for bioterrorism".

It goes on to explain that non-state actor threat assessments are "provided by the joint terrorism analysis centre", while threats to "UK deployed forces are provided by defence intelligence". The memo outlines three possible scenarios under which terrorists might seek to exploit the Ebola outbreak, which so far has killed more than 9,000 people in the three most affected countries, Guinea, Sierra Leone and Liberia.

The first scenario outlined is completely redacted, illustrating the acute sensitivity about the issue. The second scenario is heavily blacked out but, according to the memo, "would be both logistically and technically challenging for a non-state group to undertake". It observes: "Clearly there are practical issues involved with such a scenario that of themselves are often not insurmountable but taken together add enormously to the complexity of successfully undertaking this attack."

A third, also heavily redacted, scenario "constitutes the most technically challenging of the scenarios considered here".

Concerns that terrorist groups might look to "weaponise" Ebola have been raised by several thinktanks and politicians. Last year Francisco Martinez, Spain's state secretary for security, claimed that Isis fighters were planning to carry out "lone wolf" attacks using biological weapons. Martinez said that his belief was informed by listening in to

conversations uncovered in secret chatrooms used by terrorist cells. The claim has since been played down by others.

Jeh Johnson, the US department of homeland security secretary, said last October that "we've seen no specific credible intelligence that Isis is attempting to use any sort of disease or virus to attack our homeland".

Dr Filippa Lentzos, a senior research fellow at King's College London and an expert on bioterrorism, said terrorists looking to use the virus as a weapon would encounter problems. "It doesn't spread quickly at all," she said. "Terrorists are usually after a bang and Ebola isn't going to give you that."

On average, a person infected with Ebola will infect two more people. In a developed country such as the UK transmission would be even more limited.

"People with Ebola are infectious only when they show symptoms," Lentzos said. "Could terrorists go to west Africa, get infected, then come back and sit on the tube? Sure, but they're not likely to be functional for very long. They're going to be very sick and you'll see that. So they would have only a very small window in which to operate. And in a country with a developed public health system like the UK, there would be plenty of chances to clamp down on an outbreak."

Other biological weapons would potentially be more attractive to terrorists, experts suggested. Unlike Ebola, which requires the transmission of body fluids, anthrax spores can be dried and milled down to form tiny particles that can be inhaled.

However, even the suggestion that Ebola could be weaponised made it a potentially powerful weapon for terrorists, Lentzos suggested. "If your aim is not to kill a lot of people, or even make them ill, but instead to frighten them and cause a huge level of societal disruption, then bioterrorism would do that. It elicits exceptionally high levels of fear, disgust and abhorrence."

The use of pathogens as a weapon has been tried before. Following the attacks in New York and Washington in 2001, five people died in the US after opening letters laced with anthrax. In the 1980s, a cult in Oregon spread salmonella on salad bars in restaurants in an attempt to keep voters from the polls so its preferred candidates would win.

"The risk of small-scale bioterrorism attacks is possible and very likely," Lentzos said.

Porton Down is known to have experimented with Ebola but a specific request for the laboratory to analyse the virus's potential use by "non-state agents" highlights the growing concern that terrorists are becoming increasingly inventive in their choice of weapons.

One scenario could see terrorists combining genes from different pathogens to synthetically create super pathogens that could spread disease far more effectively than Ebola. But Lentzos suggested this was unlikely. "It's pretty damn hard to make dangerous pathogens from scratch in the lab. Experts have a really hard time doing that. At this point I'm not sure that's what we need to worry about."

Lentzos said that focusing on the terrorist threat posed by Ebola risked losing sight of the bigger picture. "To beat Ebola we have to worry less about terrorism and more about public health. Disease knows no borders."

http://www.theguardian.com/uk-news/2015/feb/21/top-secret-ebola-biological-weapon-terror-warning-al-qaida-isis

Mers virus: What are the symptoms, what is it and where in the world has it affected?

by Alexander Ward

2 June, 2015

Last week, South Korea confirmed that the country had experienced two deaths from Middle East Respiratory Syndrome (Mers) after tests on a 58-year-old woman who died of acute respiratory failure showed she had been infected with the disease before her death.

A 71-year-old man who tested positive for the virus also died.South Korea has now reported 24 cases since last month, in most instances in people who have had contact with the original patient.

China also reported that it had placed one of the South Korean relatives of the original case in quarentine after he presented sympotoms of Mers at a Chinese hospital. Staff are said to have drawn lots at the hospital as to who will treat the patient.

What is Mers?

Middle East respiratory syndrome coronavirus (Mers) belongs to the same group of coronaviruses that includes SARS and the common cold.

The first fatality occurred in Saudi Arabia in 2012, the virus affects the respiratory system, attacking patients' lungs and breathing tubes.

The Centers for Disease Control and Prevention (CDC) have previously said that all reported cases have been linked to countries in and near the Arabian Peninsula.

South Korea has had a spate of cases in the last month and there have been 1,167 reported incidents of Mers worldwide, of which 479 have died from the disease.

The virus can affect anyone; reported cases have gone been as young as one-year-old and as late in life as 99.

People who are at an increased risk of catching the virus are those who have exposure to camels and healthcare personnel who do not follow recommended infection-control precautions.

According to the CDC the virus is particularly dangerous for people with diabetes, kidney failure, or chronic lung disease.

Most of the deaths which have occurred already have an underlying medical condition.

Could it spread?

Mers spreads through close contact between infected patients and those caring for or living with them.

The World Health Organisation has said that there are no known cases of Mers spreading throughout the community however, although there are some cases where transmission of the virus has occurred in hospital.

How can you catch it?

To catch the virus, a person would have to come into close contact with somebody who is already infected with Mers. That said, the CDC advises people not to drink raw camel milk and urine and not to eat undercooked meat – especially camel meat.

What are the symptoms?

Those infected tend to display symptoms between two and five days, although the virus can have an incubation period of up to 14 days.

When patients do present with symptoms, they are usually fever, shortness of breath and coughing. Some people also suffer from gastrointestinal symptoms including diarrhoea, nausea and vomiting.

http://www.independent.co.uk/news/world/asia/mers-virus-what-is-it-what-are-the-symptoms-and-where-has-it-affected-10291527.html

South Korea grapples to contain MERS as 1,369 in quarantine

by Madison Park, CNN

4 June, 2015

Hong Kong (CNN) The World Health Organization warned that the MERS outbreak in South Korea is likely to grow, as the number of people under quarantine crept up to 1,369 on Wednesday.

The Korean Centers for Disease Control and Prevention confirmed five new cases — increasing the number of people with the disease to 35. These new cases were contracted within hospitals.

So far, three people have died after contracting the respiratory virus in South Korea, the country's Health Ministry said Thursday, in the largest MERS outbreak outside Saudi Arabia.

The first case, concerning a man who returned to South Korea after traveling to Saudi Arabia, Qatar, the UAE and Bahrain, was reported on May 20. The person had not been ill during his travels, according to the World Health Organization.

More than 900 schools have shut to prevent the spread of the virus, according to South Korea's education ministry.

The extent of the outbreak in South Korea has taken many by surprise — mainly because the virus has not been shown to spread easily between humans and the health care system in the country is considered to be sophisticated and modern.

South Korean President Park Geun-hye acknowledged problems in the country's early response earlier this week.

"Initial reaction for new infectious diseases like MERS is very important, but there were some insufficiency in the initial response, including the judgment on its contagiousness," she said.

She convened an emergency MERS meeting on Wednesday.

MERS is in the same family of viruses as SARS (severe acute respiratory syndrome) as well as the common cold. However, MERS does not spread easily between humans — as far as scientists know at this point.

"So far, the virus has been circulating in humans for three years," said Dr. Leo Poon, a virology expert at the School of Public Health at the University of Hong Kong, who worked on the SARS outbreak more than a decade ago. "We found little transmission in human. We know there is human-to-human transmission, but it's not sustainable."

Then why is it spreading in South Korea?

Since MERS, short for Middle East respiratory syndrome, was first reported in Saudi Arabia in 2012, international cases have largely been confined to travelers bringing the virus back to other countries and infecting one or two others. There have been deaths in countries like Oman, Algeria, and Malaysia — but none of them had additional infections to the extent of South Korea.

"This is quite unusual. I think this is the only country, apart from those in the Middle East, that has such a number of cases," said Poon. "It's not entirely surprising. In the Middle East, people in Saudi Arabia had hospital outbreaks where a few people got infected. It's a similar situation at the moment."

In early 2013, 23 MERS cases in eastern Saudi Arabia were linked to a single outbreak extending through four health care facilities.

Similarly, the vast majority of the South Korean cases have been linked to infections from hospitals.

Another factor for the spread in South Korea could be the fact that family members often stay with patients in their hospital rooms to watch and care for their loved ones.

"With the hospital culture here, the family does a lot of the nursing. For general patients on the ward there are fewer nurses than we are accustomed to in the West," said Dr. John Linton of Yonsei University's Severance Hospital in Seoul. "They would have been in close proximity to other patients."

How did it start in South Korea?

The first patient, a 68-year-old man, had traveled to four Middle Eastern countries before returning to South Korea on May 4. During his flight, he did not have any symptoms.

As he started getting sick a week later, the Korean sought treatment at two clinics and two hospitals — "creating multiple opportunities for exposure among health care workers and other patients," according to the WHO. MERS was not suspected and health care workers did not treat the first patient in isolation.

As a result, the MERS cases in South Korea span patients from several health care facilities. Health officials have not identified the hospitals, but 22 of the current cases are related to those who were at what's being called "Facility B." That hospital has closed voluntarily.

"Given the number of clinics and hospitals that cared for the index case, further cases can be expected," the WHO stated in a situation report on Wednesday.

Some of the infected people occupied the same room as the first patient and others had been in the same ward for times ranging from five minutes to several hours, according to the WHO.

How does MERS spread?

Concern about the virus is gripping many in South Korea, with schools shutting and the increased use of face masks and hand sanitizers.

The virus acts like a cold and attacks the respiratory system, the Centers for Disease Control and Prevention has said. But symptoms, which include fever and a cough, are severe and can lead to pneumonia and kidney failure.

MERS spreads from close contact with an ill person, such as living or caring for them.

5 things to know about MERS

About three to four out of every 10 people reported with MERS have died. But the people who died often had underlying medical conditions that made them more vulnerable.

The two patients who died in South Korea had chronic obstructive pulmonary disease and heavy asthma.

As of Wednesday, there have been 1,179 confirmed cases of MERS reported to WHO since 2012, and at least 442 cases were fatal. Cases have been reported in 25 countries, with China and South Korea joining the ranks only last month, WHO said.

MERS has been linked to camels and it's possible that some people became infected after coming into contact with camels, but it's not completely clear.

There are no vaccines and no cures.

To prevent MERS, the CDC recommends everyday hygiene practices like hand-washing, covering coughs and sneezes, and avoiding personal contact with sick people.

http://edition.cnn.com/2015/06/03/world/south-korea-mers/

DISARMAMENT

First of 12 Chemical Weapon Production Facilities in Syria Destroyed

3 February 2015

The destruction of an underground structure in Syria that previously hosted a chemical weapon production facility – the first of twelve planned to be destroyed – was completed on 31 January 2015. OPCW inspectors verified and declared the structure as destroyed on the same day.

At the same time, destruction activities and preparatory work at the eleven remaining structures continue.

"I welcome the destruction of the first facility, which had been delayed due to some technical reasons. I am hopeful that remaining destruction activities will proceed according to the plan," said Director-General Ahmet Üzümcü.

98% of chemical weapons declared by the Syrian Arab Republic have so far been verified by the OPCW as destroyed. This includes 100% of sulfur mustard and methylphosphonyl difluoride – a precursor chemical for the nerve agent sarin – which were neutralised aboard the US Cape Ray.

Only 29 metric tones of Hydrogen fluoride remain to be destroyed at facilities in the United States and United Kingdom.

Progress towards destruction of effluent arising from sea-based destruction of sulfur mustard and methylphosphonyl difluoride continues to be made at facilities in Germany and Finland, respectively – 63% of 333,520 kg of sulfur effluents and 52% of 5,867,000 kg of fluorinated effluents have been destroyed.

The Declaration Assessment Team of the OPCW, whose mandate is to assist the Syrian authorities to complete their declaration, has undertaken its seventh visit to Syria and will submit its report at the next meeting of the Executive Council.

http://www.opcw.org/news/article/first-of-12-chemical-weapon-production-facilities-in-syria-destroyed/

OPCW and CTBTO Heads Meet To Strengthen Cooperation

23 February 2015

The Executive Secretary of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Lassina Zerbo, today met the Director General of the Organisation for the Prohibition of Chemical Weapons (OPCW), Ahmet Üzümcü, at the OPCW's headquarters in The Hague to discuss deepening the cooperation between both organisations.

"Our organisations are cornerstones of global disarmament and non-proliferation architecture, and it is vital that we learn from each other," said Director-General Üzümcü.

"We value the achievements of the 2013 Nobel Peace Prize winner in verification and are eager to share the experience gained from our own on-site inspection activities," said Executive Secretary Zerbo.

The OPCW and the CTBTO are both mandated to carry out inspections in their Member States: to verify compliance with the Chemical Weapons Convention (CWC) in the case of the OPCW, and to monitor compliance with the Comprehensive Nuclear-Test-Ban Treaty (CTBT), once the Treaty has entered into force.

While CWC and CTBT inspections differ in the technologies used and their operational parameters, there are important similarities which open avenues for closer cooperation and exchanges of best practice. These include procedures for training and deploying inspectors, use of satellite imagery and secure communications, and logistical aspects of inspections.

Both organisations have exchanged knowledge about inspection activities over recent years. CTBTO staff have participated as observers in a number of OPCW exercises and activities, and vice versa. The OPCW's Director for Verification, Philippe Denier, took part in the CTBTO's most recent on-site inspection exercise in Jordan in late 2014, the Integrated Field Exercise IFE14.

ttp://www.opcw.org/news/article/opcw-and-ctbto-heads-meet-to-strengthen-cooperation/

NEW DEVELOPMENTS IN SCIENCE AND TECHNOLOGY

Huge chamber to test biological weapons testers debuts at Dugway

by Amy Joi O'Donoghue, Deseret News

19 Feburary, 2015

DUGWAY PROVING GROUND — It's unique in the world, the largest chamber constructed for this purpose and represents a step up in the nation's defense against deadly biological agents such as anthrax, plague or ricin.

With an official ribbon-cutting ceremony Thursday, the intricate, expensive system housed at Dugway Proving Ground is a $39 million investment for the U.S. Department of Defense and the culmination of a 2002 directive that ordered more biological warfare readiness for the country.

Shiny, complicated and strictly controlled for humidity, temperature, airspeed and for the "dissemination air" that is pushed into it, the Whole System Live Agent Test had its coming out party at the West Desert facility, offering people a rare — and one time chance — to step inside its walls before it ultimately plays host to all manner of biological weapons.

"We have never had a chamber large enough to do whole system testing," said Douglas Andersen, chief of the life sciences division at Dugway's West Desert System.

The chamber tests how well other biological agent detectors do the job they were designed to do.

Previously, biological agent detection systems had to be tested component by component to determine how efficiently they

functioned. Typical biological agent detection systems used by the military are about the size of refrigerator and this new chamber is big enough to accommodate two at the same time — so they can be compared side by side, as well as their ability to perform independently.

"We can do those tests and safely challenge or expose a real system to agent in the air and see if it will respond," Andersen said.

The system operates in a building that is strictly engineered at "negative" air pressure so no agent escapes. Air drives aersolized particles into the main chamber of Whole System Live Agent Test under an array of conditions the military can simulate. The Army can design a test to determine how a biological warfare detection device operates in smoke, for example, or how proficient it is under high humidity.

Its features have fancy names, such as Aerodynamic Particle Sizer or Ultraviolet Aerodynamic Particle Sizer, which Dugway's Wing Tsang said makes the system uniquely valuable from a detection standpoint — operators can actually manipulate the size of the particles of biological agents that enter the chamber.

"A few years back, no one could control aerosol size, and we have gone from no control to sudden precision," he said.

Trials of live agent introduced into the new chamber can be conducted under circumstances in which the aersolized particles are taken down to minute quantities — thus measuring a system's ability to react under extreme circumstances in which deadly agents are widely dispersed.

Dugway's commander, Col. Ronald Fizer, said it is impossible to overestimate the value of the chamber, which is slated to go live some time in the next several weeks.

"It is a huge deal," he said. "We have not had the ability to evaluate these systems in a live environment before. This allows us to have a high degree of confidence in our systems."

Both Fizer and Carmen J. Spencer, joint program executive officer for Chemical and Biological Defense, said it is paramount that biological agent detection systems operate at the highest efficiency given the evolving nature of global threats.

"The world is a far different place than it was 20 years ago," Spencer said. "There's an ever-increasing awareness of the potential of a biological threat against nation states by non-nation states."

Fizer said al-Qaida has made no secret of its desire to get its hands on biological agents and biological labs are high value targets for multiple terrorist cells.

"Before we didn't have a chamber that could test these systems. This gives us that readiness," he said.

http://www.deseretnews.com/article/865622316/Huge-chamber-to-test-biological-weapons-testers-debuts-at-Dugway.html?pg=all