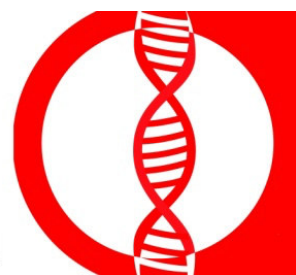


**Research Group for  
Biological Arms Control**



# **2021 Reader on Publicly Available CBMs**

**November 2021**



PDF Version

## About this Reader

The exchange of information under the Biological Weapons Convention (BWC) in the form of the Confidence Building Measures (CBMs) is the only permanent transparency and security building mechanism of the BWC.

This Reader, as its forerunners, presents information on CBM-related developments based on the data provided in the openly available CBM declarations of the current year. The CBM Reader, which is an authoritative publication of the University of Hamburg aims to underline the importance of participating in the CBM data exchange as the only established permanent transparency measure for the BWC and to highlight the particular efforts of an increasing number of states to increase transparency by making their CBM submissions available to the public. The CBM Reader series is prepared as part of our efforts to enhance transparency around bioweapon-relevant activities globally. Such transparency is indispensable for building confidence in compliance with the BWC and must extend to all stakeholders including civil society.

For more information please visit:

[www.biological-arms-control.org/projects\\_improvingthecbms.html](http://www.biological-arms-control.org/projects_improvingthecbms.html).

## Development of the CBM regime in 2021

The last formal decision of States Parties with regard to CBMs dates back to 2011. On the 7<sup>th</sup> Review Conference in 2011 BWC States Parties decided to address CBMs in the 2012 and 2013 the Meetings of Experts and the Meetings of States Parties. It was aimed to discuss a possible update of the CBM forms (that dates back to the year 1992) in the ISP, but BWC members did not agree on recommendations for a formal decision at the 8<sup>th</sup> Review Conference. Some States Parties, however, tabled working papers at the ISP and for the 8<sup>th</sup> Review Conference (see page 3). In general, on the 8<sup>th</sup> Review Conference in 2016 Member States reached very few forward-looking decisions, and particular no decision was made in relation to CBMs.

Figures shown in this reader also illustrate the need for strengthening the debate of how a more active participation in the mechanism could be reached. The debates in the precedent ISP meetings and at the Review Conference show that these issues have potential for further development.

### Facts about the BWC and its CBMs<sup>1)</sup>

**BWC States Parties:** 183

**Signatory States:** 4

**New BWC States Parties in 2021:** None

**States Parties with national contact points:** 122

**CBMs submitted in 2021:** 87 as of 8 November 2021

**Public CBMs in 2021:** 31 as of 8 November 2021

**First-time CBM submission in 2021:** Three (not publicly available)

**Number of states having participated in the CBM data exchange in 30 years:** 119

<sup>1)</sup> For reference see data provided by BWC Implementation Support Unit (ISU), accessible at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G19/233/39/PDF/G1923339.pdf?OpenElement>

## CBM-specific publications in 2021

We could not find any publications on the issue of the CBM mechanism published in 2021.

For earlier publications, please check former versions of this reader at: [http://biological-arms-control.org/projects\\_improvingthecbms.html](http://biological-arms-control.org/projects_improvingthecbms.html).

## Participation in the CBM regime in 2021

As of 22 November 2021, **92** BWC states parties had submitted their CBM. Therewith the long-time phenomenon that participation is relatively high in years with Review Conferences, but drops down significantly in the following year, does only appear in a moderated form. The overall participation in the CBM mechanism improved slightly over time. Since the beginning of the data exchange in 1987, the annual level of participation was never higher than 50.27 percent of the BWC states parties (183 in total), in 2021 92 of the member states have submitted a CBM, which is an all-time record of CBM submissions for the BWC community. In total, 122 countries submitted a CBM at least once. This means that 60 BWC states parties have yet to submit their first CBM declaration. Continuity in states' participation also remains weak: Only 37 countries have submitted a CBM in each of the past 10 years, and respectively only 31 countries have submitted a CBM once or twice since 1987.

**First-time submissions in 2021:** Afghanistan (not publicly available), Guatemala (not publicly available), Mozambique (not publicly available).

**First-time public submission in 2021:** none.

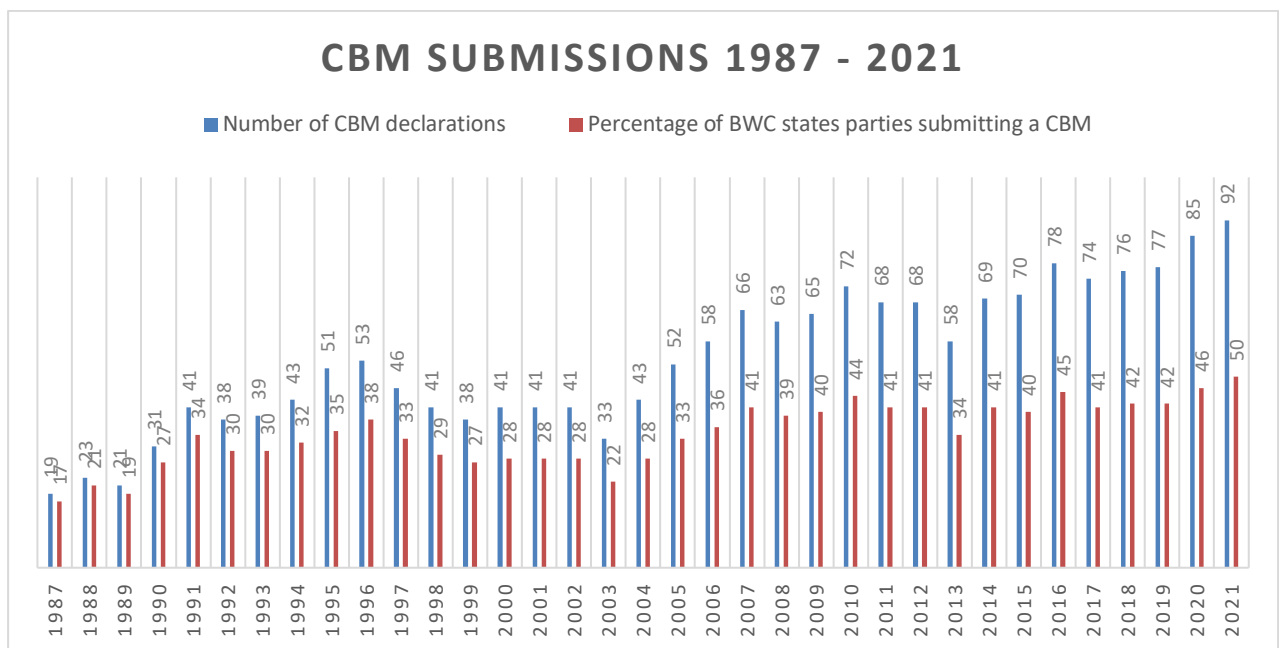
**CBM submissions in 2021** (See map 1. in page 7) - States in bold made their CBM available to the public:

1. Afghanistan	17. <b>Croatia</b>	32. India	47. Malaysia	62. Oman
2. Algeria	18. Cuba	33. Iran (Islamic Republic of)	48. Maldives	63. Pakistan
3. Argentina	19. <b>Cyprus</b>	34. Iraq	49. Mali	64. Peru
4. Armenia	20. <b>Czech Republic</b>	35. <b>Ireland</b>	50. Malta	65. Philippines
5. <b>Australia</b>	21. <b>Denmark</b>	36. Italy	51. Mauritius	66. Poland
6. <b>Austria</b>	22. Ecuador	37. <b>Japan</b>	52. <b>Mexico</b>	67. <b>Portugal</b>
7. Azerbaijan	23. El Salvador	38. Jordan	53. Mongolia	68. Qatar
8. Belarus	24. <b>Estonia</b>	39. Kazakhstan	54. Montenegro	69. Rep. Korea
9. <b>Belgium*</b>	25. <b>Finland</b>	40. Kenya	55. Morocco	70. <b>Rep. Moldova</b>
10. Bhutan	26. France	41. Kyrgyzstan	56. Mozambique	71. <b>Romania</b>
11. Brazil	27. Georgia	42. <b>Latvia</b>	57. <b>Netherlands</b>	72. Russian Fed.
12. <b>Bulgaria</b>	28. <b>Germany</b>	43. Libya	58. <b>New Zealand</b>	73. <b>Saudi Arabia</b>
13. <b>Canada</b>	29. Greece	44. Liechtenstein	59. Nicaragua	74. Senegal
14. Chile	30. Guatemala	45. <b>Lithuania</b>	60. Nigeria	75. <b>Serbia</b>
15. China	31. Hungary	46. <b>Luxemburg</b>	61. <b>Norway</b>	

- |                     |                        |                |                          |                 |
|---------------------|------------------------|----------------|--------------------------|-----------------|
| 76. Singapore       | 80. Spain              | 84. Tajikistan | 88. <b>Ukraine</b>       | 91. <b>USA*</b> |
| 77. <b>Slovakia</b> | 81. Suriname           | 85. Thailand   | 89. United Arab Emirates | 92. Uzbekistan  |
| 78. <b>Slovenia</b> | 82. <b>Sweden</b>      | 86. Tunisia    | 90. <b>UK</b>            |                 |
| 79. South Africa    | 83. <b>Switzerland</b> | 87. Turkey     |                          |                 |

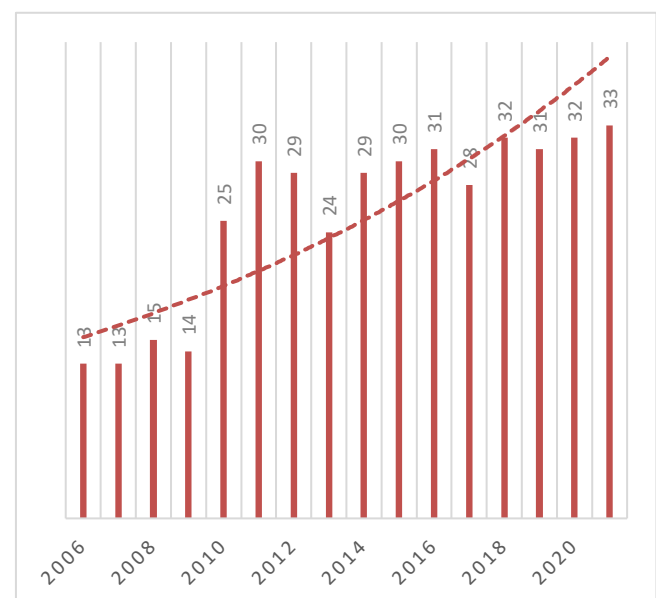
\* States that submitted both public and restricted versions of CBM reports.

**Figure 1. CBM submissions per year between 1987 and 2021** (Numbers in this figure may differ from numbers provided by the Implementation Support Unit. This is due to differences in counting states that were formerly part of other states, such as the former republics of the Soviet Union. This figure provides the actual number of CBM declarations submitted in the respective year.)



As of 22 November 2021, 33 countries have made their 2021 CBM declarations publicly available. All of the 33 publicly available CBMs can be found on the website of the Implementation Support Unit (ISU) (<https://bwc-ecbm.unog.ch/group/ecbm-portal>):

Australia, Austria, Belgium, Bulgaria, Canada (in English and French), Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Portugal, Republic of Moldova, Romania, Saudi Arabia, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Ukraine, United Kingdom and the USA. Belgium and the USA provided two separate versions of their CBMs, one for the restricted part of the ISU website and one for the public.



**Table 1. Countries that made their CBM declarations publicly available, 2007-2021**

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Albania	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—
Australia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Austria	—	—	x	x	x	x	x	—	x	x	x	x	x	x	x
Bangladesh	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x
Brazil	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—
Bulgaria	x	(x)	—	(x)	(x)	(x)	(x)	x	x	x	x	x	x	x	x
Canada (En and Fr)	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x
Croatia	—	—	—	—	—	—	—	x	—	—	—	x	—	x	x
Cyprus	—	—	—	—	(x)	(x)	—	—	—	—	—	—	x	x	x
Czech Republic	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
Denmark	x	x	—	x	x	x	—	x	x	x	x	x	x	x	x
Ecuador	—	—	—	—	(x)	—	—	—	—	—	—	—	—	—	—
Estonia	—	—	—	(x)	(x)	—	x	—	—	x	x	x	x	x	x
Finland	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Georgia	—	—	(x)	(x)	(x)	—	—	—	—	—	—	—	—	—	—
Germany	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Greece	—	—	—	—	(x)	x	x	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	(x)	(x)	—	—	—	—	—	—
Ireland	x	x	x	x	x	—	—	—	x	x	x	x	x	x	x
Japan	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x
Latvia	—	—	(x)	—	x	x	x	x	x	x	x	x	x	x	x
Liechtenstein	x	(x)	(x)	(x)	(x)	—	(x)	(x)	—	—	—	—	—	—	—
Lithuania	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Luxembourg	—	—	—	—	—	—	—	(x)	x	x	x	x	x	x	x
Madagascar	—	—	—	—	—	(x)	—	—	—	—	—	—	—	—	—
Malaysia	—	—	—	—	x	—	—	—	—	—	—	—	—	—	—
Mauritius	—	—	—	—	—	—	—	—	—	x	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x
Morocco	—	—	—	—	—	—	—	—	—	—	—	—	x	—	—
Myanmar	—	—	—	—	—	—	—	—	—	x	—	x	—	—	—
Netherlands	—	—	—	—	—	—	(x)	x	x	x	x	x	x	x	x
New Zealand	(x)	(x)	—	(x)	x	x	x	x	x	x	x	—	x	x	x
Norway	—	(x)	—	x	x	x	x	—	x	x	x	x	x	x	x
Poland	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
Qatar	—	—	—	—	—	(x)	(x)	—	—	—	—	—	—	—	—
Republic of Moldova	—	—	—	—	—	x	x	x	x	x	—	x	—	x	x
Romania	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Saudi Arabia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x
Senegal	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—
Serbia	—	—	—	—	—	(x)	—	(x)	x	—	x	x	x	x	x
Slovakia	—	—	—	—	—	—	—	(x)	—	—	—	x	x	x	x
Slovenia	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x
Sweden	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Switzerland	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Thailand	—	—	—	(x)	(x)	(x)	—	—	—	—	—	—	—	—	—
Turkey	—	—	—	—	x	x	—	x	x	x	x	x	—	—	—
Ukraine	—	—	—	—	(x)	(x)	—	—	x	x	x	x	x	x	x
United Kingdom	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
USA	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
<b>Total</b>	<b>13</b>	<b>15</b>	<b>14</b>	<b>25</b>	<b>30</b>	<b>29</b>	<b>24</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>28</b>	<b>32</b>	<b>31</b>	<b>32</b>	<b>33</b>

As shown in **Table 1.**, above, 51 countries have made their CBM publicly available at least once since 2007. “(x)” indicates that states provided their CBM directly to the Hamburg Research Group. Many states make their CBMs publicly available in an erratic way. No explanation readily offers itself for why many states make their CBMs publicly available in one year but not in another.

## Summary of data in publicly available 2021 CBM declarations

A summary of the data declared in the publicly available CBMs of 2021 is provided in the table below. More detailed information can be found in the Annex to this Reader. 32 maximum biological containment facilities were declared in publicly available CBMs in 2021, five of which were partially or wholly funded by ministries of defence. 15 of the 30 countries making their 2021 CBM publicly available declared having a biodefence programme; they provided information on 74 biodefence facilities. And lastly, 57 unusual disease outbreaks and 81 vaccine production facilities were declared in the 33 publicly available CBMs of 2021.

**Table 2. Summary of data in publicly available CBM declarations, 2021**

<b>Form A, part 1:</b>	Number of maximum biological containment facilities (BSL-4 or equivalent) declared.
<b>Form A, part 2 (i):</b>	Does the state party declare having a biodefence programme?
<b>Form A, part 2 (ii):</b>	National programmes conducting biological defence research
<b>Form A, part 2 (iii):</b>	Number of biodefence facilities declared.
<b>Form B (ii):</b>	Number of unusual disease outbreaks declared.
<b>Form F:</b>	Does the state party declare having a past offensive and/or defensive programme?
<b>Form G:</b>	Number of vaccine production facilities declared.
<b>ND / NN:</b>	“Nothing to declare” / “Nothing new to declare” indicated in Form X.

Country	Form A, part 1	Form A, part 2 (i)	Form A, part 2 (ii)	Form A, part 2 (iii)	Form B	Form F (off/def)	Form G
Australia	NN (4)	NN (yes)	1	1	NN	NN (no/yes)	2
Austria	1	NN (yes)	2 <sup>1</sup>	1	ND	ND	ND
Belgium	ND	yes	1	1	1	ND	— <sup>2</sup>
Bulgaria	ND	ND (no)	ND	ND	ND	NN (no/no)	NN (1)
Canada	2	NN (yes)	2	2	13	NN (yes/yes)	15
Croatia <sup>3</sup>	ND (1)	ND	ND	ND (1)	ND <sup>4</sup>	ND	ND
Cyprus	NN (0)	NN (no)	NN (0)	NN (0)	NN	NN (no/no)	NN
Czech Republic <sup>5</sup>	NN	NN	NN	ND	2	NN	NN
Denmark	NN (0)	NN (yes)	NN (1)	1	ND	NN (no/yes)	NN (2)
Estonia	0	ND	ND	ND	1	ND	ND
Finland	0	yes	1	1	ND	ND	ND
Germany	4	yes	2	5	1	NN (no/no)	9
Ireland	NN (1)	NN (no)	NN (0)	NN (0)	NN (0)	ND	NN (3)
Japan	NN (2)	NN (yes)	4	1	ND	NN (no/no)	NN (6)
Latvia	NN (1)	NN	ND	NN (1)	ND	NN (no/yes)	ND
Lithuania	NN (2)	ND	ND	ND	ND	ND	NN
Luxemburg	1	ND	ND	ND	1 <sup>6</sup>	NN (no/no)	NN (0)

<sup>1</sup> In form 0, Austria has mistakenly ticked both “nothing to declare” and “nothing new to declare”.

<sup>2</sup> Form G is missing.

<sup>3</sup> Croatia has ticked “nothing to declare” in form 0, although new data has been introduced in subsequent parts.

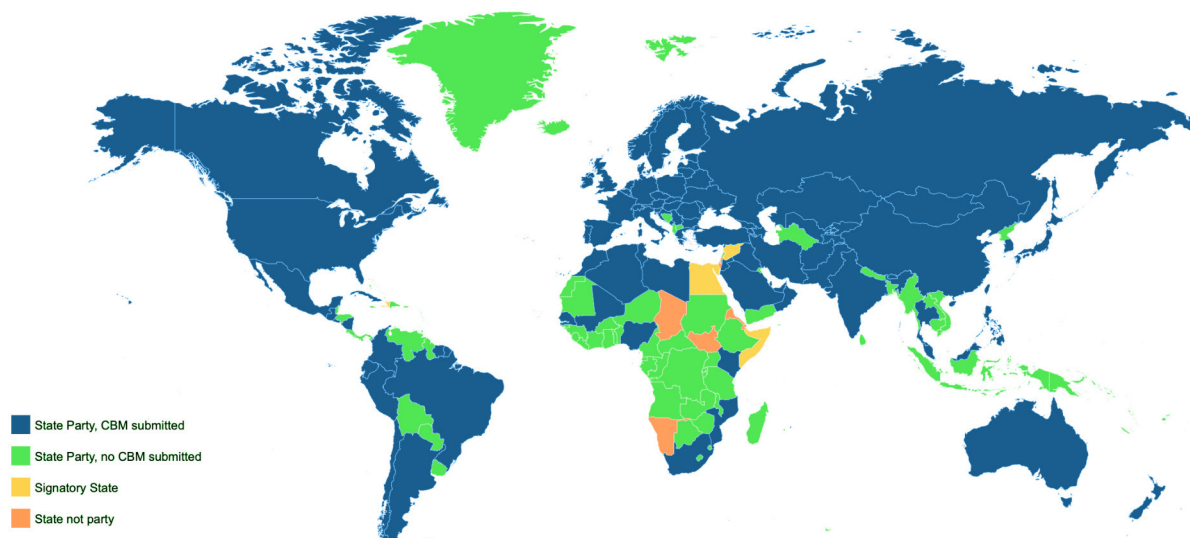
<sup>4</sup> A table reports the occurrence of 30 infectious and parasitic diseases of domestic and wild animals in the Republic of Croatia for 2021.

<sup>5</sup> Czech Republic has partially provided information on forms B and C only.

<sup>6</sup> Information on possible epidemics of infectious diseases is available on the online site of the National Health Laboratory (via the "Epidemiological surveillance service for infectious diseases"): <http://www.lns.public.lu/>

Mexico	0	ND	ND	ND	2	ND	2
Netherlands	0	yes	1	1	1	NN (no/yes)	8
New Zealand	ND	ND	ND	ND	NN	NN	ND
Norway	ND	NN (yes)	NN (3)	NN (3)	ND	NN (no/yes)	NN (3)
Portugal	NN (0)	NN (yes)	NN (2)	NN (1)	ND	NN (no/no)	NN (1)
Republic of Moldova	—	yes	NN	NN	8	NN	ND
Romania	7	ND	—	ND	ND	ND	3
Saudi Arabia*	—	—	—	—	—	—	—
Serbia <sup>7</sup>	ND	ND	ND	ND	ND (1)	ND	ND (1)
Slovakia	ND	ND	ND	ND	ND	ND	ND
Slovenia	ND	ND	ND	ND (2) <sup>8</sup>	ND (1)	ND	ND
Sweden	1	yes	1	2	ND (1) <sup>9</sup>	NN (no/yes)	NN (1)
Switzerland	4	NN (yes)	2	10	11 <sup>10</sup>	NN (no/yes)	2
Ukraine	ND <sup>11</sup>	no	ND	1	2	ND	NN (4)
United Kingdom	9	yes	2	1	2 <sup>12</sup>	NN (yes/yes)	7
USA	9	yes	7	29	9 <sup>13</sup>	NN (no/—)	11

Map 1. CBM Submissions  
2021



<https://Ins.lu/departement/microbiologie/revilux/>

<sup>7</sup> Serbia has ticked “nothing to declare” in form 0, although new data has been introduced in subsequent parts.

<sup>8</sup> They incorrectly say “nothing to declare”.

<sup>9</sup> The Public Health Agency does not have any deviating outbreaks to report during 2020 apart from the COVID-19 pandemic.

<sup>10</sup> 10 plant diseases and pestis and one human disease (COVID-19).

<sup>11</sup> They didn’t tick the box but they wrote “nothing to declare”.

<sup>12</sup> The UK, like most other countries has suffered from the COVID-19 pandemic caused by SARS-CoV-2. While this is “an outbreak that seems to deviate from the normal pattern”, individual case details are not being reported here and datasets on the outbreak in the United Kingdom published by the UK Government’s Office for National Statistics.

<sup>13</sup> Two human disease events and 7 animal disease events.



## Research Group for Biological Arms Control

The aim of the Research Group is to contribute, through innovative research and outreach activities, to the universal prevention of biological weapons development, production and use. The focus of activities is twofold. Firstly, the Research Group contributes to preventing the erosion of the universal bioweapons prohibition by opposing norm-harming activities. Secondly, it develops new concepts and instruments for monitoring bioweapon relevant activities and for verifying and enforcing compliance with the norm against bioweapons.

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## ANNEX

The following table summarizes the data declared in **CBM Form A, Part 1**, of the publicly available CBM submissions from 2021 (covering 2021) and compares them with the information in publicly available CBMs from 2007 to 2021. The table provides the names and locations of facilities declared in CBM Form A, part 1, their containment levels, the year(s) they were declared, and whether the facilities were wholly or partly funded by the respective ministries of defence (MoD). “ND” indicates that states ticked the “Nothing to declare” box in Form 0. “NN” indicates that states ticked the “Nothing new to declare” box in Form 0 and provided no further information. “—” indicates that no data was provided or data was not made publicly available (either on the ISU—website or by providing the Hamburg Research Group with the CBM) in the respective year. Cells with background colour indicate that data applies to all cells.

Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	Year of Declaration																	MoD funded?
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Australia	1. Australian Centre for Disease Preparedness (East Geelong)	BL4	x	x	x	x		x	x									x <sup>1</sup>	partially <sup>2</sup>	
	2. National High Security Quarantine Laboratory (Melbourne)	BL4	x	x	x	x	NN	x	x	NN	NN	NN	NN	NN	NN	NN	NN	x	no	
	3. Queensland Health and Forensic Scientific Services (Coopers Plains)	BL4	x	x	x	x		x	x									x	no	
	4. Emerging Infectious Disease and Biohazard Response Unit (Westmead)	BL4	—	x	x	x		x	x									x	no	
Austria	Federal Ministry of Defence and Sport (Vienna)	BL3	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x	wholly	
Belgium	Laboratoire Fédéral d’Orientation (FOL) (FOL) de la défense (DLD)	BL3	—	—	—	—	ND	ND	ND	ND	x	x	x	ND	ND	ND	x	partly		
Bulgaria	1. National Center of Infectious and Parasitic Diseases (Yanko Sakazov Blvd., Sofia)	BL3	x	x		x	x	x	x			x				—				
	2. Department of Microbiology and Virology, Military Medical Academy (St. Georgi Sofiiski Str., Sofia)	BL3	—	—	—	—	—	—	—	NN	NN	x	NN	NN	x	—	NN	NN		
	3. National Diagnostic Research Veterinary Medicine Institute (Pencho Slaveikov Blvd., Sofia)	BL3	—	—		x	x	—	—			x			x					

<sup>1</sup> Although Australia ticked “nothing to declare” in form 0, it modified the name of a facility and MoD’s findings details.

<sup>2</sup> Funding to support ACDP’s work on the environmental stability of SARS—CoV—2 was provided in 2020 by Department of Defence.



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	Year of Declaration																	MoD funded?
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Canada	1. National Microbiology Laboratory (Winnipeg)	BL4					x		NN	NN	NN	x	x	NN	NN	x	x	x	no	
	2. National Center for Foreign Animal Disease (Winnipeg)	BL4			—		x		NN	NN	NN	x	x	NN	NN	x	x	x	no	
Croatia	University Hospital for Infectious Diseases (Zagreb) <sup>3</sup>	BL3	—	—	—	—	—	—	—	—	ND	—	—	—	ND	—	x	x	no	
Cyprus	<i>Nothing to declare</i>	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	NN	NN	NN	—	
Czech Rep.	1. State Veterinary Institute Jihlava (Jihlava)	BL3	—	—			x	—											—	
	2. State Veterinary Institute Prague (Lysolaje)	BL3	—	—			x	—											—	
	3. Tekro, spol.s.r.o. (Uničov)	BL3	—	—			x	—											—	
	4. Collection of Animal Pathogenic Microorganisms, Veterinary Research Institute — former Microbiological Laboratory BSL—3 (Brno)	BL3	x	x			x	—											—	
	5. Institute of Molecular Pathology (Hradec Králové)	BL3	x	x			x	x											—	
	6. Military Health Institute, Biological Defence Department at Techonin — former Central Military Health Institute, Department Těchonín (Těchonín)	BL4	x	x	NN	NN	x	x	NN	x	NN	NN	NN	NN	NN	NN	NN	NN	NN	wholly
	7. Central Military Health Institute, Department Prague (Prague)	BL2	—	—			x	x												—
	8. Laboratory for Biological Monitoring and Protection, Department of Biological Protection, National Institute for Nuclear, Chemical and Biological Protection (Mlín)	BL4	—	x			x	x		x										no
	9. Laboratory of Molecular Biology (Hradec Králové)	BL2	—	x			—	—												—

<sup>3</sup> Croatia ticked “nothing to declare” but reported a new facility.



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	Year of Declaration																	MoD funded?
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
	10. Division of Infectious Diseases, Department of Infectious Diseases and Epizootology, Faculty of Veterinary Medicine (Brno)	BL3	—	—			x	—		—									—	
	11. National Institute of Public Health; Centre of Epidemiology and Microbiology (Šrobárova)	BL3	—	—			x	—		—									—	
	12. Bioveta, a.s. (Ivanovice na Hané)	BL3	—	—			x	—		—									—	
Denmark	1. Centre for Biosecurity and Biopreparedness — former National Centre for Biological Defence (Copenhagen)	BL2	—	x		x	—												—	
	2. Larger university in Denmark — anonymous (no location provided)	BL3	—	—	—	—	x		ND	ND	ND	ND	ND	NN	NN	NN	NN		no	
	3. TB Vaccine Research (Copenhagen)	BL3	—	—		—	x												no	
	4. QC Bio (Copenhagen)	BL3	—	—		—	x												no	
	5. International Reference Laboratory of Mycobacteriology (Copenhagen)	BL3	—	—		—	x												no	
Ecuador	<i>Nothing to declare</i>	—	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—	—	—	
Estonia	1. Joint Laboratories of Tartu University Clinics (Tartu)	BL3											x	x	x	x	x	x	—	
	2. Microbiology Laboratory of North—Estonia Regional Hospital	BL3											x	x	x	x	x	x	—	
	3. Veterinary & Food Laboratory	BL3											x	x	x	x	x	x	—	
	4. Laboratory for Mycobacteriosis of University of Life Sciences	BL3	—	—	—	ND	ND	—	—	—	ND		x	x	x	x	x	x	—	
	5. Institute of Biomedicine and Translational Medicine of Tartu University	BL3											—	—	x	x	x	—	—	
	6. Laboratory of Communicable Diseases of Estonian Health Board	BL3											—	—	x	x	x	x	—	
	7. Synlab Eesti	BL3											—	—	x	x	x	x	—	
	8. Icosagen Cell Factory OU	BL3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—	



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
	9. University of Tartu Institute of Technology	BL3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—		
Finland	1. Centre for Biothreat Preparedness — Finnish Defence Forces, Centre for Military Medicine, Research and Development Department (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	wholly	
	2. Finnish Institute of Health and Welfare, bacteriological and virological laboratories (Helsinki, Turku)	BL3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	
	3. Yersinia Research Laboratory, University of Helsinki (Helsinki)	BL2	x	x	x	x	x	x	x	x	x	x	—	x	x	x	x	x	no	
	4. Department of Virology, Viral Zoonoses Group, University of Helsinki (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	
	5. Institute of Biotechnology (Helsinki)	BL3	—	—	—	—	—	—	—	x	—	—	—	—	—	—	—	—	—	
	6. Finnish Food Safety Authority (Ruokavirasto) (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	7. Finnish Defence Research Agency (FDRA) (Lakiala)	BL3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	wholly
	8. Department of Food and Environmental Sciences, University of Helsinki (Helsinki)	BL3	—	—	—	—	—	—	—	—	x	x	x	x	—	—	—	—	—	
	9. <i>Clostridium botulinum</i> laboratory, University of Helsinki (Helsinki)	BL2	—	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	no
	10. University of Turku, Institute of Biomedicine and Turku University Hospital/TYKS Laboratories	BS3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	no
Georgia	1. National Center for Disease Control and Public Health (Tbilisi)	BL2	—	—	x	x	x	—	—	—	—	—	—	—	—	—	—	—	—	
	2. Laboratory of Ministry of Agriculture of Georgia (Tbilisi)	BL2	—	—	—	x	x	—	—	—	—	—	—	—	—	—	—	—	—	
Germany	1. Bernhard—Nocht—Institut für Tropenmedizin (Hamburg)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
	2. Friedrich—Loeffler—Institut, Federal Research Institute for Animal Health (Insel Riems)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	
	3. Institute of Virology at the University of Marburg (Marburg)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	
	4. Centre for Biological Threats and Special Pathogens (Zentrum für Biologische Gefahren und Spezielle Pathogene, ZBS) at the Robert Koch Institute	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—	
Greece	1. University of Crete School of Medicine (Heraklion)	BL3					x												
	2. Kapodistrian University of Athens School of Medicine (Athens)	BL3					x												
	3. The National Arbovirus and Hemorrhagic Fever Viruses Reference Laboratory at Arisotelian University of Thessaloniki (Thessaloniki)	BL3	—	—	—	—	x	NN	NN	—	—	—	—	—	—	—	—	—	
	4. Infectious Diseases Hospital (Thessaloniki)	BL3					x												
	5. Hellenic Pasteur Institute (Athens)	BL3					x												
	6. Athens School of Public Health (Athens)	BL3					x												
Hungary	National Center for Epidemiology (Budapest)	BL4	—	—	—	—	—	—	—	x	x	—	—	—	—	—	—	—	
Ireland	1. University College Dublin, National Viral Reference Laboratory (Dublin)	BL3+	x	x	x	x	x			x	x	x		x				no	
	2. Public Health Laboratory, Cherry Orchard Hospital (Dublin)	BL3	x	x	x	x	x			x	x	x		x				no	
	3. Department of Agriculture Food and the Marine Laboratories (Celbridge)	BL3+	—	—	—	—	x			x	x	x	NN	x	NN	NN	NN	—	
	4. National Salmonella Reference Laboratory, National University of Ireland (Galway)	BL3	x	x	x	x	x			x	x	x		x				—	
	5. Galway University Hospital (Galway)	BL3	—	—	—	—	x			x	x	x		x				—	



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
	6. Irish Marine Institute, Oranmore (Galway)	BL2	x	x	x	x	x	—	—	x	x	x		x				—		
	7. Health Research Board Clinical Research Facility, St James' Hospital (Dublin)	BL2	—	—	—	—	x	—	—	x	x	x		x			—	—		
Japan	1. Murayama Annex of National Institute of Infectious Diseases — former National Institute of Health (Tokyo)	BL4	—	—	—	—	—	x		NN	NN	NN	NN	NN	NN	NN	NN	NN	no	
	2. RIKEN Tsukuba Campus (Ibaraki)	BL4						x											no	
Latvia	1. Riga East University Hospital Latvian Centre of Infectious Diseases, National Microbiology Reference Laboratory (Linezera Street, Riga)	BL3					x	x	x	x	x	x	x	x				NN	no	
	2. Latvian Biomedicine Research and Study centre (Ratsupites, Riga)	BL2	—	—	ND	—	—	—	—	—	—	x	x	x		NN	NN	—	no	
	3. Centre for Disease Prevention and Control of Latvia (Dunties Street, Riga)	BL3					—	x	—	—	—	—	—	—				—	—	
Liechtenstein	<i>Nothing new to declare</i>	—	NN	NN	NN	NN	NN	—	NN	NN	—	NN	NN	NN	NN	NN	—	NN		
Lithuania	1. National Public Health Surveillance Laboratory — former Microbiological Laboratory of Vilnius Public Health Centre (Vilnius)	BL3	x	x	x	x	x	x	x	x								NN	no	
	2. Laboratory of Centre for Communicable Diseases and AIDS — former Lithuanian AIDS Center Laboratory (Vilnius)	BL2	x	x	x	x	—	—	—	—		NN	NN	NN	NN	NN	NN	—	—	
	3. National Food and Veterinary Risk Assessment Institute — former National Veterinary laboratory (Vilnius)	BL3	x	x	x	x	x	x	x	x								NN	no	
Luxembourg	1. Laboratoire de santé (Dudelange)	BL3	—	—	—	—	—	ND	k	—	x	NN	NN	NN	NN	NN	x	no		
	2. Luxembourg Institute of Health (Esch-sur-Alzette)	BL3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—		
Madagascar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Malaysia	1. Animal and Plant In vitro Laboratory, Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3					x													
	2. Biochemistry Laboratory, Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3					x													
	3. Genomics Laboratory, Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3					x													
	4. Microbiology Laboratory, Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3					x													
	5. Natural Product Chemistry Laboratory, Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3	—	—	—	—				—	—	—	—	—	—	—	—	—	—	—
	6. Medical Laboratories for medical microbiology, parasitology and virology (Serdang)	BL2					x													
	7. Biosafety Level 3, Animal Biosafety Level 3 Laboratory (Serdang)	BL3					x													
	8. Plant Biotech Facility, Centre for Research in Biotechnology for Agriculture (Kuala Lumpur)	—					x													
	9. Institute for Systems Biology (Bangi)	BL2					x													
	10. Veterinary Resarch Institute (Ipoh)	BL3					x													
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—	—	
Mexico	1. Universidad de Monterrey (Nuevo León)	BL3											x	x				x	x	no
	2. Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán. Laboratorio Nacional de Máxima Seguridad Biológica para el Estudio de la Tuberculosis y Enfermedades Emergentes (LNMSBETEE) (Tlalpan)	BL3	—	—	—	—	—	—	—	—	—	—	x	x	NN	NN	NN	x	x	no



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021												
	3. Centro de Investigación en Tecnología y Diseño del Estado de Jalisco A.C. Dirección de Biotecnología Médica y Farmacéutica (Jalisco)	BL3																	x	x				x	x		no		
	4. Laboratorios de Diagnostico del Departamento de Medicina Zootecnia de Cerdo, Facultad de Medicina Veterinaria y Zootecnia (Coyoacán)	BL3																		x	x				—	—		—	
	5. Instituto Nacional de Enfermedades Respiratorias Ismael Cosío Villegas. Unidad de Investigación (Tlalpan)	BL3																		x	x				x	x		no	
	6. Instituto de Diagnóstico y Referencia Epidemiológicos “Dr. Manuel Martínez Báez”. Dirección General de Epidemiología. Secretaría de Salud. (Álvaro Obregón)	BL3																		x	x				x	x		no	
	7. Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria. Comisión México Estados Unidos para la prevención de la Fiebre Aftosa y otras enfermedades exóticas de los animales (Cuajimalpa)	BL3																		x	x				x	x		no	
	8. Laboratorio Estatal de Salud Pública del Estado de Sonora (Sonora)	BL3																		x	x				x	x		no	
	9. Universidad Nacional Autónoma de México. Instituto de Investigaciones Biomédicas (Coyoacán)	BL3																		x	x				x	x		no	
	10. Laboratorio Estatal de Salud Pública de Veracruz (Veracruz)	BL3																		x	x				x	—		no	
	11. Centro Nacional de Servicios de Diagnóstico en Salud (Pachuca de Soto)	BL3																		x	x				—	—		—	
Morocco	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	NN	—	—	—
Myanmar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—





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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Netherlands	1. TNO Department of CBRN Protection (Rijswijk)	BL3								x	—	x	x	x	x	x	x	x	mostly
	2. National Institute for Public Health and the Environment Rijksinstituut voor Volksgezondheid en Milieu (Bilthoven)	BL3	—	—	—	—	—	—	—		x	x	x	x	x	x	x	x	no
New Zealand	National Centre for Biosecurity and Infectious Disease (Upper Hutt)	BL3+	x	x	—	x	x	x	x	x	x	x	x	x	x	x	x	x	no
Norway	Institute of Microbiology, Armed Forces Medical Services (Oslo)	BL3	—	x	—	x	NN	NN	NN	NN	NN	ND	ND	ND	ND	ND	ND	ND	—
Portugal	1. Laboratório de Bromatologia e Defesa Biológica (Lisbon)	BL3				x	x	x	x	x	x								partly
	2. Unidade de reposta a Emergências e Bio-preparação (Lisbon)	BL3				x	—	—	—	—	—								—
	3. Departamento de Doenças Infecciosas (Lisbon)	BL3				—	—	x	x	x	x								no
	4. Unidade de reposta a Emergências e Bio-preparação (Braga)	BL3				—	—	—	—	—	—								—
	5. Instituto Nacional de Investigação Agrária e Veterinária, Unit of Animal Health (Lisbon & Vila do Conde)	BL3	—	—	—	—	—	x	x	x	x		NN	NN	NN	NN	NN	NN	no
	6. Life and Health Sciences Research Institute (Braga)	BL3				—	—	—	x	x	x								—
	7. Instituto de Tecnologia Química e Biológica (Lisbon)	BL3				—	—	—	—	—	x								no
	8. Departamento de Farmácia Galénica e Tecnologia Farmacêutica (Lisbon)	BL3				—	—	—	—	—	x	x							no
	9. Departamento de Microbiologia e Imunologia (Lisbon)	BL3				—	—	—	—	—	x	x							—
	10. Faculdade de Ciências da Universidade de Lisboa (Lisbon)	BL3				—	—	—	—	—	—	—							no
Qatar	<i>Nothing new to declare</i>	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	



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			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Republic of Moldova	1. National Center for Public Health (Chinsinau)	BL3	—	—	—	—	x	x	—	—	—	—	—	—	—	—	—	—	—	
	2. Republican Center for Veterinary Diagnostics (Chinsinau)	BL3	—	—	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—	
Romania	1. Military Medical Research Center (Bucharest)	BL2+ <sup>4</sup>	x	—	—	—	x	x	x	—	—	x	x	x	x	x	x	x	x	wholly
	2. National Society "Pasteur Institute" (Bucharest)	BL2	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	no
	3. Institute for Hygiene and Veterinary Public Health (Bucharest)	BL2	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	no
	4. "Cantacuzino" National Medico—Military Institute of Research and Development (Bucharest)	BL2 <sup>5</sup>	—	NN	NN	NN	—	x	—	—	x	x	x	x	x	x	x	x	x	no
	5. Institute for Diagnosis and Animal Health (Bucharest)	BL3	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	no
	6. Institute for Control of Veterinary Biological Products and Medicines (Bucharest)	BL2	x	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	—
	7. National Institute for Infectious Diseases "Matei Bals" (Bucharest)	BL3 <sup>6</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x	no
Serbia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	ND	—	ND	ND	—	ND	ND	ND	ND	ND	ND	—
Slovakia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	NN	ND	ND	—
Slovenia <sup>7</sup>	1. University of Ljubljana, Faculty of Medicine Institute of Microbiology and Immunology (Ljubljana)	BL3	—	—	—	—	—	—	—	—	—	NN	NN	NN	NN	NN	NN	ND	x	—
	2. Ministry of Defence - mobile laboratory (Kranj)	BL3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	—

<sup>4</sup> Biosafety level 3 is under construction (2021, p. 6).

<sup>5</sup> Biosafety level 3 is not operational (2021, p. 9)

<sup>6</sup> Biosafety level 3 is not fully operational, pending validation (2021, p. 7)

<sup>7</sup> Slovenia has mistakenly ticked “nothing to declare” although in its CBM submission it declared three BS3 (2021, p.4), with no further information provided.



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	3. University of Ljubljana, Veterinary Faculty, National Veterinary Institute (Ljubljana)	BL3																x		
Sweden	1. Swedish Defence Research Agency Division of NBC Defence (Umea)	BL3	x	x	x	x	x	—	—	—	—	—	—	x	—	—	—	—	—	
	2. High Containment Laboratory, Public Health Agency of Sweden (Solna)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no	
	3. National Veterinary Institute (Uppsala)	BL3	x	x	x	x	x	—	—	—	—	—	—	x	—	—	—	—	—	
Switzerland	1. Labor Spiez (Spiez)	BL3				x	x	x	x	x	x	x	x	x	x	x	x	x	partly	
	2. Institute of Virology and Immunology (Mittelhäusern)	BL3	NN	NN	NN	x	x	x	x	x	x	x	x	x	x	x	x	no		
	3. National Reference Center for Emerging Viral Infections (Geneva)	BL4				x	x	x	x	x	x	x	x	x	x	x	x	no		
	4. Institute of Medical Virology (Zurich)	BL4				—	—	—	—	x	x	x	x	x	x	x	x	no		
Thailand	<i>Nothing new to declare</i>	—	—	—	—	NN	NN	NN	—	—	—	—	—	—	—	—	—	—		
Turkey	1. Ankara University Biotechnology Institute (Ankara)	BL2					x	x												
	2. Refik Saydam National Public Health Agency (Ankara)	BL3					x	—												
	3. Bornova Veterinary Control and Research Institute (Ankara)	BL3	—	—	—	—	x	—	NN	NN	NN	NN	NN	NN	—	—	—	—		
	4. Diagnosis of Poultry Disease Laboratory (Ankara)	BL3					x	—												
	5. Biosafety Level—3 Laboratory Institute (Ankara)	BL3					—	x												
Ukraine	1. Governmental Scientific Oversight Institute for Biotechnology and Microorganism Culture Collection (Kiev)	—					x	x					x	—	—	—	—	—		
	2. State institution "Institute of Microbiology and Immunology I.I. Mechnikov of the	—					x	x				x	x	x	x	x	x	partially		



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	National Academy of Medical Sciences of Ukraine" (Kharkov)																			
	3. State institution "Institute of Epidemiology and Infectious Diseases named after L.V. Gromashevsky NAMS of Ukraine" (Kiev)	BL2						x	x				x	—	x	x	x	x	x	no
	4. State institution "Ukrainian Research Anti—Plague Institute I.I. Mechnikov" of the Ministry of Health of Ukraine (Odessa)	BL3						x	x				x	x	x	x	x	x	x	no
	5. Central Sanitary Epidemiological Station (Kiev)	BL3						x	x				—	—	—	—	—	—	—	—
	6. State institution "Lviv Research Institute of Epidemiology and Hygiene of the Ministry of Health of Ukraine" (Lviv)	BL3						x	x				x	x	x	x	x	x	x	no
	7. National Scientific Center "Institute of Experimental and Clinical Veterinary Medicine" (Kharkov)	BL2						—	x				x	x	x	x	x	x	x	no
	8. Institute of Veterinary Medicine of the National Academy of Agrarian Sciences of Ukraine (Kiev)	—						—	x				x	x	—	x	x	x	x	no
	9. State institution "Center for Public Health of the Ministry of Health of Ukraine" — former State institution "Ukrainian Centre for Disease Control and Monitoring of the Ministry of Health of Ukraine" (Kiev)	BL3						—	—				x	x	x	x	x	x	x	no
	10. State Scientific Control Institute of Biotechnology and Microorganism Strains (Kiev)	BL2						—	—				x	x	x	x	x	x	x	no
	11. State Research Institute of Laboratory Diagnostics and Veterinary and Sanitary Expertise (Kiev)	BL2						—	—				—	—	—	x	x	x	x	no
United Kingdom	1. Defence Science and Technology Laboratory, Porton Down (Salisbury)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	yes



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	2. Public Health England — Colindale (London)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	3. Public Health England — Porton (Salisbury)	BL4	x	x	x	x	x	x	—	x	x	x	x	x	x	x	x	no
	4. National Institute for Biological Standards and Control (Potters Bar)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	5. The Francis Crick Institute Containment 4 facility (London)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	6. The Pirbright Institute (Pirbright)	SAPO4	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	no <sup>8</sup>
	7. Animal and Plant Health Agency (Addlestone)	SAPO4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	8. Institute for Animal Health, Pirbright Laboratory (Woking)	SAPO4	x	x	x	x	x	x	—	—	—	—	—	—	—	—	—	—
	9. Boehringer Ingelheim Animal Health UK Limited, former Merial Animal Health, Biological Laboratory (Pirbright)	SAPO5	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	10. Schering—Plough Animal Health (Uxbridge)	SAPO4	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	11. Biobest Secure Unit (Milton Bridge)	BL4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	no
	USA	1. Georgia State University — High Containment Core (Atlanta, GA)	BL4				x	x	x	x	x	x	x	x	x	—	x	x
2. The Betty Slick and Lewis J. Moorman, Jr. Laboratory Complex (San Antonio, TX)		BL4				x	x	x	x	x	x	x	x	x	x	x	x	partly
3. Galveston National Laboratory (Galveston, TX)		BL4	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	partly
4. Plum Island Animal Disease Center (Greenport, TX)		BL3				x	x	—	—	—	—	—	—	—	—	—	—	—
5. U.S. Army Medical Research Institute of Infectious Diseases (Fort Detrick, MD)		BL4				x	x	x	x	x	x	x	x	x	x	x	x	partly

<sup>8</sup> Partially funded by the US Defense Advanced Research Projects Agency.



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	Year of Declaration														MoD funded?	
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		2021
	6. National Biodefense Analysis and Countermeasures Center (Fort Detrick, MD)	BL4				—	—	x	x	x	x	x	x	x	x	x	—	no
	7. Integrated Research Facility at Rocky Mountain Laboratories (Hamilton, MT)	BL4				—	—	x	x	x	x	x	x	x	x	x	—	no
	8. Coordinating Center for Infectious Diseases (Atlanta, GA)	BL4				x	—	—	—	—	—	—	—	—	—	—	—	—
	9. CDC, Deputy Director for Infectious Diseases (Atlanta, GA)	BL4				—	—	x	x	x	x	x	x	x	x	x	x	no
	10. Integrated Research Facility at Fort Detrick — NIAID (Fort Detrick, MD)	BL4				—	—	—	—	x	x	x	x	x	x	x	x	no
	11. The Boston University National Emerging Infectious Diseases Laboratories — NEIDL (Boston)	BL4				—	—	—	—	—	—	—	—	x	x	x	x	no

### CBM Form A, Part 2 (ii)

The following table summarizes the data declared in **CBM Form A, Part 2 (ii)** of the publicly available CBM submissions from 2021 and compares them with the information in publicly available CBMs from 2007 to 2021. The table indicates the overall funding for the biodefence programme as declared in CBM Form A, part 2 (ii), and lists the names and locations of biodefence facilities declared in CBM Form A, part 2 (iii), specifying the year(s) they were declared. Grey cells indicate that there was no CBM submission or that it was not made publicly available in the respective year. “ND” indicates that the state ticked the “Nothing to declare” box in Form 0. “NN” indicates that the state ticked the “Nothing new to declare” box in Form 0. “—“ indicates that no data were provided.

Country	Year of Declaration — Total funding in million EUR declared in Form A, Part 2 (ii) <sup>9</sup>														
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	1.5	1.6	1.7	1.7	2	2	2	1.7	1.7	2.1	2.1	2.3	2.2	1.8	2.5
Austria	—	—	0.01	0.03	0.05	0.03	0.02	0.09	0.09	0.09	0.02	0.09	0.63	5	5

<sup>9</sup> National currencies were converted to Euros using the online service, <http://www.finanzen.net/waehrungsrechner>. 15 April of each respective year, the deadline for submitting the CBM to the UN is selected as the date for the currency conversion.



Belgium	—	—	—	—	0.6	1	0.3	0.3	0.4	0.2	0.3	0.26	0.24	0.27	0.35
Bulgaria	—	—	—	—	—	NN	NN	NN	NN	ND	ND	ND	NN	—	NN
Canada	—	—	—	—	6	6.6	9.3	9.6	6.5	6.6	6.3	4	3.1	2.4	1.9
Croatia	—	—	—	—	—	—	—	ND	—	—	—	ND	—	—	—
Cyprus	—	—	—	—	—	—	—	—	—	—	—	—	NN	NN	NN
Czech Rep.	—	—	NN	—	—	NN	—	—	NN	NN	NN	NN	NN	NN	NN
Denmark	1.9	2	—	2.9	2.8	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Ecuador	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—
Estonia	—	—	—	ND	ND	—	—	—	ND	ND	ND	ND	ND	ND	ND
Finland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Georgia	—	—	0.3	1.7	1.6	—	—	—	—	—	—	—	—	—	—
Germany	11.7	11.4	11.2	9.9	9.6	15	16	14.6	15.4	18	17.4	17.3	18.5	17.6	20.9
Greece	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	—	—	—	—	—	—	—	—	—	NN	NN	NN	NN
Japan	—	—	—	—	—	1.1	2.3	2.5	0.01	0.01	0.01	0.4	0.28	0.3	0.38
Latvia	—	—	—	—	—	—	—	NN	—	—	ND	ND	ND	ND	ND
Liechtenstein	NN	NN	NN	NN	NN	—	NN	NN	—	—	—	—	—	—	—
Lithuania	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Luxembourg	—	—	—	—	—	ND	—	ND	ND	ND	ND	ND	ND	ND	ND
Madagascar	—	—	—	—	—	ND	—	—	—	—	—	—	—	—	—
Malaysia	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—
Mauritius	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	ND	ND	ND	ND	ND	ND	ND
Morocco	—	—	—	—	—	—	—	—	—	—	—	—	ND	—	—



Myanmar	—	—	—	—	—	—	—	—	—	—	ND	—	ND	—	—	—
Netherlands	—	—	—	—	—	—	1.2	1.2	1	1	1	3	3	3.6	3.6	
New Zealand	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Norway	—	—	—	—	—	0.5	—	—	2	2.6	NN	NN	NN	2.6	1.7	
Portugal	—	—	—	0.2	0.1	0.1	0.03	0.05	0.26	0.26	0.04	0.11	NN	0.23	0.24	
Qatar	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	
Republic of Moldova	—	—	—	—	—	NN	NN	0.03	NN	NN	—	0.03	—	0.03	0.03	
Romania	—	—	NN	NN	—	0.01	0.01	ND	ND	ND	ND	ND	ND	ND	ND	
Serbia	—	—	—	—	—	ND	—	ND	ND	—	ND	ND	ND	ND	ND	
Slovakia	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	ND	ND	
Slovenia	—	—	—	—	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND	
Sweden	2.8	2.7	2.7	3.1	3.5	3.5	3.5	4.2	3.7	3.2	3	3.2	3.7	2.9	3.5	
Switzerland	0.6	0.6	1	1.7	3.9	4.2	4.1	4.1	4.9	4.8	4.7	4.4	4.4	4.7	4.6	
Thailand	—	—	—	NN	NN	NN	—	—	—	—	—	—	—	—	—	
Turkey	—	—	—	—	2.3	NN	NN	1.7	ND	ND	ND	ND	—	—	—	
Ukraine	—	—	—	—	ND	ND	—	—	ND	ND	ND	ND	ND	ND	ND	
United Kingdom	75	77.6	65.7	53.6	57.8	62	60.1	59.1	69.4	66.5	58.2	52.2	45.9	52.3	49.6	
	—	—	—	451.6	475	779	743	670	812.4	730.4	668.8	547.7	694	693	618	

### CBM Form A, Part 2 (iii)

The following table summarizes the data declared in **CBM Form A, Part 2 (iii)** of the publicly available CBM submissions from 2021 and compares them with the information in publicly available CBMs from 2007 to 2021. The table lists the names and locations of biodefence facilities declared in CBM Form A, part 2 (iii), specifying the year(s) they were declared. Grey cells indicate that there was no CBM submission or that it was not made publicly available in the respective year. “ND” indicates that states ticked the “Nothing to declare” box in Form 0. “NN” indicates that states ticked the “Nothing new to declare” box in Form 0 and provided no further information. “—” indicates that no data was provided or data was not





made publicly available (either on the ISU—website or by providing the Hamburg Research Group with the CBM) in the respective year. Cells with background colour indicate that data applies to all cells.

Country	Name and location of facilities declared in CBM Form A, Part 2 (iii)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Australia	Biological Defence Research, Land Division, Defence Science and Technology Group (Fishermans Bend)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Austria	Armament and Defence Technology Agency, Division NBC & Environmental Protection Technology (Vienna)	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
Belgium	1. Centre de Technologies Moléculaires Appliquées — Laboratoires de la Défense (Brussels)					x	x	x	x	x	x	x	x	x	x	x
	2. Centre de Technologies Moléculaire Appliquée — Mycologie (Louvain—La—Neuve)					—	—	—	x	x	x	x	x	—	—	—
	3. DLD Defense Laboratory Department (Vilvoorde Peutie)	—	—	—	—	x	x	x	x	x	x	x	x	—	—	—
	4. Research Laboratory for Vector Borne Disease (Brussels)					x	—	—	—	—	—	—	—	—	—	—
	5. UCL, Faculté des Sciences Agronomiques, Unité de microbiologie (Louvain—La—Neuve)					x	x	x	x	x	x	x	—	—	—	—
Bulgaria	1. National Center of Infectious and Parasitic Diseases, Ministry of Health of the Republic of Bulgaria (Sofia)	x	x	—	x	x	x	x	x	x						
	2. National Research Diagnostic Veterinary Institute, Bulgarian Food Safety Agency (BFSA) of the Republic of Bulgaria (Sofia)	—	—	—	—	—	—	—	—	x	ND	ND	ND	NN	—	NN
Canada	1. Defence Research and Development Canada — Suffield Research Centre (Medicine Hat, AB)					x	x	x	x	x	x	x	x	x	x	x
	2. Defence Research and Development Canada (DRCD) — Valcartier Research Centre (Québec, QC)					x	x	x	x	x	x	x	x	x	x	x



Croatia <sup>10</sup>	University Hospital for Infectious Diseases “Dr. Fran Mihaljevic”, Central Diagnostic Laboratory (Zagreb)	—	—	—	—	—	—	—	ND	—	—	—	ND	—	x	x
Cyprus	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	—	—	ND	NN	NN
Czech Rep.	1. Central Military Health Institute, department Techonin (Techonin)	x	x	—	—	x	x	—	ND	ND	NN	ND	ND	ND	ND	NN
	2. Central Military Health Institute, department Prague (Prague)	—	—	—	—	x	x	x								
	3. Institute of Molecular Pathology (IMP) (Hradec Králové)	x	x	NN	ND	x	x	x								
	4. Laboratory for Biological Monitoring and Protection (Milin)	x	x	—	—	x	x	—								
	5. Laboratory of Molecular Biology, GENERI BIOTECH s.r.o. (Hradec Kralove)	x	x	—	—	—	—	—								
Denmark	Center for Biosecurity and Biopreparedness (Copenhagen)	x	x	—	x	x	x	x	x	x	NN	x	x	x	x	x
Ecuador	<i>Nothing to declare</i>	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—
Estonia	<i>Nothing to declare</i>	—	—	—	ND	ND	—	—	ND	ND	ND	ND	ND	ND	ND	ND
Finland	Center for Biothreat Preparedness (Helsinki)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Georgia	1. National Center for Disease Control and Public Health (Tbilisi)	—	—	x	x	x	—	—	—	—	—	—	—	—	—	—
	2. Laboratory of Ministry of Agriculture of Georgia (Tbilisi)	—	—	—	x	x	—	—	—	—	—	—	—	—	—	—
Germany	1. CBRN Defence, Safety and Environmental Protection School (Sonthofen)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	2. Bundeswehr Institute of Microbiology (Munich)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	3. Bundeswehr Research Institute for Protective Technologies and NBC—Protection (Munster)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4. Central Institute of the Bundeswehr Medical Service (Kiel)	—	x	x	—	x	x	x	x	x	x	x	x	x	x	x

<sup>10</sup> Croatia ticked “nothing to declare” but reported a new facility.



	5. Centre for Biological Threats and Special Pathogens at the Robert Koch Institute (Berlin)	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x
Greece	<i>Nothing to declare</i>	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—
Hungary	1. Medical Centre of Hungarian Defence Forces (Budapest)	—	—	—	—	—	—	—	x	—	—	—	—	—	—	—
	2. Biosafety Laboratory (Budapest)	—	—	—	—	—	—	—	—	x	—	—	—	—	—	—
Ireland	<i>"Ireland does not have a national biological defence R&amp;D programme"</i>	—	—	—	—	—	—	—	—	ND	ND	ND	NN	NN	NN	NN
Japan	1. Military Medicine Research Unit, Test & Evaluation Command (Tokyo)	—	—	—	—	—	x	—	—	—	—	—	—	—	—	—
	2. National Defense Medical College (Saitama)	—	—	—	—	—	—	NN	NN	NN	NN	NN	x	x	x	x
Latvia	Riga East University Hospital, Latvian Centre of Infectious Diseases, National Microbiology Reference laboratory (Riga)	—	—	—	—	x	x	NN	x	x	x	x	x	NN	NN	NN
Liechtenstein	<i>Nothing new to declare</i>	NN	NN	NN	NN	NN	—	NN	NN	—	—	—	—	—	—	—
Lithuania	<i>Nothing to declare</i>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Luxembourg	<i>"Luxembourg does not have national research and development programs for biological defense on the territory"</i>	—	—	—	—	—	ND	—	ND	ND	ND	ND	ND	ND	ND	ND
Madagascar	<i>Nothing to declare</i>	—	—	—	—	—	ND	—	—	—	—	—	—	—	—	—
Malaysia	<i>Nothing to declare</i>	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—
Mauritius	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—
Mexico	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	ND	ND	ND	ND	ND	ND	ND
Morocco	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myanmar	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—
Netherlands	TNO Prins Maurits Building; Department of CBRN Protection (Rijswijk)	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x
New Zealand	<i>Nothing to declare</i>	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Norway	1. Institute of Microbiology, FML (Kjeller)	—	x	—	x	—	—	—	—	x	—	—	—	—	—	—
	2. Norwegian Defence Research Establishment, FFI (Kjeller)	—	—	—	—	—	NN	NN	NN	NN	x	NN	NN	NN	NN	NN



	3. Norwegian Institute of Public Health, FHI (Oslo)		—		—					x							
Portugal	Laboratório de Bromatologia e Defesa Biológica (Lisbon)	—	—	—	x	x	x	x	x	x	x	x	NN	NN	NN	NN	
Qatar	<i>Nothing to declare</i>	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	
Republic of Moldova	The National Center of Public Health (Chisinau)	—	—	—	—	x	NN	x	x	NN	NN	—	ND	—	—	—	
Romania	Military Medical Research Center (Bucharest)	—	x	NN	NN	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	
Serbia	<i>Nothing to declare</i>	—	—	—	—	—	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	
Slovakia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	ND	ND	
Slovenia <sup>11</sup>	1. University of Ljubljana, Veterinary Faculty, National Veterinary Institute (Ljubljana)																x
	2. University of Ljubljana, Medical Faculty, Institute of microbiology and immunology (Ljubljana)																
Sweden	1. Swedish Defence Research Agency (Umea)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	2. National Veterinary Institute (Uppsala)	—	x	—	—	—	—	x	x	x	x	x	x	x	x	x	x
Switzerland	1. Spiez Laboratory — Swiss NBC Defence Establishment (Spiez)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	2. Institute of Virology and Immunology (Mittelhäusern)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
	3. National Reference Center for Emerging Viral Infections (Geneva)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
	4. National Reference Center for Anthrax (Bern)	—	—	—	x	x	x	x	x	x	x	—	—	—	—	—	—
	5. Bacteriological Laboratory (Geneva)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
	6. Virological Laboratory — National Reference Center for Emerging Viral Infections (Geneva)	—	—	—	x	x	x	x	x	x	x	x	x	—	—	—	—
	7. Diagnostic Laboratories of the Institute of Microbiology (Lausanne)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x

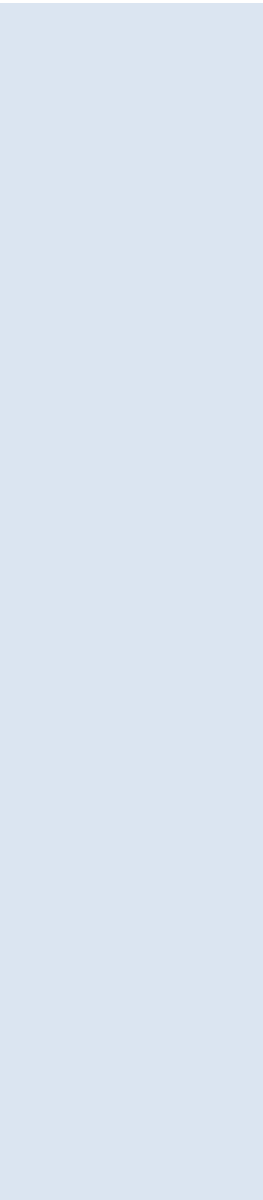
<sup>11</sup> Slovenia has mistakenly ticked “nothing to declare” although in its CBM submission it declared three BS3 (2021, p.7), with no further information provided.



	8. Spiez Laboratory — National Reference Center (Spiez)	—	—	—	x	x	x	x	x	x	x	x	x	—	—	—
	9. Department of Medical Microbiology (Luzern)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	10. Institute of Medical Microbiology (Zurich)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	11. Institute for Medical Virology (Zurich)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	12. Cantonal Laboratory of Basel—Stadt (Basel)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	13. Laboratory of Applied Microbiology (Bellinzona)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
Thailand	<i>Nothing new to declare</i>	—	—	—	NN	NN	NN	—	—	—	—	—	—	—	—	—
Turkey	1. DIDC (Ankara)	—	—	—	—	x	NN	NN	NN	ND	ND	ND	ND	—	—	—
	2. Refik Saydam National Public Health Agency (Ankara)	—	—	—	—	x	NN	NN	NN	ND	ND	ND	ND	—	—	—
Ukraine	State Scientific and Control Institute for Biotechnology and Microorganism Strains (Kiev)	—	—	—	—	ND	ND	—	—	ND	ND	ND	ND	ND	ND	x
United Kingdom	Defence Science and Technology Laboratory (Porton Down Salisbury)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
USA	1. Plum Island Animal Disease Center (Orient Point, NY)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	2. Tyndall Air Force Base 1, Research Road (Tyndall, FL) — closed in 2013	—	—	—	x	x	x	x	—	—	—	—	—	—	—	—
	3. Tyndall Air Force Base 2, Barnes Drive (Tyndall, FL)	—	—	—	x	x	x	x	—	—	—	—	—	—	—	—
	4. Lothar Salomon Test Facility (Dugway, UT)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	5. U.S. Army Combat Capabilities Development Command Chemical and Biological Center, former U.S. Army Edgewood Chemical and Biological Center (Aberdeen, MD)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	6. U.S. Army Medical Research Institute of Chemical Defense (Aberdeen, MD)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	7. U.S. Army Medical Research Institute of Infectious Diseases (Fort Detrick, MD)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x



8. Walter Reed Army Institute of Research (Silver Spring, MD)
9. Battelle Biomedical Research Center (West Jefferson, OH)
10. Naval Surface Warfare Center—Dahlgren Division Chemical, Biological, Radiological Defense Laboratory (Dahlgren, VA)
11. Naval Research Laboratory (Washington, DC)
12. Naval Medical Research Center (Fort Detrick, MD)
13. Brookhaven National Laboratory (Upton, NY)
14. Idaho National Laboratory (Idaho Falls, ID)
15. Los Alamos National Laboratory (Los Alamos, NM)
16. Lawrence Livermore National Laboratory (Livermore, CA)
17. Oak Ridge National Laboratory (Oak Ridge, TN)
18. Pacific Northwest National Laboratory (Richland & Sequim, WA)
19. Sandia National Laboratories (Albuquerque, NM and Livermore, CA)
20. C.W. Bill Young Center for Biodefense and Emerging Infectious Diseases (Bethesda, MD)
21. Integrated Research Facility at Rocky Mountain Laboratories (Hamilton, MT)
22. Dale and Betty Bumpers Vaccine Research Center (Bethesda, MD)
23. CDC Mass Spectrometry Toxin Laboratory — since 2012 within No. 28 (Atlanta, GA)
24. Foreign Disease—Weed Science Research Unit (Fort Detrick, MD)



x	x	x	—	—	—	—	—	—	—	—	—	—
x	x	—	—	—	—	—	—	—	—	—	—	—
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	—	—	—
x	x	x	x	—	—	—	—	—	—	—	—	—
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
x	—	—	—	—	—	—	—	—	—	—	—	—
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	—	—	—	—	—	—	—	—	—	—	—
x	x	x	x	x	x	x	x	x	x	x	x	x



25. National Animal Disease Center (Ames, IA)

26. Southeast Poultry Research Laboratory (Athens, GA)

27. National Biodefense Analysis and Countermeasures Center (Fort Detrick, MD)

28. Centers for Disease Control and Prevention, National Center for Environmental Health, Division of Laboratory Services (Buford Highway, Atlanta, GA)

29. Centers for Disease Control and Prevention, Deputy Director for Infectious Diseases (Clifton Road, Atlanta, GA)

30. CDC, DDID, National Center for Emerging and Zoonotic Infectious Diseases, Division of Vector Borne Diseases (Fort Collins, CO)

31. Lawrence Berkeley National Laboratory (Berkeley, CA)

32. Air Force Research Laboratory (Wright—Patterson Air Force Base, OH)

33. US Army Natick Soldier Research Development and Engineering Center (Natick, MA)

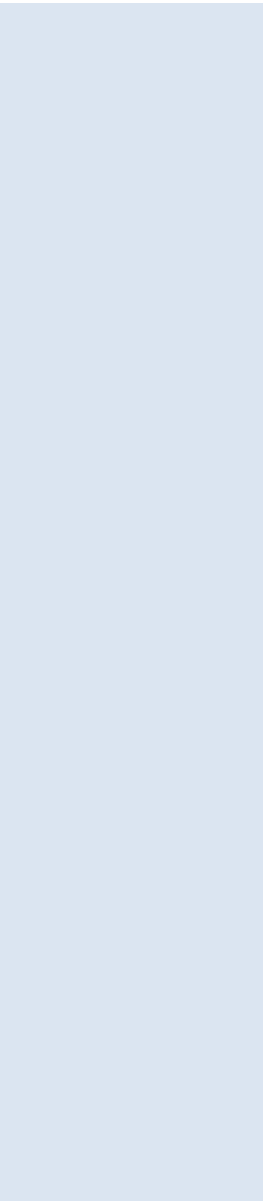
34. Integrated Research Facility at Fort Detrick (Fort Detrick, MD)

35. Food and Drug Administration, includes the Center for Biologics Evaluation and Research and the Center for Drug Evaluation and Research (Silver Spring, MD)

36. Argonne National Laboratory, development project in 2019 (Lemont, IL)

37. Food and Drug Administration College Park Campus (College Park, MD)

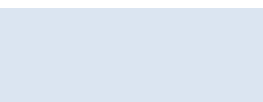
38. Food and Drug Administration Moffett Campus (Bedford Park, IL)



x	x	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
—	x	x	x	x	x	x	x	x	x	x	x	x
—	—	x	x	x	x	x	x	x	x	x	x	x
x	x	—	x	—	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	x	x
—	—	x	x	—	—	—	—	—	—	—	—	—
—	—	—	x	x	—	—	x	x	—	—	x	
—	—	—	—	—	—	—	x	x	x	—	—	
—	—	—	—	x	x	x	x	x	x	x	x	x
—	—	—	—	—	—	—	—	—	x	x	x	
—	—	—	—	—	—	—	—	—	—	x	x	
—	—	—	—	—	—	—	—	—	—	—	x	



Floral and Nursery Plants Research, Beltsville Agricultural Research Center (Beltsville, MD)



— — — — — — — — — — — x

### CBM Form G

The following table summarizes the data declared in **CBM Form G** of the publicly available CBM submissions from 2020 and compares them with the information in publicly available CBMs from 2007 to 2019. It provides the names and locations of vaccine production facilities declared in CBM Form G, the year(s) they were declared, and the diseases against which vaccines were produced. “ND” indicates that states ticked the “Nothing to declare” box in Form 0. “NN” indicates that states ticked the “Nothing new to declare” box in Form 0 and provided no further information. “—” indicates that no data was provided or data was not made publicly available (either on the ISU—website or by providing the Hamburg Research Group with the CBM) in the respective year. Cells with background colour indicate that data applies to all cells.

Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Australia	1. Seqirus (Australia) Pty Ltd (Parkville and Broadmeadows, VIC)	no	yes	x	x	x	x								x	x	x	x	
	2. Queensland Institute of Medical Research (Herston Road)	no	yes	—	x	x	x	NN	NN	NN	NN	NN	NN	NN	—	—	—	—	
	3. Ludwig Institute for Cancer Research, Austin Hospital (Heidelberg, VIC)	no	yes	—	x	x	x								—	—	—	—	
	4. GlaxoSmithKline Australia Pty Ltd (VIC)	no	yes	—	—	—	—								x	x	x	x	
Austria	<i>Nothing to declare</i>	n.a.	n.a.	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	1. GlaxoSmithKline Biologicals S.A (Rixensart)	n.a.	n.a.	— — — —				x	x	x	x	x	x	x	x	x	—	—	—

<sup>12</sup> As designated by the Centers for Disease Control and Prevention (CDC) in the USA.

<sup>7</sup> The list of vaccines is removed in the public version of the CBM.





Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration																
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Belgium <sup>13</sup>	2. Pfizer Animal Health (Louvain-la-Neuve)	n.a.	n.a.					x	—	—	—	—	—	—	—	—	—	—		
Bulgaria	1. BulBio—NCIPD Ltd (Sofia)	n.a.	n.a.	x	x		x	x	x	x										
	2. National Diagnostic and Research Veterinary Medical Institute (Sofia)	n.a.	n.a.	—	—	—	x	—	—	—		NN	NN	NN	NN	NN	NN	—	NN	
Canada	1. ID Biomedical Corporation of Quebec (GlaxoSmithKline Inc.) (Quebec City, QC)	n.a.	yes					—				x	x	x	x	x	x	x	x	x
	2. Sanofi Pasteur Limited (Toronto, ON)	n.a.	yes					—				x	x	x	x	x	x	x	x	x
	3. Medicago (Quebec City, QC)	n.a.	yes					—				—	—	x	x	x	x	x	x	x
	4. Immunovaccine (Halifax, NS)	Anthrax	yes					—				—	—	x	x	x	x	x	x	x
	5. Artemis Technologies Inc., No. 50 (Guelph, ON)	no	yes					x				x	x	x	x	x	x	x	x	x
	6. Bioniche Life Sciences Inc., No. 8 (Belleville)	no	yes	—	—	—	—	x		NN		x	x	—	—	—	—	—	—	—
	7. Biovet Inc., No. 49 (Saint—Hyacinthe, QC)	no	yes					x				x	x	x	x	x	x	x	x	x
	8. Gallant Custom Laboratories Inc., No. 45 (Cambridge, ON)	no	yes					x				x	x	x	x	x	x	x	x	x
	9. Elanco Canada Limited, No. 40 — former Novartis Animal Health Canada Inc. (Mississauga, ON)	no	yes					x				x	x	x	x	—	—	—	—	—
	10. Novartis Animal Health Canada Inc. (Mississauga, ON)	no	yes					—				—	—	—	x	x	x	—	—	—



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	11. Elanco Canada Limited — Aqua Health, No. 40 — former Novartis — Aqua Health (Charlottetown (PEI) and Victoria (PEI))	no	yes					x			x	x	x	x	x	x	x	x	x
	12. Nutratech Inc., No. 58 (Winnipeg, MB)	no	yes					x			x	x	x	—	—	—	x	x	x
	13. Saskatoon Colostrum Co. Ltd., No. 44 (Saskatoon, SK)	no	yes					x			x	x	x	x	x	x	x	x	x
	14. Vacci—Vet Inc., No. 59 (Saint—Hyacinthe, QC)	n.a.	yes					—			—	x	—	—	—	—	x	x	x
	15. Ceva Animal Health Inc., No. 23 — former Vetech Laboratories Inc. (Guelph, ON)	no	yes					x			x	x	x	x	x	x	x	x	x
	16. Biovet Inc., No. 59 (Saint—Hyacinthe, QC)	no	yes					—			—	—	x	x	x	x	—	—	—
	17. InventVac (Vancouver, BC)	no	yes					—			—	—	—	—	—	x	x	x	x
	18. National Research Council of Canada (Ottawa, ON)	no	yes					—			—	—	—	—	—	x	x	x	x
	19. Prevtect Microbia Inc., No. 60 (Saint—Hyacinthe, QC)	no	yes					—			—	—	—	—	—	x	x	—	—
	20. Centre for Aquaculture Technologies Canada, No. 61 (Souris, PEI)	no	yes					—			—	—	—	—	—	—	x	x	x
	21. Pfizer Animal Health, No. 4 (Saanichton)	no	yes					x			x	—	—	—	—	—	—	—	—
	22. Saskatchewan Research Council, No. 57 (Saskatoon)	no	yes					x			x	—	—	—	—	—	—	—	—
	23. Vetcovac Ltée., No. 48 (Saint—Hyacinthe, QC)	no	yes					x			—	—	—	—	—	—	—	—	—
	24. Intervet Canada Corp., No. 51 (Kirkland)	no	yes					x			—	—	—	—	—	—	—	—	—



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration														
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	25. Vétoquinol N.A. Inc., No. 34 (Lavaltrie)	no	yes					x		—	—	—	—	—	—	—	—	
Croatia	Institute of Immunology	no	yes	—	—	—	—	—	—	—	x	—	—	—	x	—	—	ND
Cyprus	<i>Nothing to declare</i>	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	ND	ND	NN
Czech Republic	1. Baxter BioScience s.r.o (Kostolec nad Černými Lesy)	no	yes	x				x					—					
	2. SEVAPHARMA a.s. (Hostivar)	no	yes	x				x					x					
	3. Bioveta, a.s. (Ivanovice na Haně)	Anthrax	yes	x	NN	NN	NN	x	NN	NN	NN	NN	x	NN	NN	NN	NN	NN
	4. DYNTEC, spol. s.r.o. (Terezín)	no	yes	x				x					x					
	5. BIOPHARM, Research Institute of Biopharmacy and Veterinary Drugs (Jíluvě u Prahy)	no	yes	x				x					x					
Denmark	1. Statens Serum Institute (Copenhagen)	no	yes	x	x			x					—	—	—			NN
	2. Bavarian Nordic A—S (Kvistgaard)	Smallpox	yes	x	x	—	NN	x	NN	NN	NN	NN	x	x	x	NN	NN	
	3. AJ Vaccines (Copenhagen)	no	yes	—	—			—					x	x	x			
Ecuador	<i>Nothing to declare</i>	—	—	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—
Estonia	<i>Nothing to declare</i> <sup>14</sup>	—	—	—	—	—	ND	ND	—	—	—	ND	ND	ND	ND	ND	ND	ND
Finland	<i>Nothing to declare</i> <sup>15</sup>	—	—	NN	NN	NN	NN	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Georgia	<i>Nothing to declare</i>	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—	—	—
Germany	1. GlaxoSmithKline Vaccines — former Novartis Vaccines	Botulism	yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

<sup>14</sup> There are no vaccine producing facilities in Estonia (2021, p. 6).

<sup>15</sup> There are no vaccine producing facilities in Finland (2021, p. 18).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration														
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	and Diagnostix GmbH & Co. KG (Marburg)																	
	2. GlaxoSmithKline Biologicals (Branch of SB Pharma GmbH & Co KG) (Dresden)	no	yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	3. IDT Biologika GmbH (Dessau—Rosslau)	Smallpox	yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4. Bavaria Nordic GmbH (Berlin): relocated to denmark (2014)	Smallpox	yes	—	—	—	x	x	x	x	—	—	—	—	—	—	—	—
	5. Dynavax GmbH — former Rhein Biotech GmbH (Düsseldorf)	no	yes	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
	6. Vibalogics GmbH (Cuxhaven)	no	yes	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x
	7. Burgwedel Biotech GmbH, MSD Group (Burgwedel)	Ebola	yes	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x
	8. CureVac AG (Tübingen)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x
	9. BioNTech Innovative Manufacturing Services GmbH	Ebola, Marburg, Lassa	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x
	10. Rentschler Biopharma SE (Laupheim)	yes <sup>16</sup>	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x
Greece	<i>Nothing to declare</i>	—	—	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—
Hungary	1. Omninvest Ltd. (Budapest)	no	yes	—	—	—	—	—	—	—	—	x	x	—	—	—	—	—
	2. GlaxoSmithKline Biological Kft. (Budapest)	no	yes	—	—	—	—	—	—	—	—	—	x	—	—	—	—	—
Ireland	1. Elanco Laboratories (Sligo)	no	yes	x	x	x	x	x	—	—	x	x	—	—	—	—	—	—

<sup>16</sup> Tuberculosis vaccine (recombinant and non-recombinant), Smallpox vaccine (recombinant), Bordetella vaccine, HIV vaccine (recombinant), Zika vaccine (recombinant), Typhus vaccine, RSV, Newcastle Disease Virus (Drug Substance, recombinant), Influenza A (PR8 vaccine), VSV vaccine (recombinant), HSV-1 vaccine (recombinant), CoVid vaccine (recombinant).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration														
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	2. MSD International GmbH (Carlow)	no	yes	—	—	—	—	—			x	x	x	x				
	3. MSD International GmbH — former Schering—Plough (Brinny)	no	no <sup>17</sup>	—	—	—	—	—			x	x	x	x	NN	NN	NN	NN
	4. Pfizer Ireland Pharmaceuticals (Dublin)	no	yes	—	—	—	—	—			x	x	x	x				
Japan	1. Denka Seiken Co., Ltd (Tokyo)	no	yes						x	x		x		x			x	x
	2. Daiichi Sankyo Biotech Co., Ltd (Saitama)	no	yes						x	x		x		x			x	x
	3. Takeda Pharmaceutical Co., Ltd (Osaka)	no	yes						x	x		x		x			x	x
	4. The Research Foundation for Microbial Diseases of Osaka University (Osaka)	no	yes						x	x	NN	x	NN	x	NN	NN	x	x
	5. KM Biologics Co., Ltd emerged from The Chemo—Sero—Therapeutic Research Institute (Kumamoto)	no	yes						x	x		x		x			x	x
	6. Japan BCG Laboratory (Tokyo)	no	yes						x	x		x		x			x	x
	7. Japan Poliomyelitis Research Institute (Tokyo)	no	yes						x	x		x		—			—	—
Latvia	<i>Nothing to declare</i>	—	—	—	—	ND	—	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Liechtenstein	<i>Nothing new to declare</i>	—	—	NN	NN	NN	NN	NN	—	NN	NN	—	—	—	—	—	—	—
Lithuania	<i>Nothing new to declare<sup>18</sup></i>	—	—	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN

<sup>17</sup> The site holds a manufacturer's authorization for medical products for human use. None of these is a vaccine.

<sup>18</sup> No vaccines are produced in Lithuania (2021, p. 13).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Luxembourg	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	ND	—	—	ND	ND	ND	ND	ND	ND	
Madagascar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Malaysia	Institute of Veterinary Services (Putrajaya)	no	yes	—	—	—	—	x	—	—	—	—	—	—	—	—	—	—	
Mauritius	—	—	—	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—	
Mexico	1. Centro de Investigación y Estudios Avanzados en Salud Animal, Universidad Autónoma del Estado de México (Toluca)	no	yes									x	—		—			—	
	2. Laboratorios de Biológicos y Reactivos de México S.A de C.V. (Colonia Popotla and Colonia Santo Tomás)	no	yes	—	—	—	—	—	—	—	—	—	x	x	NN	x	NN	NN	x
	3. Productora Nacional De Biológicos Veterinarios (Colonia Lomas Altas)	no	yes									—	—		x			x	
Morocco	1. Société de Productions Biologiques et Pharmaceutiques Vétérinaires BIOPHARMA (Rabat)	Botulism	yes												x			—	
	2. M.C.I. SANTE ANIMALE (Mohammedia)	Botulism, Anthrax	yes												x			—	
Myanmar	1. Vaccine Research Centre, Department of Medical Research (Yangon)	no	yes									—	—	x	—	x			
	2. Vaccine Production Division, LBVD (Yangon)	Anthrax	yes									—	—	—	x	—	x		



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration																
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
Netherlands	1. Wageningen Bioveterinary Research — former Central Veterinary Institute (Lelystad)	no	yes								x	x	x	x	x	—	—	—	x	
	2. Intervet International B.V. — MSD Animal Health (Boxmeer)	no	yes								x	x	x	x	x	x	x	x	x	
	3. Nederlands Vaccin Instituut (Bilthoven)	no	yes								x	—	—	—	—	—	—	—	—	
	4. WWY—WWP (Weesp)	no	yes								x	x	x	x	x	x	x	x	x	
	5. Boehringer Ingelheim Animal Health Operation — former Merial Lelystad (Lelystad)	—	yes								x	x	x	x	x	x	x	x	x	
	6. Janssen Vaccines & Prevention — former Janssen—Crucell Holland B.V. (Leiden)	yes <sup>19</sup>	yes									x	x	x	x	x	x	x	x	x
	7. Erasmus Medical Center (Rotterdam)	yes <sup>20</sup>	yes									—	x	x	x	x	x	x	x	x
	8. Bilthoven Biologicals B.V. (Bilthoven)	no	yes									—	x	x	x	x	x	x	x	x
	9. Wacker Biotech B.V. — former SynCo Bio Partners B.V. (Amsterdam)	no	yes									—	—	—	—	x	x	x	x	x
	10. Patheon Biologics (Groningen)	no	yes									—	x	x	x	x	x	x	—	x
New Zealand	<i>Nothing to declare</i>	—	—	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Norway	1. Pharmaq (Overhalla)	no	yes		x		x	x	x	x	x	x								
	2. The National Veterinary Institute (Oslo)	no	yes		x		x	x	x	x	x	x	NN	NN	NN	NN	NN	NN	NN	

<sup>19</sup> Viral diseases: Ebola, Marburg, Zika, RSV, HIV, HPV, Influenza, SARS-CoV-2. Bacterial infectious diseases: ExPEC (E. coli) and MRSA (S. aureus).

<sup>20</sup> Zoonotic viruses such as Ebola, Marburg, Crimean Congo, Hanta, SARS-coronaviruses, Avian Influenza. Arboviruses such as Dengue, West Nile, Japanese Encephalitis, Rift Valley, Zika Respirat



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	3. The Norwegian Institute of Public Health (Nydalen)	no	yes		x		x	x	x	x	x								
Portugal	Genibet Biopharmaceuticals (Oeiras)	no	yes	—	—	—	ND	x	x	ND	ND	NN	NN	ND	NN	NN	NN		
Qatar	<i>Nothing to declare</i>	—	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—		
Republic of Moldova	<i>Nothing to declare</i> <sup>21</sup>	—	—	—	—	—	—	ND	ND	ND	ND	ND	ND	—	—	—	ND	ND	
	1. The "Cantacuzino" National Medico—Military Institute for Research and Development (Bucharest)	no	yes	—	—	—	x			x	x	x	x	x	x	x	x	x	
Romania	2. SC Pasteur — Filiala Filipesto Srl, working point Bucharest — former National Society "Pasteur Institute" S.A. (Bucharest)	no	yes	x	x	x	—	NN		x	x	x	x	x	x	x	x	x	
	3. S.C. Pasteur Filiala Filipeti S.R.L (Prahova)	no	yes	—	—	—	—			—	x	x	—	—	—	—	—	—	
	4. ROMVAC COMPANY S.A. (Voluntari)	Anthrax	yes	—	—	—	—			—	x	x	x	x	x	—	x	x	x
Serbia	Institute of Immunology and Virology "Torlak" (Belgrad)	no	yes	—	—	—	—	—		x	—	x	x	—	x	x	x	x	
Slovakia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	ND	ND			ND	ND	ND	ND
Slovenia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	ND	ND	ND	ND	ND	ND	ND	ND
Sweden	1. Valneva Sweden AB — former Crucell Sweden AB — former SBL Vaccin AB, Solna (Stockholm)	no	yes	x	x	x	NN	NN		x	NN	x	NN	NN	NN	NN	NN	NN	NN

<sup>21</sup> Currently there are no human vaccines manufactured and licensed in the Republic of Moldova (2021, p. 9).





Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	2. UniTech Biopharma (Matfors)	no	yes	x	x	x			—		—								
	3. Cobra Biopharma (Matfors)	no	yes	—	—	—			x		—								
Switzerland	1. Janssen Vaccines, Branch of Cilag International GmbH — former Crucell Switzerland AG (Bern)	yes <sup>22</sup>	yes	—	—	—	x	x	x	x	x	—	x	x	x	x	x	x	
	2. Cytos Biotechnology AG (Schlieren)	no	yes	—	—	—	x	x	x	x	—	—	—	—	—	—	—	—	
	3. Pevion Biotech Ltd. (Ittingen)	no	yes	—	—	—	x	x	x	x	—	—	—	—	—	—	—	—	
	4. EmergentBiosolutions Berna GmbH — former PaxVax Berna GmbH — former Crucell Switzerland AG (Thörishaus)	no	yes	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
	Lonza AG (Lonzastrasse)	no	no	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x
Thailand	1. The Government Pharmaceutical Organisation (Bangkok)	no	yes				x	x	x										
	2. Merieux Biological Products Co., Ltd. (Chachoengsao)	no	yes				—	—	x										
	3. Queen Saovabha Memorial Institute (Bangkok)	no	yes	—	—	—	—	—	x										
	4. BioNet—Asia Co., Ltd. (Bangkok)	no	yes				—	—	x										
	5. Bureau of Veterinary, Department of Livestock Development (Nakhon Ratchasima)	Anthrax	yes				—	—	x										

<sup>22</sup> Disease targeted: Ebola virus disease - Name of vaccine: Ad26.ZEBOV (CBM 2021, p. 80).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration														
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Turkey	1. Konya Veterinary Control and Research Institute (Meram—Konya)	no	yes					x			—	—	—	—	—			
	2. Ministry of Food Agriculture and Livestock — Veterinary Control Institute — former Pendik Veterinary Control and Research Institute (Istanbul)	no	yes					x			x	x	x	x	x			
	3. Ministry of Food Agriculture and Livestock — Veterinary Control and Central Research Institute — former Anthrax Vaccine Production Laboratory & Production of Tuberculin and Mallein Laboratory (Ankara)	Anthrax	no					x			x	x	x	x	x			
	4. Ministry of Food Agriculture and Livestock — Foot and Mouth Disease Institute (Ankara)	no	yes					—		NN	NN					—	—	—
	6. Veterinary Control Institute (Samsun)	no	yes					—			x	x	—	—	—			
	7. VETAL Animal Health Products Company (Adiyaman)	no	yes					—			x	x	—	x	x			
	8. DOLLVET Veterinary Vaccine, Medicine and Biological Materials Production Company (Sanliurfa)	no	yes					—			x	x	—	x	x			
	9. ATAFEN Veterinary Materials Production Company (Ismir)	no	yes					—			x	x	—	x	x			



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration																
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		
	10. AKUAKIM Medical, Chemical, Pharmaceutical, Feed Additives and Water Products Industry and Trade Company (Manisa)	no	yes					—				x	x	—	—	—				
Ukraine	1. Sumy Biofactory (Sumy)	Anthrax	yes					x	x				x	x	x	x	x			
	2. Biofabrika Dnepropetrovsk (Dnepropetrovsk)	no	yes					x	x				—	—	—	—	—			
	3. Kharkov Biofactory (Kharkov)	no	yes					x	x				x	x	x	x	x			
	4. Kherson Biofactory (Kherson)	Anthrax	yes					x	x				x	x	x	x	x			
	5. Novogareshchinsky Biofactory (Kiev)	no	yes					x	x				x	—	—	—	—			
	6. LLC "Ukrvetpromsnab" (Brovary)	no	yes					x	x				x	x	x	x	x			
	7. Corporation "Ukrvetpromsnab" (Kiev)	no	yes					x	x				—	—	—	—	—			
	8. Scientific Center "Institute for Experimental and Clinical Veterinary Medicine" (Kharkov)	no	yes		—	—	—	—	x	x				x	—	—	—	—	NN	NN
	9. Institute of Veterinary Medicine of the National Academy of Agrarian Science of Ukraine (Kiev)	no	yes						x	x				x	—	—	—	—		
	10. PJSC "PHARMSTANDART BIO-LEC" (Kharkov)	no	yes						x	—				x	x	x	x	—		
	11. LLC "PHARMEX GROUP" (Shevchenko)	no	yes						—	—				—	x	x	x	—		
	12. TOV "Pharma Life" (Lviv)	no	yes						x	—				—	x	x	x	—		



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	13. Laboratory of leptospirosis with a museum of strains of microorganisms of the INM NAAS, laboratory of bacterial animal diseases (Kiev)	no	yes					—	—					x	x	x			
	14. PJSC Farmak (Kiev)	no	yes					x	—				—	x	x	x	—		
United Kingdom	1. Seqirus Vaccines Limited — former Novartis Vaccines and Diagnostics Limited (Liverpool)	no	yes	x	x	x	x	x	—	x	x	x	x	x	x	x	x	x	
	2. AstraZeneca Liverpool (registered in Companies House as MedImmune UK Ltd) (Liverpool)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	
	3. Porton Biopharma Limited — former Public Health England—Porton — former Health Protection Agency (Salisbury)	Anthrax	no	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4. Merck BioReliance® Services (Glasgow) <sup>23</sup>	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	
	5. Valneva Scotland Ltd (Livingston)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	
	6. MedImmune UK Ltd (Liverpool)	no	yes	x	x	x	x	x	x	x	x	x	x	x	x	—	—	—	
	7. Oxbox Manufacturing Facility (Oxford)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	
	8. Cobra Biologics Limited (Staffordshire)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	

<sup>23</sup> The facility produces the active viral ingredient for an Adenovirus vaccine Type 4 and Type 7 (2021, p. 41).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>12</sup>	Other diseases	Year of Declaration															
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
USA	1. Emergent Biosolutions (Lansing, MI)	Anthrax, Small-pox	no				x	x	x	x	x	x	x	x	x	x	x	x	
	2. MassBiologics (Boston, MA)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	
	3. MedImmune, LLC (Gaithersburg, MD)	no	yes				x	x	x	x	x	—	—	—	—	—	—	—	
	4. Merck Sharp & Dohme Corp (North Wales, PA)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	
	5. Organon Teknika Corporation, LLC (Durham, NC)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	
	6. MCM Vaccine Company—Sanofi Pasteur, Inc. (Swiftwater, PA)	no	yes		—	—	—	—	—	—	—	—	—	—	—	—	x	x	x
	7. Sanofi Pasteur Biologics Co. (Cambridge, MA)	Small-pox	yes				x	x	x	x	x	x	x	x	x	—	—	—	
	8. Wyeth Pharmaceuticals, Inc (New York, NY)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	x
	9. Barr Laboratories, Inc. (Forrest, VA)	no	yes				—	—	x	x	x	x	x	x	x	x	x	x	x
	10. Protein Sciences Corporation (Meriden, CT)	no	yes				—	—	—	x	x	x	x	x	x	x	x	x	x
	11. Sanofi Pasteur, Inc (Swiftwater, PA)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	x
	12. Seqirus Inc. (Holly Springs, NC)	no	yes				—	—	—	—	—	—	—	—	—	—	—	x	x
Emergent Travel Health (Gaithersburg, MD)	no	yes				—	—	—	—	—	—	—	—	—	—	—	—	x	



## **Research Group for Biological Arms Control**

The aim of the Research Group is to contribute, through innovative research and outreach activities, to the universal prevention of biological weapons development, production and use. The focus of activities is twofold. Firstly, the Research Group contributes to preventing the erosion of the universal bioweapons prohibition by opposing norm—harming activities. Secondly, it develops new concepts and instruments for monitoring bioweapon relevant activities and for verifying and enforcing compliance with the norm against bioweapons.

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