

# CBRN Threats and Incidents Involving Non-state Actors – 2020 Annual Report

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OMVÄRLDSBEVAKNING  
HOT MOT SAMHÄLLET  
RADIOAKTIVA ÄMNEN  
KIM  
GIFT  
BIOLOGISKA ÄMNEN  
KEMISKA ÄMNEN  
VAPEN  
**TERRORISM**  
KRIMINALITET

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# **CBRN Threats and Incidents Involving Non-state Actors – 2020 Annual Report**

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## Sammanfattning

Under 2020 har inga kända terrorattentat skett där CBRN-ämnen kommit till användning. Trots detta finns internationellt en fortsatt oro för att denna typ av attentat ska ske. En drivande faktor bakom hotperspektivet har varit det intresse och den retorik som fortsatt att manifesteras bland våldsbejakande aktörer, främst inom den islamistiskt inspirerade extremistmiljön.

Året som gått har till stor del präglats av effekterna av covid-19-pandemin. Aktörer kopplade till våldsbejakande islamistiska och högerextrema miljöer har försökt att dra fördel av pandemin och genom propaganda uppmanat sympatisörer att utnyttja de konsekvenser och effekter som covid-19 orsakat, bl.a. för att genomföra attentat. Samtidigt har effekterna av pandemin medfört en ökad insikt om sårbarheter för smittspridning och en diskussion om behov av att stärka förmågan att bemöta framtida antagonistiska händelser med biologiska ämnen.

Vi kan även konstatera att giftiga ämnen tämligen regelbundet används för att hota, skrämma och skada andra personer även utanför extremistmiljöerna. Ofta görs detta i syfte att skada någon som står i nära relation med attentatspersonen. Hot som anspelar på giftiga och smittsamma ämnen förekommer också typiskt sett i finansiella opportunistiska syften eller för att manifesteras missnöje mot företag, myndigheter eller andra offentliga funktioner och personer.

Nyckelord: ickestatliga aktörer, terrorism, kriminalitet, bioterrorism, CBRN, hotbedömning, årsrapport

## Summary

The aim of this annual report is to present an updated assessment of the threat posed by non-state actors' use of chemical, biological, radiological, or nuclear (CBRN) materials to cause adverse effects on society. The content is based solely on open-source information and includes a selection of incidents that occurred in 2020. The report has been produced by a research group at FOI (Swedish Defence Research Agency), within the framework of a grant from the Swedish Ministry of Defence.

No known CBRN-related terrorist attack has occurred during 2020. However, there is still a widespread concern for the occurrence of this type of attack and the consequences it may generate in the society. Propaganda and threats related to CBRN attacks and instructions for carrying them out are still being disseminated within violent extremist communities, with the purpose of spreading fear and inspiring sympathisers to take action. Propaganda and expressions of threat during this year have largely been influenced by the ongoing COVID-19 pandemic and its effects and consequences.

**Keywords:** non-state actors, terrorism, crime, bioterrorism, CBRN, threat assessment, annual report

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# Introduction

This report has been produced annually since 2012 by an FOI (Swedish Defence Research Agency) research group whose task is to assess the threat from non-state actors' use of chemical, biological, radiological, or nuclear materials (CBRN) to cause adverse effects on society. This ongoing research is financed by a grant from the Swedish Ministry of Defence. We continuously produce different types of oral and written materials that highlight this type of threat. The research is aligned in cooperation with the Swedish Government Offices, who are also the main receiver of the results generated. This annual report is the regularly recurring product for communicating our results to a wider circle of recipients. The report is the ninth in the series of annual reports on this topic and the third to be translated into English.<sup>1</sup>

This report is intended to reflect the results of our continuous intelligence monitoring during 2020 and to provide an overall description of relevant incidents that have occurred.<sup>2</sup> Furthermore, information concerning the likelihood that CBRN substances are being used by non-state actors is provided. The report is based solely on open-source information. It does not constitute a complete review of all information gathered by the members of our research team. The purpose of the report is to uphold a strategic function by presenting a general summary of assessed, relevant incidents on an annual basis. From this material, deviations and trends can be identified over time.

## Perspectives on CBRN threats from non-state actors

The past year has been dominated by the effects of the COVID-19 pandemic, which has entailed the devotion of substantial resources to dealing with the effects of the spread of infection, as well as the negative security policy implications that follow in the wake of the pandemic. COVID-19 has also increased concerns over how the large-scale spread of infection may affect extremists' and terrorists' perspectives on infection in society, as presenting a way for them to put pressure on governments, and to create change. Non-state actors linked to the Islamic State of Iraq and the Levant (Daesh) have taken advantage of the pandemic, and through their propaganda have called on

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<sup>1</sup> The 2018 and 2019 reports are available in both English and Swedish from the FOI website, [www.foi.se](http://www.foi.se). The reports from 2012–2017 are only available in Swedish.

<sup>2</sup> When a date appears in the report without stating the year, it refers to an incident that occurred in 2020.

sympathisers to exploit the altered conditions caused by COVID-19 to carry out attacks.<sup>3</sup>

United Nations Secretary-General António Guterres is one of many world leaders who have highlighted the need for also considering the threat posed by bioterrorism in current efforts to strengthen preparedness for naturally occurring pandemics.<sup>4</sup> In his speech during the Security Council's virtual meeting on 2 July, Guterres discussed how the pandemic has contributed to increased security policy challenges at the global level. He called on governments to work on strengthened preparedness to deal with similar challenges in the future and to take into account in this work the threat of deliberate spread of infection by conflict actors.

During a meeting of the Council of Europe Committee on Countering Terrorism,<sup>5</sup> in early April, similar concerns were expressed about the increased risk of bioterrorism attacks as an effect of the ongoing pandemic. The Committee noted that due to the nature and effects of a bioterrorism attack, handling it requires specific capabilities, and expressed an ambition to work towards strengthening them. Furthermore, the Committee particularly pointed to the need of enhancing exercise activities and developing an ability for international cooperation and communication in connection with imminent threats, or terrorist incidents, of this nature.<sup>6</sup>

Due to the exceptional situation caused by the pandemic during 2020, we have dedicated a separate section in this annual report to these challenges and their connection to the threat from non-state actors; see p. 14.

In 2020, no information has come to our attention concerning attempts of deliberate spread of infection, or any other form of attempted CBRN attack by extremists or terrorists that has caused any serious consequences,. Despite the fact that no serious CBRN incidents occurred during the year, concerns about potential threats of this nature have characterised both threat perspectives and measures to deal with them.

In October, the US Department of Homeland Security (DHS) published an open threat assessment report describing the security challenges that are considered as the main threats to the United States.<sup>7</sup> Non-state threats that are

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<sup>3</sup> For COVID-19-related events and effects, see separate section on page 14.

<sup>4</sup> Antonio Guterres, Remarks to Security Council open video-teleconference on the maintenance of international peace and security: Implications of COVID-19, 2020-07-02.

<sup>5</sup> The Council of Europe Committee on Countering Terrorism (CDCT).

<sup>6</sup> Council of Europe, The Council of Europe continues working to enhance international co-operation against terrorism, including bioterrorism, Strasbourg, 2020-04-06.

<sup>7</sup> US Department of Homeland Security, Homeland threat assessment, October 2020.

singled out as the main security threats in the United States are unnamed, lone and national extremists, particularly persons within the growing white supremacy movement and other organisations driven by hatred of the state. International terrorist groups such as Daesh and al-Qaeda are assessed, despite having an intention to carry out attacks on the United States, as currently having limited ability to initiate or lead operations against targets in the country. The anticipated modes of attack are traditional weapons such as vehicles, stabbing weapons, and simpler forms of explosive devices. Domestic extremists, however, are assessed as being able to use more advanced methods, such as those relying on chemical, biological, or radioactive, materials. If attempted CBRN attacks should occur, it is considered that they will probably use poisonous chemicals and toxins, which are the easiest to obtain in society.

Attacks aimed at critical infrastructure, possibly carried out with unmanned aerial vehicles (UAVs), are considered as posing a significant threat in the future. DHS points to nearly 4,000 observed activities with UAVs in 2019 that have occurred in the vicinity of critical infrastructure or public gatherings in the United States. However, none of these incidents have been linked to known extremists or terrorist groups.

At the global level, DHS estimates that the threat from the use of weapons of mass destruction is expected to grow in 2021. This is in light of several considerations: events that have occurred during recent years, continued building of capability, technology development and availability, erosion of international standards, information dissemination, increased UAV-related challenges and growing awareness among both state and non-state threat actors.<sup>8</sup>

The work of combating international terrorist groups such as Daesh and al-Qaeda and its sympathisers has been carried out with varying success during 2020. In November, the US Department of Defense announced that it was withdrawing almost half of its forces from Afghanistan and a subset of its forces in Iraq. The stated goal of former US President Donald Trump was that all US troops were to be withdrawn from Iraq and Afghanistan by May 2021, when an agreement was to be reached with the Taliban.<sup>9</sup> This has created uncertainty and challenges for the involvement of other allied states in the two conflict areas, and for the work of stabilising the security situation. President Joe Biden and the Pentagon are now reviewing the US strategy for

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<sup>8</sup> US Department of Homeland Security, Homeland threat assessment, October 2020.

<sup>9</sup> Anonymous, Pentagon announces drawdown of troops in Afghanistan and Iraq, Aljazeera News, 2020-11-17.

Afghanistan and Iraq, and there are indications that US involvement in both territories will continue.<sup>10</sup>

Aircraft operations during the anti-terrorism initiative Operation Inherent Resolve against targets linked to Daesh and other terrorist groups in Iraq and Syria have been a significant part of the fight against terrorism. During the year, the number of air operations decreased sharply compared to previous years, which is partly due to the decreasing of Daesh's resources and operations in the region and that they were more hidden from direct combat.<sup>11</sup>

There is no indication that Daesh, under its new leader Mohammed Said Abd Al Rahman al-Mawla, has changed strategic direction. The latest UN assessment of the terrorist threat from Daesh states that the organisation has increased its activities in Iraq and Syria at the same time as its leadership and influence over allied terrorist groups in other regions has weakened.<sup>12</sup> The effects of the COVID-19 pandemic are assessed as having limited the organisation's capacity to carry out attacks outside the conflict area. The effects of national efforts to prevent the spread of infection have, among other things, meant that traditionally attractive targets for terrorists, such as large public gatherings in markets, religious gatherings, or passenger transport, have become significantly fewer and more difficult to attack. This could imply that terrorists' target selections are redirected to other parts of society, for example critical infrastructure facilities, such as healthcare.<sup>13</sup>

Despite vastly different conditions for carrying out terrorist attacks, a number of attacks took place in Europe during autumn. Between 25 September and 2 November, five attacks were carried out in three European countries, causing nine fatalities and 25 injured. The attacks did not include CBRN materials and were carried out with simple means; they were aimed at unprotected civilians and appeared to have been carried out by persons inspired by jihadist motives. During this period, the attacks led a number of states, including Sweden, to raise their terrorism preparedness to prevent and manage terrorist attacks.<sup>14</sup>

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<sup>10</sup> Rebecca Kheel, Study group recommends Biden delay Afghanistan withdrawal, The Hill, 2021-02-03.

<sup>11</sup> Brian W. Everstine, Airstrikes continue against ISIS in Iraq and Syria, Air Force Magazine, 2021-01-06.

<sup>12</sup> Eleventh report of the Secretary-General on the threat posed by ISIL (Da'esh) to international peace and security and the range of United Nations efforts in support of Member States in countering the threat, UN Security Council, 2020-08-04.

<sup>13</sup> UN Counter-Terrorism Committee Executive Directorate, The impact of the COVID-19 pandemic on terrorism, counter-terrorism and countering violent extremism, December 2020.

<sup>14</sup> The Swedish Police Authority, Nationell särskild händelse efter attentat i Europa [National special event after attacks in Europe], 2020-11-06.

In November, a new international initiative was launched to study the threat from non-state actors and CBRNE<sup>15</sup> materials. The initiative is jointly run by Interpol and the United Nations Counter-Terrorism Centre (UNCCT) and aims to increase knowledge and awareness about the threat and to strengthen the international capability to prevent such incidents. A key part of the work is based on conducting regionally focused CBRNE threat assessments of non-state actors, based on information from relevant national law enforcement agencies. The initiative is planned to run till the end of 2025.<sup>16</sup>

As were preceding years, 2020 was characterised by the use of various forms of dangerous materials for antagonistic purposes to threaten and/or harm people around the world. One phenomenon that has been occurring with some regularity is to play on the general public's widespread fear concerning the potential use of toxic materials. An example of this is the repeated occurrence of so-called powder letters that are sent to authority representatives, politicians, entrepreneurs and media representatives, usually containing harmless content, such as flour, or sugar substances.

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<sup>15</sup> E = explosive materials.

<sup>16</sup> Interpol, Interpol and UN launch initiative on CBRNE terror threats, 2020-11-17.

## Threats, rhetoric, and information dissemination

Dissemination of information aiming to inspire attacks with toxic and contagious materials occurs repeatedly within extremist environments promoting violence. Examples of discussion and propaganda with references to CBRN materials were found in all extremist environments in recent years, indicating an interest among these actors for this type of attack.

The Islamist violence-promoting environment has traditionally been more interested in this type of information dissemination than have, for example, the extreme right and autonomous movements. It should be noted that in relation to the total amount of information that we have observed being disseminated through and within websites on the internet, in chat groups and other media channels and environments that we have observed, CBRN-related information constitutes only a marginal share. We can also note that a large part of the CBRN-related dissemination of information that does occur is usually aimed at inspiring followers to take initiatives in this direction and at spreading fear in Western countries, rather than on delivering detailed and operationally useful instructions.

The COVID-19 pandemic has generated elements of information dissemination in these environments that deviate from previous years. Examples of this are addressed in the next section, which aims to shed light on how the spread of infection has affected events and phenomena linked to violence-promoting non-state actors.

During 2020, we have not observed any significant information drive among terrorist groups and extremists that aims to inspire, provide instructions for, or threaten to carry out, CBRN-related attacks. However, sporadic elements of information dissemination, with references to hazardous materials, are occurring. A typical example of this was a message broadcast on the propaganda channels linked to Daesh, which prior to the Christmas holiday period called for acts of violence against Western targets, civil and military. The message, which was circulated in December on jihadist propaganda channels in various languages, called on 'lone wolves and hungry lions' to kill unfaithful Americans and Europeans by all available means, from the use of blunt force to toxic materials and fire.<sup>17</sup>

Several other calls, encouraging the use of biological materials against infidels around the world, were spread during the year through propaganda channels

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<sup>17</sup> Maryland Coordination and Analysis Center, "ISIS Followers told to kill American, French civilians 'like insects' in holiday season", Homeland security news, 2020-12-16.

that sympathise with Daesh. Among the biological materials mentioned in these usually superficially described calls for assassination were the bacterium that causes plague, *Yersinia pestis*, and the bacteria that cause cholera and typhus.

The use of toxic and contagious materials has also been called for within the violence-promoting extreme right milieu. Information channels that can be linked to the neo-Nazi environment have disseminated both general calls for attacks with biological materials and more specific data on the use of toxic chemicals such as arsenic, chlorine gas, and chloramine in conducting attacks.<sup>18, 19</sup>

In 2020, researchers at the Institute for Strategic Dialogue (ISD) identified a decentralised digital archive on the internet that included links to Daesh sympathisers. ISD has named the archive 'the Caliphate Cache' and describes it as a structure that includes over 90,000 data records in nine different languages, estimating that it has over 10,000 visitors each month.<sup>20</sup> Among the data, it is claimed, is detailed information on terrorist attacks that can be of benefit to actors who plan future attacks. The archive is open for those who want to add information and is said to be constantly growing. At the same time, it appears to be difficult to take action against the archive, as the information is spread on many different internet servers. The extent of CBRN-related operational information that is contained in the archive is unknown to us.

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<sup>18</sup> InSite Intelligence Group, Far-Right Calls for Bioweapon Engineered to Kill Racial Minorities, 2020-06-08.

<sup>19</sup> InSite Intelligence Group, Cyanide Production Discussed in Neo-Nazi Group, 2020-07-08.

<sup>20</sup> Shiroma Silva, Islamic State: Giant library of group's online propaganda discovered, BBC Click, 2020-09-03.

## Effects of the COVID-19 pandemic

During 2020, the COVID-19 pandemic has affected global civil society in many ways, medically as well as economically. There has been speculation whether the pandemic has influenced violence-promoting actors to become increasingly likely to use biological materials for the purpose of causing harm, or, on the contrary, whether it has deterred groups from using these materials, as it has become increasingly clear that the consequences of contagions are difficult to overview and control.

There have been discussions among Daesh followers about using the pandemic as an opportunity to expand the group's operations and territories, since government resources will have to deal with the consequences of the pandemic rather than fighting terrorism.<sup>21</sup> This has not only been wishful thinking, since it has to some extent already become a reality, as some members of the international coalition that fought Daesh in Iraq announced reductions in their commitments and withdrawal of personnel.<sup>22</sup> It is reported that terrorist organisations, including right-wing extremists, have hoped that the pandemic would at least have facilitated recruitment. Both al-Qaeda and Daesh have made official statements on the pandemic and provided guidelines to stop further spread, but they have also issued statements aimed at new recruitment. Al-Qaeda has suggested that non-Muslims in the West should use this period of quarantine to convert to Islam.<sup>23, 24</sup>

Right-wing extremist groups have opportunistically exploited the pandemic to intensify their hate narrative against selected groups, resulting in outbursts of racism, anti-Semitism, Islamophobia, and anti-immigration. For example, supporters of the American right-wing extremist conspiracy theory, QAnon, claim that the pandemic is being staged to control US politics; that it is a bioweapon; that there is a secret, hidden cure for the virus; and that it is a means of implementing martial law.<sup>25</sup> Individuals in the far-right Reopen movement have spread views on Telegram channels saying that closure measures proclaimed by the US authorities are only an attempt to enslave

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<sup>21</sup> Aymenn Al-Tamimi, Coronavirus and official Islamic state output: An analysis. Global Network on Extremism & Technology, 2020-04-15.

<sup>22</sup> International Crisis Group, Contending with ISIS in the time of coronavirus, 2020-03-31.

<sup>23</sup> Clive Williams, Terrorism in the era of Covid-19, The Strategist, Australian strategic policy institute, 2020-04-15.

<sup>24</sup> Julie Coleman, The impact of coronavirus on terrorism in the Sahel, International Center for Counter-terrorism – The Hague, 2020-04-16.

<sup>25</sup> Milo Comerford & Jacob Davey, Comparing jihadist and far-right extremist narratives on COVID-19, Global Network on Extremism & Technology, 2020-04-27.

citizens. Another American right-wing extremist movement, Boogaloo, advocates a similar line of reasoning and calls for violent insurrection linked to the pandemic.<sup>26</sup>

White supremacists in the United States have urged their supporters to spread the coronavirus to police and Jews by spraying infected body fluids, or through direct body contact.<sup>27</sup>

Within the neo-Nazi movement in the United States, there have been ideas linked to so-called *accelerationism*, which espouses making an effort to first cause chaos and destruction of the society, in order to make it collapse, after which the building of an ethnic white state will follow.<sup>28, 29</sup> Accelerationists see the COVID-19 pandemic as an event that plays into their hands.<sup>30</sup>

Travel restrictions and quarantine regulations may have had an inhibiting effect on violent jihadist organizations such as Daesh and al-Qaeda, since the pandemic has made it increasingly difficult to travel between countries, also for individuals planning to carry out terrorist acts. Restrictions concerning the size of crowds have been introduced in most countries and have likely led to a significant reduction in attractive terrorist targets. However, local perpetrators of violence will be less affected by restrictions in travel.<sup>31</sup>

During the pandemic, there have been several incidents with individuals who claimed they were infected with coronavirus and who spat or coughed at officials or police officers. A selection of such incidents is listed here. In Tunisia, two men, one of whom is said to have been a member of a jihadist network, were arrested for trying to infect staff at a police station with coronavirus.<sup>32</sup> A man in Brighton, UK, was sentenced to 12 weeks in prison

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<sup>26</sup> Blyth Crawford, Coronavirus and conspiracies: how the far right is exploiting the pandemic, King's College London, 2020-09-16.

<sup>27</sup> Josh Margolin, White supremacists encouraging their members to spread coronavirus to cops, Jews, FBI says, ABC News, 2020-03-23.

<sup>28</sup> Mia Bloom, Far-right infiltrators and agitators in George Floyd protests: Indicators of white supremacists, Just Security, 2020-05-30.

<sup>29</sup> Stuart Wexler, White supremacist provocateurs are tipping America's protests into a race war, Haaretz, 2020-06-02.

<sup>30</sup> Cassie Miller, White supremacists see coronavirus as an opportunity, Southern Poverty Law Center, 2020-03-26.

<sup>31</sup> United Nations Security Council, Eleventh report of the Secretary-General on the threat posed by ISIL (Da'esh) to international peace and security and the range of United Nations efforts in support of Member States in countering the threat, S/2020/774, 2020-07-04.

<sup>32</sup> AFP, Tunisia arrests 2 for trying to infect police with virus, Daily Star Lebanon, 2020-04-16.

for a similar attack.<sup>33</sup> In Oslo, Norway, a man was sentenced to 75 days in prison for the same type of crime.<sup>34</sup> Coast guards in Piteå, Sweden, were exposed to a coughing elderly man who claimed that he was infected with coronavirus. The latter victims are claiming damages of SEK 5,000 (~ € 500) each for the violation.<sup>35</sup> A man in Florida risks up to five years in prison for a similar crime, as the US authorities regard this as a federal terrorist crime.<sup>36</sup> In none of the cases listed above were the perpetrators carriers of coronavirus.

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<sup>33</sup> Anonymous, Coronavirus: Brighton man jailed for spitting on police, BBC News, 2020-03-30.

<sup>34</sup> AFP, Man in Norway jailed for corona spit threat to policeman, The Local, 2020-04-03.

<sup>35</sup> Mattias Larsson, Man i Piteå coronahostade mot kustbevakare – åtalas [Man in Piteå, who corona coughed against coast guards – is prosecuted], SVT Nyheter, 2020-11-30.

<sup>36</sup> AP, Grand jury charges man with threatening to spread virus, Daily Herald, 2020-05-22.

# Incidents with nuclear and other radioactive materials

Since 2012, when FOI started this series of reports, we have tried to pay attention to incidents that stand out from the normal reporting on nuclear and other radioactive materials. Over the years, we have reported on incidents involving nuclear and other radioactive materials linked to threats, terrorism, and murder; about startling thefts and robberies, as well as spectacular attempts to sell material; and security incidents at nuclear facilities. This year's compilation does not deviate significantly from the established pattern, while it can be underlined that none of the reported incidents are of the magnitude that they constituted a threat to national or international security.

Incidents described in this chapter have been obtained from open-source information from various media. The numbers below are taken from the IAEA Incident and Trafficking Database (ITDB).<sup>37</sup> Incidents involving nuclear and other radioactive materials, when these have been handled against national regulations, are reported by Member States to ITDB on a voluntary basis. In 2020, 74 such incidents were reported to ITDB. Of these, 52 took place in Europe. The number of reported incidents more than halved in 2020 compared with the previous year, 2019, since there were 192 incidents then.

## Sweden

In December, a container with radioactive liquid was stolen from the University Hospital in Linköping. Hospital staff started looking for the container themselves and eventually found its outer wrapping, but not the container itself. The liquid reportedly contained a short-lived radioactive nuclide used in examinations of internal organs. The short half-life of the radioactive nuclide will have made the liquid harmless in just a few days.<sup>38</sup>

## Mexico

Every year, a number of radioactive sources are stolen around the world. Two such thefts took place within a few days of each other in two different places in Mexico. In the first case, a radiation source was stolen on September 19 from a vehicle in the state of Sonora, in northern Mexico.<sup>39</sup> Two weeks later, a

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<sup>37</sup> International Atomic Energy Agency, [iaea.org](http://iaea.org)

<sup>38</sup> Polismyndigheten, Stöld av farlig vätska, 2020-12-02.

<sup>39</sup> Mayra Echeverría, Protección Civil alerta por robo de fuente radioactiva en Ciudad Obregón, Sonora; material muy peligroso [Civil Protection alert for theft of a radioactive source in Ciudad Obregón, Sonora; very dangerous material], El Imparcial, 2020-09-19.

second radiation source was stolen, together with the car that was used to transport the radiation source. This theft took place in the state of Puebla, near Mexico City.<sup>40</sup> In both cases, similar SPEC 150 radiography instruments<sup>41</sup> with iridium-192 as the radiation source were stolen. The equipment is primarily used to check the quality of welding. None of the radiation sources has been reported as found.

## Indonesia

Early in the year, personnel from the Indonesian Nuclear Energy Regulatory Agency, BAPETEN, discovered elevated radiation levels when performing routine measurements on an empty plot in a residential area in Jakarta. The radioactive material was identified as cesium-137; it was also discovered that it had been dispersed at the site, making remediation more difficult. As decontamination was started to remove contaminated soil, a police investigation was also initiated. Police found an individual in the residential area who had previously worked at the Indonesian National Nuclear Energy Agency, BATAN. During a house search, this person turned out to be in possession of a number of radiation sources, without a permit. The same person had also started an industrial company specialising in decontamination and remediation. The person has been charged with illegal possession of radioactive materials. The penalty in Indonesia for this type of crime is two years in prison.<sup>42</sup>

## Venezuela

On at least three different occasions during 2020, uranium materials have been seized from private citizens in Venezuela. Two of the cases took place on the same day, October 8. In the first case, a police officer spotted a man behaving nervously at a shopping mall. A body search revealed that the man was carrying a number of red stones that were believed to contain uranium. During the body search, four persons in uniform appeared on the scene and claimed that the man belonged to their group. However, none of them could show a valid police ID and the outcome was that all five were arrested. A search of their car produced among other things three additional kilograms of uranium.

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<sup>40</sup> Carlos Morales, Alerta en Puebla por robo de material radioactivo en la Calpulalpan-Texcoco, Milenio [Alert in Puebla for theft of radioactive material in Calpulalpan-Texcoco, Milenio], 2020-10-03.

<sup>41</sup> Radiography is a method for quality control used in industry, in which objects are exposed to ionising radiation and then checked for indications of deficiencies through detection of any leaks of radiation.

<sup>42</sup> Anonymous, Radiation level in South Tangerang house returns to normal eight months after initial test, The Jakarta Post, 2020-10-23.

Later in the same day, a car carrying three men who were behaving suspiciously was stopped. In a search of their car, another 1.6 kg of uranium was discovered. All eight persons are suspected of illicit trafficking of *strategic material*.<sup>43</sup>

In a police raid six months earlier, on March 6, more than three kilograms of uranium were seized from a number of people belonging to a team suspected of selling illegal material to Colombian organisations.<sup>44</sup> Mercury and coltan were also found during the search.<sup>45</sup>

## USA

In our previous annual report, we highlighted the fact that drones had been sighted over and around nuclear power plants in Sweden.<sup>46</sup> In 2020, *Forbes* and the *Daily Mail*, among others, reported that a number of drones had flown over the nuclear power plant in Palo Verde, Arizona, on two consecutive nights in September 2019. It was not possible to identify the owners of the drones and it is not known what the purpose of the flights was. Furthermore, it has emerged that, between the years 2014 and 2019, drones have been sighted over 24 US nuclear facilities on at least 57 occasions.<sup>47</sup> Most of the incidents have taken place at nuclear power plants, but on a few occasions, drones have also been discovered at spent nuclear fuel storage facilities. In the USA, it is not illegal to fly drones over sensitive infrastructure if they stay above a certain altitude. Therefore, both nuclear power plant owners and legal authorities currently find it difficult to take any measures.<sup>48</sup>

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<sup>43</sup> Anonymous, Ocho detenidos por tráfico ilícito de uranio en Carabobo y Caracas [Eight detained for illicit uranium trafficking in Carabobo and Caracas], Versión Final, 2020-10-28.

<sup>44</sup> Anonymous, FAES desarticula banda que contrabandeaba material radioactivo en Carabobo [FAES dismantles band that smuggled radioactive material in Carabobo], TalCual, 2020-03-06.

<sup>45</sup> Coltan is a mixture of the minerals columbite and tantalite, a metallic ore from which the elements niobium and tantalum are extracted. Coltan counts as one of four conflict minerals.

<sup>46</sup> Magnus Normark, Anders Lindblad, Björn Sandström, Anna-Karin Tunemalm, Daniel Wiktelius, Anna Vesterlund, Per Wikström, CBRN threats and incidents involving non-state actors – 2019 Annual report, FOI-R--4979--SE, June 2020.

<sup>47</sup> David Hambling, Dozens more mystery drone incursions over U.S. nuclear power plants revealed, *Forbes*, 2020-09-07.

<sup>48</sup> Keith Griffith, Who flew drone swarms over America's most powerful nuclear reactor last year? Federal probe proves inconclusive after mysterious security breach in Arizona, *Daily Mail*, 2020-07-30.

## Malta

In March, a man from Malta was prosecuted for trying to buy polonium-210 and the explosive C-4; these crimes were committed during 2019.<sup>49</sup> A foreign security service told Maltese authorities that someone from Malta had far-reaching plans to buy illegal material on Darknet.<sup>50</sup> The person was looking for a quantity of polonium-210 that would be a lethal dose for a man who was 165–175 cm tall and weighing 50–65 kg. He was interested in buying five lethal doses, to start with. The purported seller persuaded the buyer to settle for just one dose to minimise the risk that any death would attract attention. It is unclear what the specific purpose of the purchase of the radioactive material was, or who the target was. The man was released on bail while the investigation continues.

Polonium-210 is the radioactive nuclide that was used in 2006 to poison the former FSB agent Alexander Litvinenko in a hotel bar in London. Litvinenko died three weeks later as a result of the poisoning.

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<sup>49</sup> Matthew Agius, The Polonium plot: how Jomic Calleja trawled dark web for explosives and radioactive poison, *maltatoday*, 2020-05-05.

<sup>50</sup> Edwina Brincat, Attempt to import deadly polonium thwarted, but intended victim is unknown, *Times of Malta*, 2020-05-06.

# Incidents with chemical materials

The most common CBRN materials that occur in poisonings are various forms of chemicals. This is regardless whether the incidents are of antagonistic nature, self-inflicted, or unintentional. This observation is correct in both domestic and international settings, and also remains true for 2020.

During the past year, we have not been made aware of any severe incidents related to non-state actors intending to carry out attacks with toxic chemicals. Nevertheless, there have been several incidents and circumstances related to chemical materials that are relevant to highlight in this annual report.

## Sweden

In the early summer, a middle-aged man from Karlstad was sentenced to prison for 1.5 years for aggravated assault after intentionally poisoning his wife's coffee with a narcotic drug. The woman showed symptoms of poisoning, but the report does not make clear which substance was used. The motive appears to have been jealousy.<sup>51</sup>

In September, an 80-year-old woman in Västerås suffered burns from a bottle bomb that had been placed in her mailbox. A group of minors had manufactured the chemical device, consisting of a PET bottle filled with caustic soda and additional chemicals to create overpressure. For some reason, the device did not work as intended, and it was then carelessly placed in the mailbox. When the woman later opened the mailbox, the bottle exploded, causing burns that required hospitalisation. The juveniles later made themselves known, out of regret for their prank. Similar incidents with PET bottle bombs have recently become more common.<sup>52, 53</sup>

A high-profile investigation of illegal wolf hunting in 2018 has resulted in a prosecution this year. Among the charges presented in September was that of preparing to carry out a serious hunting crime. Three of the accused are suspected of having handled the neurotoxic chemical, carbofuran, to poison a

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<sup>51</sup> Sophia Jiglind, 53-åring försökte förgifta sin fru: "Svartsjukedrama" [53-year-old tried to poison his wife in jealousy], Värmlands Folkblad, 2020-06-25.

<sup>52</sup> Emmelie Wallroth, Äldre kvinna skadades av vätska när hon öppnade brevlåda [Older woman injured by liquid when she opened mailbox], SVT Nyheter, 2020-09-17.

<sup>53</sup> Elisabeth Adolfsson Greijer, Polisen: Det var en flaskbomb [It was a bottle bomb], Sveriges Radio, 2020-09-17.

wolf.<sup>54</sup> Carbofuran is a very toxic pesticide that is banned in the European Union as well as in the United States and Canada. Previously, moose carcasses were discovered that were prepared with carbofuran, probably for the purpose of killing predators.<sup>55</sup> Other toxic chemicals, for example ethylene glycol, which is used in coolant, have also been found in moose carcasses placed in the forest, also probably in attempting to poison predators.<sup>56</sup>

During an emergency in Södertälje, a town outside Stockholm, an ambulance passed a raised road barrier on its way to picking up a patient. When the ambulance was leaving the area by returning along the same route, the barrier had been lowered. The ambulance staff went out to raise the barrier in order to pass it, whereupon they came in contact with a corrosive substance that had been applied to the bar, which created a burning sensation on their hands. The incident, which occurred in November, has been reported as sabotage against blue light operations and aggravated assault. Police investigators who were called to the scene were unable to find any corrosive traces on the road barrier in question.<sup>57</sup>

## Italy

An 88-year-old man was admitted to a Torino hospital in June 2019, assisted by his private caregiver. The man was diagnosed with ethylene glycol poisoning and it was later discovered that his caregiver, a 46-year-old South American woman, had persuaded the man into bequeathing her his home. The case was investigated by police and the woman was charged in September this year for intentional poisoning the man's drink. The motive behind the poisoning appears to have been financial problems.<sup>58</sup> Ethylene glycol is one of the more common chemicals used in attempts of intentional poisoning, particularly of animals. It is commonly used in coolant and tastes sweet.

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<sup>54</sup> Fredrik Björkholm, Jaktbrottshärvan i Västmanland: Fyra personer åtalas – misstänks ha jagat varg och hanterat gift [Hunting crime ring in Västmanland: Four persons stand trial suspected of hunting wolf and handling poison], SVT Nyheter, 2020-10-01.

<sup>55</sup> Peter Johansson, Älgkadavren var förgiftade [Moose carcasses were poisoned], Sveriges Radio, 2008-05-06.

<sup>56</sup> Magnus Normark, Anders Lindblad, Björn Sandström, Anna-Karin Tunemalm och Per Wikström, CBRN-hot från ickestatliga aktörer – Årsrapport 2015 [CBRN threats and incidents involving non-state actors – 2015 Annual report], FOI-R--4192--SE, December 2015.

<sup>57</sup> Sara Malm, Misstänkt syraattack mot ambulanspersonal [Suspected acid attack on ambulance personnel], Expressen, 2020-11-16.

<sup>58</sup> Nicole Conner, Carer, 46, 'tried to poison 88-year-old Italian man with antifreeze so she could inherit his house after tricking him into naming her in his will', Daily Mail, 2020-09-10.

## United Kingdom

A young couple in London stands accused of severely drugging people by employing toxic chemicals, and then robbing them. In one case, the man contacted a male victim via a gay dating app and met him in a bar. There, the victim's drink was poisoned with scopolamine, a chemical that can cause a person to enter a trans-like state. The victim was later found dead in his apartment, probably caused by an overdose of scopolamine. Scopolamine has previously been used as an incapacitating agent in crimes such as robbery and rape.<sup>59</sup>

In October, an attack with pepper spray occurred in a small shopping centre in Upper Gornal, Dudley, England. A perpetrator sprayed an irritating liquid, which after analysis was found to contain chili extract, inside two fast food restaurants and a grocery store. Fourteen victims had difficulties with breathing and were treated by ambulance personnel on site; one of the victims had to be taken to hospital. The perpetrator reported himself to the police. The motive behind the attack remains unclear.<sup>60</sup>

## Germany

Five babies in the same room in a hospital in Ulm all developed difficulties in breathing, at about the same time, which puzzled the medical staff.<sup>61</sup> The incident occurred in December 2019. Several of the infants were so badly affected that they had to receive intensive care. Fortunately, all of the children survived. Several weeks then passed without finding any clues as to why the children had developed the problems. It was hypothesised that they might have infected each other, or that they had been exposed to some infectious agent via the ventilation system, but all tests in that direction proved negative. However, in mid-January 2020, when an extended biomedical investigation revealed that the children had traces of morphine in their urine, a police investigation was initiated, almost a month after the incident. None of the children had been prescribed morphine before the symptoms developed. A complication in the investigation was that those children who had to be put on a respirator also

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<sup>59</sup> Helen William, Irish dancer had 'devil's breath' in his system 'well in excess' of therapeutic amount when he died, court hears, *Independent*, 2020-09-30.

<sup>60</sup> Oprah Flash, Mystery substance in Upper Gornal 'chemical attack' revealed, *Birmingham Mail*, 2020-10-22.

<sup>61</sup> Michael Kroha, Neue Erkenntnisse im Morphin-Fall: Tatverdacht gegen Ärztinnen „abgeschwächt“, *Schwäbische* [New findings in the morphine case: Suspicion of crime against doctors "weakened"], 2020-03-30.

received morphine, but since all children had traces of the substance, the investigation now developed into a possible case of poisoning.

During the investigation, a syringe was found in a wardrobe of one of the nurses. On initial analysis, it was shown to contain not only breast milk, but also morphine. As a consequence, the nurse was accused of attempted murder and of causing bodily harm. The accused, who denied the charge, had access to the hospital's stock of morphine.<sup>62</sup> In a twist to the investigation, a subsequent chemical analysis of the contents of the syringe could not confirm that it had actually contained any morphine and that the first analysis had probably been flawed. The accused nurse was released in February, but poisoning remained the strongest hypothesis in the case, with a whole hospital shift of four nurses and two doctors being taken off duty, at least temporarily.

Attempts by healthcare professionals to poison patients is a recurring type of incident that we have reported on in previous annual reports.

## Malta

Maltese businessman Yorgen Fenech appears in an FBI investigation that has shown that a computer belonging to him was used to search on Darknet for information about acquiring potassium cyanide for killing an adult man weighing 80 kg.<sup>63</sup> This happened in 2019, a few months before Fenech was arrested for the sensational murder of journalist and anti-corruption activist Daphne Caruana Galizia, who was killed by a car bomb.<sup>64</sup> Fenech was previously head of the Tumas Group and Electrogas – a Maltese-German-Azerbaijani company.

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<sup>62</sup> Anonymous, Vergiftete Babys: Lösungsmittel hat Ermittler auf falsche Spur geführt [Poisoned Babies: Solvent has led investigators on the wrong track], Süddeutsche Zeitung, 2020-02-04.

<sup>63</sup> Ivan Martin, FBI traced dark web poison searches to Yorgen Fenech's device, Times of Malta, 2020-09-01.

<sup>64</sup> Ida Jansson, Jenny Kejerhag, Detta har hänt: Mordet på maltesiska journalisten Daphne Caruana Galizia [This has happened: The murder of Maltese journalist Daphne Caruana Galizia], SVT Nyheter (TT, Reuters, Times of Malta), 2019-12-03.

## Russia

In the Russian city of Novosibirsk, two assailants threw a glass container into the local office of opposition politician Alexei Navalny.<sup>65, 66</sup> When the container broke, a chemical liquid with a sharp smell spread in the room, which had to be evacuated. Two persons experienced mild symptoms. The incident took place on September 8<sup>th</sup>. Five days later, Russia went to the polls to elect governors in twenty regions. Local legislators and several opposition parties in Novosibirsk joined the Novosibirsk 2020 Coalition to challenge the ruling party. A police investigation is ongoing.

## USA

In January, a woman was sentenced to 25 years in prison for killing her husband by adding lethal eye drops to the man's drink.<sup>67</sup> The successful poisoning attempt, which took place in 2018, allegedly lasted for three days, with the motive being to torment the man and make him feel discomfort, not primarily to kill him. The over-the-counter eye drop preparation contains the imidazole derivative tetryzoline, which is used to cure red eyes, as it narrows blood vessels. Symptoms of overdose include drowsiness, respiratory and cardiac effects, hypothermia, and coma.

In early 2020, a man in Delaware was arrested on suspicion of trying to poison his colleague after they had come into a dispute. The man is claimed to have poured isopropanol into the female colleague's drink, which she refrained from drinking due to the solvent odour.<sup>68</sup>

A middle-aged man was accused in June of poisoning food, intended for eight homeless people. He had laced the food with a stronger variant of pepper spray than the one that is used by, for example, police. He also allegedly videotaped the incidents and urged some of the victims to eat the laced food by telling them they participated in a *Spicy Food Challenge*. The victims reacted strongly to the poison with cramping, problems breathing, vomiting, and stomach pains, all symptoms that the man also filmed, possibly for his own entertainment.

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<sup>65</sup> Current Time / Siberia Desk, RFE/RL's Russian Service, Attackers use unknown chemical liquid attacking Navalny's team in Novosibirsk. Radio Free Europe, 2020-09-08. See also video posted to twitter account of Sergey Bokyos (Сергей Бойко) 2020-09-08.

<sup>66</sup> On August 20, Alexei Navalny was poisoned with the nerve agent Novichok. Navalny survived the attack. The poison attack is believed to have been politically motivated, the Kremlin denies that the Russian state is involved in the attack.

<sup>67</sup> Christine Hauser, Woman used eye drops to kill husband, court says, New York Times, 2020-01-17.

<sup>68</sup> CBS3 Staff, Police: New Castle County man accused of poisoning coworker's drink with chemical in Newark, CBR Philly, 2020-01-02.

Several of his victims had to seek medical care. If convicted, the accused could face up to 19 years in prison.<sup>69</sup>

A 72-year-old woman is suspected of having spiked her husband and stepson's sweetened iced tea with the household cleaning agents Lysol and Resolve Carpet Cleaner, and a certain paint primer. Investigators say they have evidence, as the incident was captured by a video camera. Earlier, the woman had raised the two men's suspicions, both when the stepson had been nauseated for a few days and since the man had felt a burning sensation in his mouth whenever he drank iced tea prepared by the woman. Hence, they had decided to install a camera, which later showed the woman pouring chemicals into bottles of iced tea in their home.<sup>70</sup>

The easy availability of potent narcotic medicines and illegal drugs results in cases where relatives have given these substances to their children, often and most probably without malicious intent. An example from 2020 concerns a couple in the USA whose two-month-old son died of fentanyl poisoning.<sup>71</sup> In this case, it is not clear to us whether the boy was given the medicine just to calm him or the intention was actually to kill him.

In 2020, a number of parents also used the antifreeze ethylene glycol to poison small children. An infant who was admitted to a hospital in the United States was found to have traces of the chemical in his blood. The boy's father was arrested for attempted murder.<sup>72</sup>

## Chad

Forty-four supporters of the Boko Haram jihadist terrorist organisation and who were imprisoned in Chad, Africa, were found dead in their cells. The suspicion of poisoning is reported to have been confirmed by samples from four dead persons that contained traces of a 'deadly substance'. Some of the victims appeared to have died from heart attack, while others had died by suffocation. The poisoned men belonged to a group of 58 individuals captured in Chad in a police raid against Boko Haram. There are reports that the detainees were being treated badly and kept without water and food for three

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<sup>69</sup> Hanna Fry, Man fed homeless people food laced with chemical stronger than pepper spray, prosecutors say, Los Angeles Times, 2020-06-11.

<sup>70</sup> Sydney Bouchelle, Warrant: Woman puts chemical cocktail in family's sweet tea, www.wwaytv3.com, 2020-08-12.

<sup>71</sup> Anonymous, Hilliard parents indicted for infant's death from fentanyl intoxication, Dublin Villager News Break, 2020-02-16.

<sup>72</sup> WSBTV.com News Staff, Father arrested after 18-day-old baby poisoned with antifreeze. WSB-TV 2, Atlanta, 2020-10-16.

days before they were found deceased. According to the report, at least one individual must have had symptoms, but survived. It is unclear whether the remaining 14 prisoners showed any symptoms.<sup>73</sup>

## China

A Chinese preschool teacher, Wang Jun, was sentenced to death in September 2020 for poisoning an entire group of children in the spring of 2019. After a conflict at work, she decided to poison the children who were in her colleague's care by adding nitrite to their porridge. According to the verdict, there was one fatality among the 25 poisoned children. Previously, the woman had also attempted to poison her husband with the same chemical.<sup>74</sup>

Lin Qi, the founder of a Chinese company that develops and produces video games, Yoozoo Games, died in a hospital in Shanghai in December.<sup>75</sup> According to media reports, he must have had at least five different poisonous substances in his body, including mercury and tetrodotoxin, which is a neurotoxin found in puffer fish.<sup>76</sup> In addition, two other persons at the company had been poisoned with non-lethal doses of mercury. A manager at a television production company has been identified as a suspect in the poisonings. According to the somewhat bizarre reporting in Chinese media, the suspected perpetrator must have had a fascination for the TV series *Breaking Bad* and built his own laboratory. He is said to have obtained, via Darknet, over 100 poisons or starting materials for producing poisons and then tested some of them on animals. In early reports of the incident, the poisons were said to have been added to a serving of tea, while later information claims that the perpetrator had produced a laced health supplement in the form of tablets and then give a packet of them to Lin Qi.<sup>77</sup> The stated reason behind the poisoning is said to have been professional jealousy, especially in relation to a major production deal between Yoozoo Games and Netflix.

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<sup>73</sup> AFP in N'Djamena, 44 suspected Boko Haram members found dead in Chad prison, The Guardian, 2020-04-18.

<sup>74</sup> Austin Ramzy, Teacher in China is sentenced to death for poisoning 25 students, New York Times, 2020-10-29.

<sup>75</sup> Ben Westcott, Police investigating suspected poisoning of billionaire game tycoon Lin Qi after Christmas Day death, CNN, 2020-12-29.

<sup>76</sup> Grady McGregor, Netflix's 'Three-Body Problem' project in China was already controversial. Then came an alleged poisoning, Fortune, 2021-01-27.

<sup>77</sup> Patrick Frater, Suspect in murder of 'Three-Body Problem' producer rehearsed killing, say Chinese media, Variety, 2021-01-19.

## India

In June, Mohan Kumar was convicted in an Indian court for the murder of a woman by cyanide poisoning. The murder is said to have already taken place in 2009 and was the last to go to court in a series of 20 similar murders. The serial killer had previously been sentenced to death in five of the cases and to life imprisonment in all the others. Kumar worked as a cook in a home for poor women, where he offered to marry his victim. He ran away with the woman only to rape her and then kill her the next day by giving her a cyanide-laced tablet, making her believe that it was a contraceptive. He had used the same *modus operandi* in all cases against him. At the time the crimes were committed, the sale of cyanide, in various forms, was uncontrolled in India.<sup>78</sup>

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<sup>78</sup> IANS, Serial killer 'Cyanide' Mohan gets life term in 20th murder case, The Quint, 2020-06-26.

## Incidents with biological materials

In 2020, there has been no large-scale antagonistic attack with either infectious agents or toxins. There are, however, examples of incidents linked to such agents, which we have decided to highlight in this report. The aim of this compilation of incidents is to describe cases where actors haven shown malevolent intentions.

A Canadian woman, Pascale Ferrier, was arrested in September for sending letters containing ricin to President Trump. She had firearms and ammunition in her vehicle when she was stopped at the US-Canadian border and ricin was found during a search of Ferrier's home. Ferrier was refused bail by the court because of the risk that she could 'take further action' to carry out the threats she was prosecuted for. The woman is also accused of having sent a handful of similar letters to law enforcement agencies in Texas, where she had been detained by police in 2019 for possession of a fake driver's license.<sup>79</sup> She has used the hashtag #killTrump on social media and, in the ricin letters she is accused of sending, used the phrase 'Ugly Clown Tyrant' as a derogatory description of the US President.<sup>80</sup>

African swine fever (ASF) is a viral disease that affects wild boar and domestic pigs. Europe has largely been spared from outbreaks of this troublesome animal disease, but since 2014 it has occurred in some locations. In recent years, however, China has been hard hit by outbreaks.<sup>81</sup> In 2020, as in the previous year, several illegal transports of ASF-infected pigs between different Chinese provinces were stopped.<sup>82, 83</sup> There is no information about the motives for this year's illegal spread of infection. The most straightforward motive would be an economic one, but it has also been speculated that the perpetrators might have intended to spread the virus as a type of terrorist act.

The female Utah resident who in December 2019 was arrested for trying to buy Vancomycin-resistant *Staphylococcus aureus* (VRSA) on Darknet to kill

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<sup>79</sup> Jacob Serebin, Quebec woman accused of sending Trump ricin letter to remain behind bars until trial, The Canadian Press, 2020-11-04.

<sup>80</sup> Snezana Farberov & Lauren Edmonds, Canadian woman, 53, suspected of mailing ricin to President Trump, Daily Mail, 2020-09-22.

<sup>81</sup> Magnus Normark, Anders Lindblad, Björn Sandström, Anna-Karin Tunemalm, Daniel Wikteliuss, Anna Vesterlund, Per Wikström, CBRN threats and incidents involving non-state actors – 2019 Annual report, FOI-R--4979--SE, June 2020.

<sup>82</sup> Anonymous, China reports new cases of African swine fever in illegally transported piglets, The Pig Site, 2020-03-30.

<sup>83</sup> Tan Yingzi, Chongqing finds African swine fever in illegal hog transport, China Daily, 2020-07-26.

her friend<sup>84, 85</sup> has been sentenced to 20 years in prison. Vancomycin is an antibiotic that is an effective cure for bacterial infections. The bacterium *Staphylococcus aureus* is common, but can cause serious infections in people with weakened immune systems. An antibiotic-resistant variant, such as VRSA, causes great concern for healthcare. The attempted purchase was discovered by an FBI agent posing as a seller.<sup>86</sup>

A California man who in 2018 tried to buy ricin on the internet ‘to be consumed, in the form of a lethal drink, by a person weighing 110 pounds (50 kg)’, was sentenced in September 2020 to 3.5 years in prison. This case was also one in which an FBI agent posed as a seller, which meant that the product delivered was harmless and the perpetrator could be arrested upon its delivery. The police assumed that the man’s intension had been to poison his wife, who weighed about 50 kg, as their relationship was strained at the time. By ordering the ricin, he was sentenced for ‘incredibly dangerous conduct without regard to the safety of others,’ as theoretically the toxin could have caused serious harm to persons working in the postal service.<sup>87</sup>

## Incidents with threat and powder letters

In November and December, a number of mosques in several places in Sweden were subjected to what appears to have been a synchronised action, in the form of letters that contained written threats and a white powder. Two mosques in Malmö, and one each in Eskilstuna, Stockholm, Luleå, and Umeå received such threat and powder letters. The police have stated that the contents of all the envelopes, including the messages, were the same. The incidents are being classified as hate crimes. The powder was found to be harmless.<sup>88, 89</sup>

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<sup>84</sup> Magnus Normark, Anders Lindblad, Björn Sandström, Anna-Karin Tunemalm, Daniel Wikteliuss, Anna Vesterlund, Per Wikström, CBRN threats and incidents involving non-state actors – 2019 Annual report, FOI-R--4979--SE, June 2020.

<sup>85</sup> Emily Crane, Utah woman, 50, is arrested for 'buying a biological agent of mass destruction' online, Daily Mail, 2019-12-20.

<sup>86</sup> Rosie Nguyen, Victim speaks after best friend sentenced for attempting to poison and kill her, ABC4 News, 2020-08-24.

<sup>87</sup> Department of Justice, U.S. Attorney’s Office, Central District of California, Man who tried to procure ricin sentenced to 3½ years in prison, 2020-09-14.

<sup>88</sup> Maria Lapenkova, Fem moskéer i Sverige utsatta för samma hot och hat [Five mosques in Sweden exposed to the same kind of threats and hatred], SVT Nyheter, 2020-11-13.

<sup>89</sup> Catarina Saha, Pulver i hotbrev till Islamiska föreningen [Powder in threat letter to the Islamic association], Västerbottens-Kuriren, 2020-12-11.

The American white supremacist Gary Gravelle, who was previously accused of sending several threatening letters that included a powder, was sentenced in January 2021 to more than 9 years in prison. He had been released in 2015 after serving a prison sentence for similar crimes that he had committed as early as 2010.<sup>90, 91</sup>

## Natural occurrence of bioterrorism-related agents

In one respect, biological materials are quite different from chemical and radiological materials, as natural outbreaks caused by biological agents happen all the time around the world. Thus, it is possible for those who are in possession of the relevant competence to acquire infectious agents from these outbreaks. A malevolent actor who possesses a potent biological agent and is capable of, for example, cultivating and spreading it, and has a desire to cause harm to other people, or to animals or plants, may be a potentially lethal threat. The next paragraph provides an overview of some natural disease outbreaks during 2020 that were caused by biological agents that are also generally regarded as having the potential to be used as bioterror agents.

The Ebola outbreak that started in 2018 in North Kivu province of eastern Congo-Kinshasa was declared over in June 2020. Official figures state that the outbreak included a total of 3470 cases, in which 2268 people died, which gives a mortality rate of 65%.<sup>92</sup> One of the reasons why the outbreak was so protracted is attributed to a difficult safety situation for the international paramedics and aid workers who were sent there to take care of patients and stop the spread of infection.<sup>93, 94</sup> In May 2020, however, a new outbreak erupted in hard-to-reach and remote villages in the western parts of the country, in the province of Équateur. In mid-November, this outbreak was declared over, with a toll of 130 cases, of which 55 were fatal (42% mortality).<sup>95</sup>

Between 20,000 and 100,000 animals, both wild and domesticated, are affected annually by anthrax and an estimated 1.8 billion people live in the

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<sup>90</sup> Magnus Normark, Anders Lindblad, Björn Sandström, Anna-Karin Tunemalm, Daniel Wikteliuss, Anna Vesterlund, Per Wikström, CBRN threats and incidents involving non-state actors – 2019 Annual report, FOI-R--4979--SE, June 2020.

<sup>91</sup> Department of Justice, U.S. Attorney's Office, District of Connecticut, Man sentenced to more than 9 years in prison for making hoax threats, violating supervised release, 2021-01-27.

<sup>92</sup> World Health Organization, Ebola Dashboard RDC, 2020-10-01.

<sup>93</sup> Catherine Soi, Ebola outbreak: Security concerns limit progress, Al Jazeera, 2019-12-02.

<sup>94</sup> On 7 February 2021, a new Ebola virus disease outbreak was declared in the North Kivu province.

<sup>95</sup> MSF (Doctors Without Borders), Eleventh outbreak declared over in Équateur province, 2020-11-03.

areas where these outbreaks occur.<sup>96</sup> Human cases are relatively rare, but most often occur from contact with infected animals and infected meat. A major portion of these cases occurs in developing countries. In 2020, cases in which a substantial number of people were affected were reported from Zimbabwe (74 cases) and Kenya (29 cases).<sup>97, 98, 99</sup> Large-scale efforts to vaccinate livestock were carried out in connection with these outbreaks. Cattle are particularly susceptible to anthrax infections and they often lead to the death of the affected animals.

Outbreaks of plague<sup>100</sup> also occur every year in different parts of the world. The Democratic Republic of the Congo has been hit several times during 2020. In July, nine people died of bubonic plague, septicemic plague, and pneumonic plague,<sup>101</sup> and in October, four people died of bubonic plague.<sup>102</sup> Cases have also been reported from, for example, Mongolia and the United States.<sup>103, 104</sup>

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<sup>96</sup> CJ Carlson, IT Kracalik, N Ross, KA Alexander, ME Hugh-Jones, M Fegan, BT Elkin, T Epp, TK Shury, W Zhang, M Bagirova, WM Getz & JK Blackburn, The global distribution of *Bacillus anthracis* and associated anthrax risk to humans, livestock and wildlife, *Nature Microbiology*, 2019 Aug;4(8):1337-1343.

<sup>97</sup> Dyson Murwira, Zimbabwe: Anthrax Outbreak Hits Chipinge, *All Africa*, 2020-10-19.

<sup>98</sup> Walter Mswazie, 30 000 cattle vaccinated against anthrax, *The Sunday News*, 2020-01-26.

<sup>99</sup> Felix Kipkemoi, Six more treated for anthrax in Bomet, *The Star*, 2020-02-03.

<sup>100</sup> There are three types of plague, defined from the route of infection: bubonic plague, septicemic plague, and pneumonic plague.

<sup>101</sup> World Health Organization, Plague – Democratic Republic of the Congo, 2020-07-23.

<sup>102</sup> Anne Laudisoit, Plague DR Congo, ProMedMail, Archive Number: 20201108.7926602, 2020-11-08.

<sup>103</sup> Carl McQueen, Plague - Mongolia (04): (GA) marmot meat exposure, fatal, ProMedMail, Archive Number: 20200715.7578026, 2020-07-06.

<sup>104</sup> Anonymous, New Mexico reports case of human bubonic plague, KOB4, 2020-07-27.

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