

Research Group for
Biological Arms Control



2023 Reader on Publicly Available CBMs

December 2023



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 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:

http://www.biological-arms-control.org/projects_improvingthecbms.html.

Development of the CBM regime in 2023

The CBM mechanism is attracting a growing number of States Parties. And this even though the form and content of the CBMs are now in urgent need of revision. The last formal decision of States Parties with regard to CBMs dates back to 2011. On the 7th 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 past two Intersessional Processes, but BWC members did not agree on recommendations for a formal decision, neither at the 8th Review Conference in 2016 nor at the 9th RevCon in 2022. After the MSP 2018 no working paper on the development of the CBM mechanism has been tabled. The latest technical progress dates back to the establishment of the electronic CBM platform in 2018, which enables the online submissions of CBM reports.

CBMs might, however, be discussed in the new working group that will deal with verification, compliance and review of the BWC. The CBMs as the one transparency building mechanism in the BWC might, however, be discussed in the working group on verification, compliance and review of the BWC. Many countries and independent experts now believe that adaptation is urgently needed at the level of the terms used because the state of science and technology is sometimes no longer accurately reflected in the language used. 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. This is despite the fact that 2023 will see a record number of submissions for the fourth year in a row. Only just over half of the states still take part.

It must also be considered whether the option of ticking “Nothing new to announce” is more likely to result in more qualified submissions being sent, or whether there is a tendency for states to use this option to make things too easy for themselves. A conceivable compromise could be to agree, at the highest possible price, to submit a more detailed form every five years.

Facts about the BWC and its CBMs¹⁾

BWC States Parties: 185

Signatory States: 4

New BWC States Parties in 2023: 1 (South Sudan)

CBMs submitted in 2023: 99

Public CBMs in 2023: 34

First-time CBM submission in 2023: 0

Number of states having participated in the CBM data exchange in 30 years: 137

¹⁾ For reference see data provided by BWC Implementation Support Unit (ISU), accessible at <https://www.un.org/disarmament/biological-weapons/implementation-support-unit/>

This reader represents the situation as of 29 November, heading for a new all-time high. For editorial reasons, submissions received later cannot be considered. States interested in having their CBMs included in this annual reader should aim to submit at least two weeks prior to the MSP.

Publications related to confidence and compliance in the BWC in 2023

- Alexanian, T., Buse, S., Grimm, S., Siddique, M., Hau Sørensen, G., & Millett, P. (2023). A Model Compliance Regime for the Biological Weapons Convention. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4430388>
- Cropper, N. R., Rath, S., Teo, R. J. C., Warmbrod, K. L., & Lancaster, M. J. (2023). A Modular-Incremental Approach to Improving Compliance Verification With the Biological Weapons Convention. *Health Security*, 21(5), 421–427. <https://doi.org/10.1089/hs.2023.0078>
- Dando, M. (2023). The Biological and Toxin Weapons Convention. In M. Dando, *The Chemical and Biological Nonproliferation Regime after the Covid-19 Pandemic* (S. 81–106). Springer International Publishing. https://doi.org/10.1007/978-3-031-19108-4_5
- Shearer, M. P., Potter, C., Vahey, R. A., Connell, N. D., & Gronvall, G. K. (2023). BWC assurance: Increasing certainty in BWC compliance. *The Nonproliferation Review*, 1–29. <https://doi.org/10.1080/10736700.2023.2178099>
- For earlier publications, please check former versions of this reader at: <http://www.biological-arms-control.org/publications.html>.

Participation in the CBM regime in 2023

As of 29.11.2023, 99 BWC states parties had submitted their CBM.

As many states have already submitted a CBM at this point as in 2022, when a record number of CBMs were submitted. It is expected that more states will send a CBM form to the ISU by the end of the year and that the positive trend will continue. However, there was no first-time submission as of the editorial deadline, but two more states uploaded a public CBM report than in 2022. This shows that the hurdle of issuing a CBM for the first time is quite large, but also that updates then require significantly less effort. The overall participation in the CBM mechanism improved slightly over time. However, since the beginning of the data exchange in 1987, the annual level of participation was never higher than 53.8 percent of the BWC states parties (185 in total). In 2023, 99 of the Member States (53,5%) submitted a CBM, which together with last year represents a new record for the BTWC community. In total, 137 countries submitted a CBM at least once. This means that 48 BWC states parties have yet to submit their first CBM declaration. Continuity in states' participation could be improved: Only 57 countries have submitted a CBM in each of the past 10 years, and 20 countries have submitted a CBM only once since 1987.

First-time submissions in 2023: none.

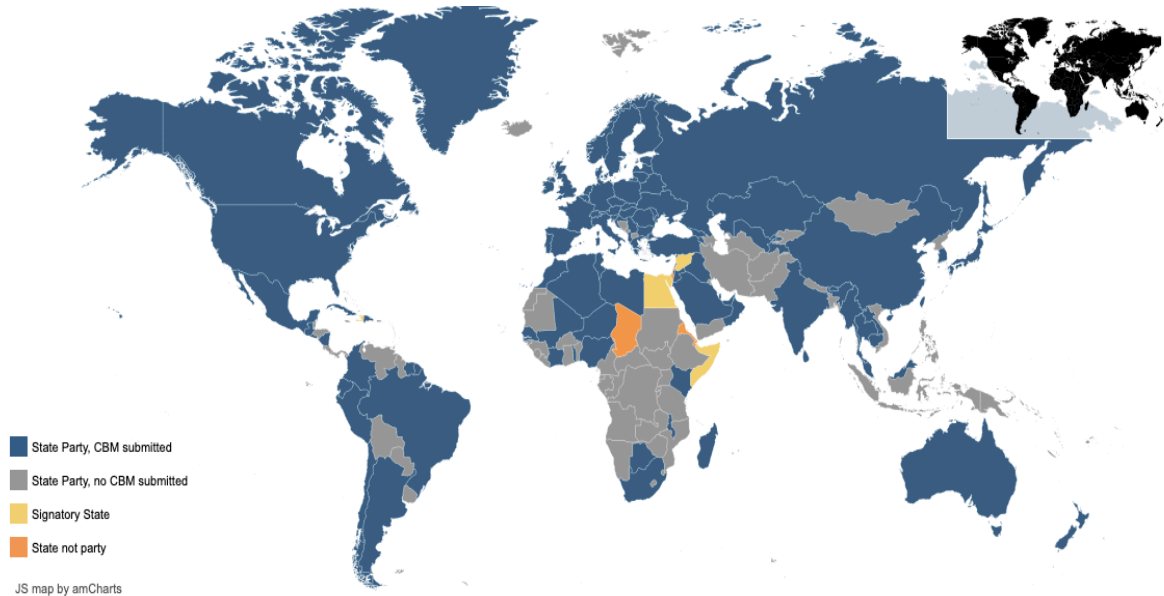
First-time public submission in 2023: none.

CBM submissions in 2023 – States in bold made their CBM available to the public:

1. Albania	23. Czech Rep.	44. Kenya	63. Niger	82. Slovenia
2. Algeria	24. Denmark	45. Lao (People's	64. Nigeria	83. South Africa
3. Argentina	25. Dominican	Dem. Rep.)	65. Norway	84. Spain
4. Armenia	Republic	46. Latvia	66. Oman	85. Sri Lanka
5. Australia	26. Ecuador	47. Libya	67. Peru	86. State of Pal-
6. Austria	27. El Salvador	48. Liechtenstein	68. Poland	estine
7. Bahrain	28. Estonia	49. Lithuania	69. Portugal	87. Suriname
8. Belarus	29. Finland	50. Luxem-	70. Qatar	88. Sweden
9. Belgium*	30. France	bourg	71. Rep. of Ko-	89. Switzerland
10. Bhutan	31. Gambia	51. Madagascar	rea	90. Tajikistan
11. Botswana	32. Georgia	52. Malawi	72. Rep. of	91. Thailand
12. Brazil	33. Germany	53. Malaysia	Moldova	92. Togo
13. Bulgaria	34. Greece	54. Maldives	73. Romania	93. Tunisia
14. Cambodia	35. Guatemala	55. Mali	74. Russian Fed.	94. Türkiye
15. Canada	36. Hungary	56. Malta	75. Saint Kitts	95. Ukraine
16. Chile	37. India	57. Mexico	and Nevis	96. United Arab
17. China	38. Iraq	58. Morocco	76. Saudi Arabia	Emirates
18. Colombia	39. Ireland	59. Myanmar	77. Senegal	97. UK
19. Côte d'Ivoire	40. Italy	60. Netherlands	78. Serbia	98. USA*
20. Croatia	41. Japan	61. New Zea-	79. Seychelles	99. Uzbekistan
21. Cuba	42. Jordan	land	80. Singapore	
22. Cyprus	43. Kazakhstan	62. Nicaragua	81. Slovakia	

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

Map. CBM Submissions 2023



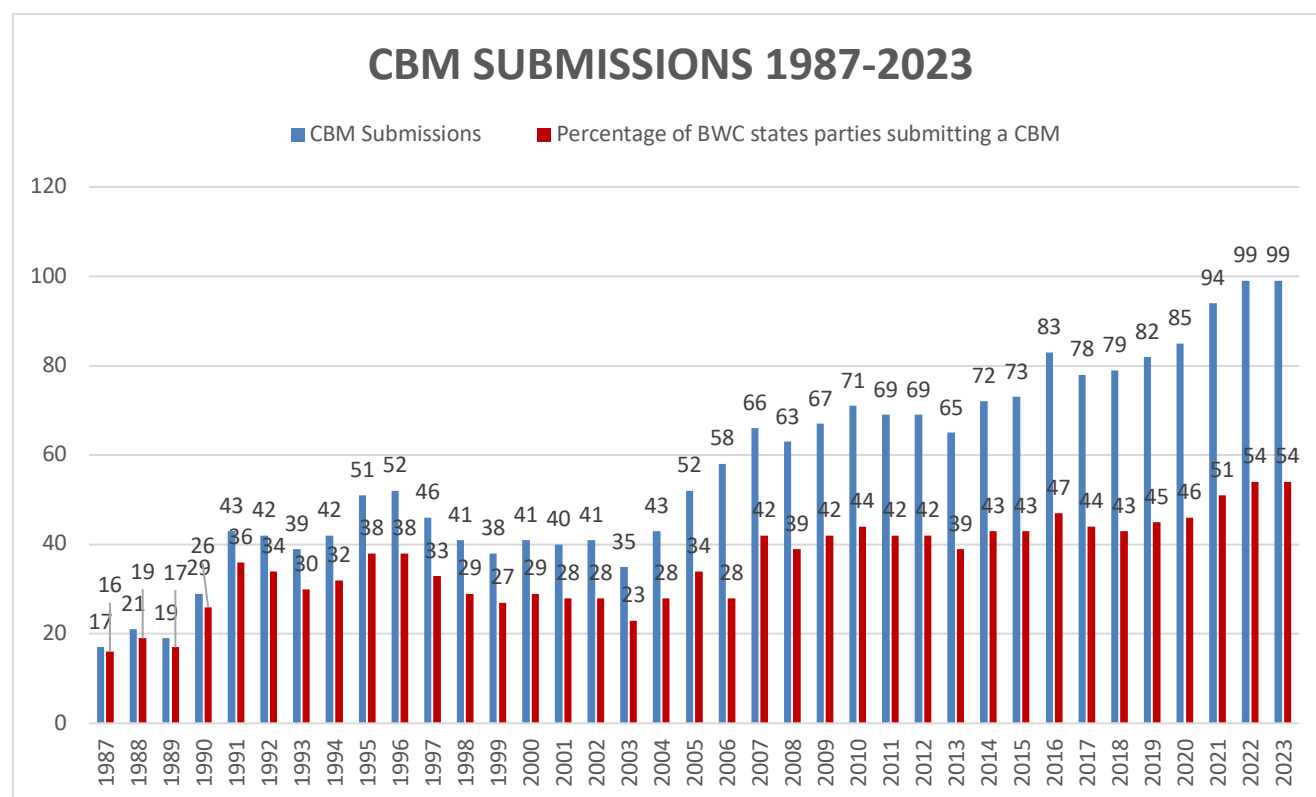
As shown in **Table 1.**, below, 51 countries have made their CBM publicly available at least once since 2008. “(x)” indicates that states provided their CBM directly to the Hamburg Research Group. Many states make their CBMs publicly available in an erratic way. No explanation readily offers itself for why many states make their CBMs publicly available in one year but not in another.

Table 1. Countries that made their CBM declarations publicly available, 2007-2023

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Albania	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—
Australia	x	x	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	x	x
Bangladesh	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	x	x	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	x	x
Canada (En and Fr)	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x
Croatia	—	—	—	—	—	—	—	x	—	—	—	x	—	x	x	x	x
Cyprus	—	—	—	—	(x)	(x)	—	—	—	—	—	—	x	x	x	x	x
Czech Republic	—	—	x	x	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	x	x
Ecuador	—	—	—	—	(x)	—	—	—	—	—	—	—	—	—	—	—	—

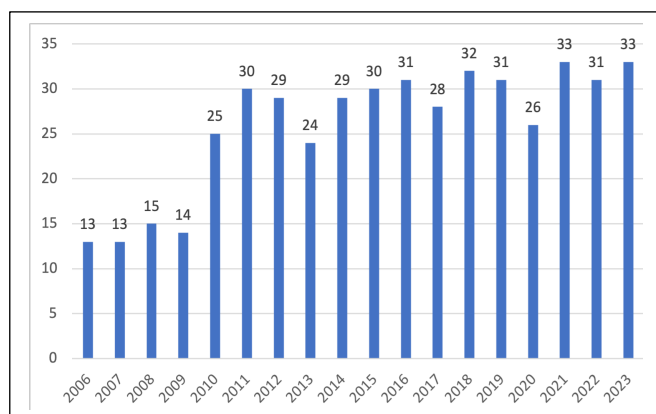
Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Estonia	—	—	—	(x)	(x)	—	x	—	—	x	x	x	x	x	x	x	x
Finland	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Georgia	—	—	(x)	(x)	(x)	—	—	—	—	—	—	—	—	—	—	—	—
Germany	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Greece	—	—	—	—	(x)	x	x	—	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	(x)	(x)	—	—	—	—	—	—	x	x
Ireland	x	x	x	x	x	—	—	—	x	x	x	x	x	x	x	x	x
Japan	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x
Latvia	—	—	(x)	—	x	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	x	x
Luxembourg	—	—	—	—	—	—	—	(x)	x	x	x	x	x	x	x	x	x
Madagascar	—	—	—	—	—	(x)	—	—	—	—	—	—	—	—	—	—	—
Malaysia	—	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	—	—	—	—	—	—	—	—	—	x	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	—	x
Morocco	—	—	—	—	—	—	—	—	—	—	—	—	x	—	—	—	—
Myanmar	—	—	—	—	—	—	—	—	—	x	—	x	—	—	—	—	—
Netherlands	—	—	—	—	—	—	(x)	x	x	x	x	x	x	x	x	x	x
New Zealand	(x)	(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	x	x
Poland	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	x	x	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	—	x	—	x	x	x	x
Romania	—	x	x	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	x	x
Slovakia	—	—	—	—	—	—	—	(x)	—	—	—	x	x	x	x	x	x
Slovenia	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x
Sweden	x	x	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	x	x
Thailand	—	—	—	(x)	(x)	(x)	—	—	—	—	—	—	—	—	—	—	—
Turkey	—	—	—	—	x	x	—	x	x	x	x	x	—	—	—	—	—
Ukraine	—	—	—	—	(x)	(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	x	x
USA	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Total	13	15	14	25	30	29	24	29	30	31	28	32	31	32	31	31	33

Figure 1. CBM submissions per year between 1987 and 2023 (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 29 November 2023, 33 countries have made their 2023 CBM declarations publicly available. All of the 33 publicly available CBMs can be found on the website of the Implementation Support Unit (ISU) (<http08s://bwc-ecbm.unog.ch/group/ecbm-portal>):

Australia, Austria, Belgium, Bulgaria, Canada (in English and French), Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Germany, Hungary, Ireland, Japan, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Portugal, Republic of Moldova, Romania, 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.



Summary of data in publicly available 2023 CBM declarations

A summary of the data declared in the publicly available CBMs of 2023 is provided in the table below. More detailed information can be found in the Annex to this Reader. 40 maximum biological containment facilities were declared in publicly available CBMs in 2023. 16 of the 33 countries making their 2023 CBM publicly available declared having a biodefence programme; they provided information on 66 biodefence facilities. And lastly, 163 unusual disease outbreaks and 78 vaccine production facilities were declared in the 33 publicly available CBMs of 2023.

Table 2. Summary of data in publicly available CBM declarations, 2023

Form A, part 1:	Number of maximum biological containment facilities (BSL-4 or equivalent) declared.
Form A, part 2 (i):	Does the state party declare having a biodefence programme?
Form A, part 2 (ii):	National programmes conducting biological defence research
Form A, part 2 (iii):	Number of biodefence facilities declared.
Form B (ii):	Number of unusual disease outbreaks declared.
Form F:	Does the state party declare having a past offensive and/or defensive programme?
Form G:	Number of vaccine production facilities declared.
ND / NN:	“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 ¹	Form F (off/def)	Form G
Australia	4	yes	1	1	NN (55)	NN (no/yes)	2
Austria	1	NN (yes)	ND/NN (2)	1	ND	ND	ND
Belgium	ND	yes	2	1	—	ND (no/yes) ²	—
Bulgaria	NN (0)	ND	ND	ND	ND	ND	NN (1)
Canada	2	NN (yes)	2	2	16 ³	NN (yes/yes)	6 ⁴
Croatia	ND	ND	ND	ND (1) ⁵	ND	ND	ND
Cyprus	NN (0)	NN (no)	NN (0)	NN (0)	NN	NN (no/no)	NN (0)
Czech Republic ⁶	NN (2)	NN (no)	NN	ND	3	NN (no/no)	NN (4)
Denmark	NN (0)	NN (yes)	NN (1)	1	ND	NN (no/yes)	2
Estonia	0	ND	ND	ND	36 ⁷	ND	ND
Finland	0	yes	1	3	ND	ND	ND

¹ The countries interpret the phrase “deviation from the normal pattern” very differently, so that the values fluctuate greatly. For example, individual cases of measles, pertussis or similar diseases are sometimes listed and sometimes not. Covid-19 is also listed in some countries, but not in others. The number of diseases that the states have indicated in their report are listed below.

² Belgium ticked “nothing to declare” but has reported yes here with the reference to Form A - Part 2 (iii) (2023, p.53).

³ Canada lists a total of 16 diseases, but only one disease (cyclosporiasis) explicitly refers to the development in 2022 (2023, p.28).

⁴ Medicago has ceased operations, and is awaiting dissolution by its parent company Mitsubishi Chemical Corporation (2023, p.52)

⁵ Croatia has ticked “nothing to declare” in form 0 but reports the facility since 2020 (2023, p.6).

⁶ Czech Republic has partially provided information on forms B and C only.

⁷ 36 human infectious diseases were listed in 2022. Estonia declares no cases of infectious diseases/outbreaks or toxin-induced diseases that deviate from the normal pattern in 2022 (2023, p.3ff.).

Country	Form A, part 1	Form A, part 2 (i)	Form A, part 2 (ii)	Form A, part 2 (iii)	Form B ¹	Form F (off/def)	Form G
Germany	4	yes ⁸	1	5	0	NN (no/no)	10
Hungary ⁹	—	—	—	—	NN	ND	NN
Ireland	NN (1)	NN (no)	ND	NN (0)	NN (0)	ND	NN (3)
Japan	NN (2)	NN (yes)	2	2	ND	NN (no/no)	NN (7)
Latvia	NN (0)	NN	ND	NN (1)	ND	NN (no/yes)	ND
Lithuania	NN (0)	ND	ND	ND	ND	ND (no/no)	ND
Luxemburg	NN (0)	ND	ND	ND	0 ¹⁰	NN (no/no)	NN (0)
Mexico	0	ND	ND	ND	4	ND	3
Netherlands	0	yes	1	1	0	NN (no/yes)	9
New Zealand	ND	ND	ND	ND	NN	NN (no/no)	ND
Norway	ND	NN (yes)	NN (3)	NN (3)	ND	NN (no/yes)	NN (3)
Portugal	NN (0)	NN (yes)	NN (1)	NN (1)	ND	NN (no/no)	NN (1)
Republic of Moldova	NN (0)	NN (yes)	NN (0)	NN	14	NN (0)	ND
Romania	0	ND	ND	ND	ND	ND	2
Serbia ¹¹	ND	ND	ND	ND	ND	ND	ND (1)
Slovakia	ND	ND	ND	ND	ND	ND	ND
Slovenia ¹²	ND	ND	ND	ND (2)	ND	ND	ND
Sweden	1	yes	1	2	ND	NN (no/yes)	NN (1)
Switzerland	3	NN (yes)	2	10	0	NN (no/yes)	3
Ukraine	2	ND	ND	ND	22 ¹³	ND	0
United Kingdom	9	yes	2	1	2 ¹⁴	NN (yes/yes)	8
USA	9	yes	7	28	11	NN	12

⁸ N/A in Form 2 (i), but Germany lists different programs in Form 2 (ii) (2023, p.10).

⁹ Hungary did not provide any information except for publications (Confidence-Building Measure “C”) and partly Form E.

¹⁰ 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.pub>

¹¹ Serbia ticket “nothing to declare”, but listed one vaccine producing facility (2023, p.15).

¹² Slovenia ticket “nothing to declare”, but listed two facilities under Form A, part 2 (iii) and COVID-19 under Form B (2023, p.7, 11).

¹³ 22 plant diseases and pestis (2023, p.57ff.).

¹⁴ Highly Pathogenic Avian Influenza, Monkeypox (2023, p.25ff.).



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

CBM Form A, Part 1

The following table summarizes the data declared in **CBM Form A, Part 1**, of the publicly available CBM submissions from 2023 (covering 2023) and compares them with the information in publicly available CBMs from 2007 to 2023. 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 or modified 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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
Australia	1. Australian Centre for Disease Preparedness – former Australian Animal Health Laboratory (AAHL) (East Geelong)	BL4	x	x	x	x		x	x								x ¹		x	no
	2. National High Security Quarantine Laboratory (Melbourne)	BL4	x	x	x	x	NN	x	x	NN	NN	NN	NN	NN	NN	NN	x	NN	x	no
	3. Queensland Health and Forensic Scientific Services (Brisbane)	BL4	x	x	x	x		x	x								x		x	no
	4. Emerging Infectious Disease and Biohazard Response Unit EIBRU (Westmead)	BL4	—	x	x	x		x	x								x		x	no
Austria	Federal Ministry of Defence (Vienna)	BL3	—	—	x	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	ND	ND	no

¹ Although Australia ticked “nothing new to declare” in Form 0, it modified the name of the facility and added that funding regarding the environmental stability of SARS-CoV-2 was provided in 2020 by Department of Defence (2021, p. 3).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
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	NN	—
	3. National Diagnostic Research Veterinary Medicine Institute (Pencho Slaveikov Blvd., Sofia)	BL3	—	—		x	x	—	—			x			x					—
Canada	1. National Microbiology Laboratory (Winnipeg)	BL4	—	—	—	—	x	NN	NN	NN	x	x	NN	NN	x	x	x	x	x	no
	2. National Center for Foreign Animal Disease (Winnipeg)	BL4	—	—	—	—	x	NN	NN	NN	x	x	NN	NN	x	x	x	x	x	no
Croatia	University Hospital for Infectious Diseases (Zagreb)	BL3	—	—	—	—	—	—	—	ND	—	—	—	ND	—	x	x	x	x ²	no
Cyprus	<i>Nothing to declare</i>	—	—	—	—	—	ND	ND	—	—	—	—	—	—	NN	NN	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			—	—		—										—

² Croatia ticked “nothing to declare” and “nothing new to declare” but reports the facility since 2020.



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	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													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	x	
	2. Microbiology Laboratory of North-Estonia Regional Hospital	BL3											x	x	x	x	x	x	x	
	3. The National Centre for Laboratory Research and Risk Assessment - former Veterinary and Food Laboratory	BL3											x	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	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	x	x	
	7. Synlab Eesti	BL3										—	—	x	x	x	x	x	x	
	8. Icosagen Cell Factory OÜ	BL3										—	—	—	—	—	x	x	x	
	9. University of Tartu Institute of Technology	BL3										—	—	—	—	—	x	x	x	



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
Finland	1. Centre for Biothreat Preparedness – Finnish Defence Forces, Centre for Military Medicine (Helsinki)	BL3	x	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	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	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	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	x	x	no
	10. University of Turku, Institute of Biomedicine and Turku University Hospital/TYKS Laboratories	BS3								—	—	—	—	—	—	—	x	x	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	x	no
	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	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	x	x	no
	4. Centre for Biological Threats and Special Pathogens (Zentrum für Biologische Gefahren und Spezielle Pathogene, ZBS) at the Robert Koch Institute (Berlin)	BL4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	no
Greece	1. University of Crete School of Medicine (Heraklion)	BL3					x													
	2. Kapodistrian University of Athens School of Medicine (Athens)	BL3	—	—	—	—	x	NN	NN	—	—	—	—	—	—	—	—	—	—	—



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	3. The National Arbovirus and Hemorrhagic Fever Viruses Reference Laboratory at Aristotelian University of Thessaloniki (Thessaloniki)	BL3					x													
	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		x						no
	4. National Salmonella Reference Laboratory, National University of Ireland (Galway)	BL3	x	x	x	x	x	—	—	x	x	x	NN	x	NN	NN	NN	NN	NN	—
	5. Galway University Hospital, Galway Microbiology Reference Laboratory Service (Galway)	BL3	—	—	—	—	x			x	x	x		x						—
	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	NN	no
	2. RIKEN Tsukuba Campus (Ibaraki)	BL4	—	—	—	—	—	x		NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	no
Latvia	1. Riga East University Hospital Latvian Centre of Infectious Diseases, National Microbiology Reference Laboratory (Linezera Street, Riga)	BL3	—	—	ND	—	x	x	x	x	x	x	x	x	NN	NN	x ³	x	x	no

³ Latvia ticked “nothing new to declare” but reported only this facility (2021, p. 3).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	2. Latvian Biomedicine Research and Study centre (Ratsupites, Riga)	BL2					—	—	—	—	—	x	x	x			—	x	x ⁴	no
	3. Centre for Disease Prevention and Control of Latvia (Duntes 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										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	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										no
Luxembourg	1. Luxembourg Institute of Health (LIH) (Esch-Alzette)	BL3									x						x	x		—
	2. Centre Hospitalier de Luxembourg (CHL) (Luxembourg)	BL3	—	—	—	—	—	ND	—	—	x	NN	NN	NN	NN	NN	—	—	NN	—
	3. Laboratoire national de santé (Dudelange)	BL3									x						x	x		no
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					x													

⁴ Latvia ticked “nothing new to declare” but reported both facilities again (2022; 2023, p. 3).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	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 Research Institute (Ipoh)	BL3					x													
Mauritius	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—	—	—	—
Mexico	1. Universidad de Monterrey (Nuevo León). Vicerrectoría de Ciencias de la Salud, Laboratorios de Ciencias Básicas.	BL3									x	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				x	x		x	no
	3. Centro de Investigación en Tecnología y Diseño del Estado de Jalisco A.C. Dirección de Biotecnología Médica y Farmacéutica (Jalisco)	BL3	—	—	—	—	—	—	—	—	x	x	NN	NN	NN	x	x	—	x	no
	4. Laboratorios de Diagnostico del Departamento de Medicina Zootecnia de Cerdos, 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		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		x	no



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	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		x	no
	8. Laboratorio Estatal de Salud Pública del Estado de Sonora (Sonora)	BL3									x	x				x	x		x	no
	9. Universidad Nacional Autónoma de México. Instituto de Investigaciones Biomédicas (Coyoacán)	BL3									x	x				x	x		x	no
	10. Laboratorio Estatal de Salud Pública de Veracruz (Veracruz)	BL3									x	x				x	—		—	no
	11. Universidad Nacional Autónoma de México- Laboratorio de Diagnóstico del Departamento de Microbiología e Inmunología. Facultad de Medicina Veterinaria y Zootecnia.	BL3									—	—				—	—		x	—
	12. Laboratorio Nacional de Vacunología y Virus Tropicales - Instituto Politécnico Nacional, Escuela Nacional de Ciencias Biológicas (ENCB)	BL3									—	—				—	—		x	—
	13. Laboratorio Estatal de Salud Pública del estado de Aguascalientes. Secretaría de Salud.	BL3									—	—				—	—		x	—
	14. Laboratorio estatal de Salud Pública del estado de Guerrero. Secretaría de Salud.	BL3									—	—				—	—		x	—
	15. Laboratorio Estatal de Salud Pública del estado de Nayarit. Secretaria de Salud	BL3									—	—				—	—		x	—
	16. Laboratorio Estatal de Salud Pública de Veracruz “Dr. Mauro Loyo Varela”.	BL3									—	—				—	—		x	—
	17. Laboratorio Estatal de Salud Pública de Quintana Roo.	BL3									—	—				—	—		x	—



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	18. Unidad de Desarrollo e Investigación en Bioterapéuticos (UDIBI) (antes Unidad de Desarrollo e Investigación en Bioprocesos) de la Escuela Nacional de Ciencias Biológicas. Instituto Politécnico Nacional.	BL3									—	—				—	—		x	—
	19. Centro Nacional de Servicios de Diagnóstico en Salud (Pachuca de Sonto)	BL3									x	x				—	—		—	—
Morocco	<i>Nothing new to declare</i>	—	—	—	—	—	—	—	—	—	—	—	—	—	NN	—	—	—	—	—
Myanmar	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	—	—	—	ND	—	ND	—	—	—	—	—
Netherlands	1. TNO Department of CBRN Protection (Rijswijk)	BL3							x	—	x	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	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	—	ND	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	ND	wholly
Portugal	1. Laboratório de Bromatologia e Defesa Biológica (Lisbon)	BL3				x	x	x	x	x	x								x ⁵	partly
	2. Unidade de reposta a Emergências e Biopreparação (Lisbon)	BL3				x	—	—	—	—	—								—	—
	3. Departamento de Doenças Infecciosas (Lisbon)- Portuguese National Health Institute, INSTITUTO NACIONAL DE SAÚDE DOUTOR RICARDO JORGE, I.P.	BL3	—	—	—	—	—	x	x	x	x		NN	NN	NN	NN	NN	NN	x	no
	4. Unidade de reposta a Emergências e Biopreparação (Braga)	BL3				—	—	—	—	—	—								—	—

⁵ Portugal ticket "nothing new to declare" but reports some new institutions in comparison to 2015.



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	5. Instituto Nacional de Investigação Agrária e Veterinária, Unit of Animal Health (Lisbon & Vila do Conde)	BL3				—	—	x	x	x	x								x	no
	6. Life and Health Sciences Research Institute (Braga)	BL3				—	—	—	x	x	x								x	no
	7. Instituto de Tecnologia Química e Biológica (Lisbon), UNIVERSIDADE NOVA DE LISBOA (INSTITUTE OF CHEMICAL AND BIOLOGICAL TECHNOLOGY)	BL2				—	—	—	—	—	x								x	no
	8. Departamento de Farmácia Galénica e Tecnologia Farmacêutica (Lisbon)	BL3				—	—	—	—	x	x								x	no
	9. Departamento de Microbiologia e Imunologia (Lisbon)	BL3				—	—	—	—	x	x								—	—
	10. Autoridade Tributária e Aduaneira (AT) – Direção de Serviços de Licenciamento (DSL) / Ministério das Finanças (Tax and Customs Authority – Ministry of Finance)	—				—	—	—	—	—	—								x	—
	11. Instituto de Higiene e Medicina Tropical – Universidade Nova de Lisboa (Hygiene and Tropical Medicine Institute – New University of Lisbon) – (IHMT) (belongs to the Portuguese National Biosafety Network - Lab-PTBioNet)	BL3				—	—	—	—	—	—								x	—
	10. Faculdade de Ciências da Universidade de Lisboa (Lisbon)	BL3				—	—	—	—	—	—								x	no
Qatar	<i>Nothing new to declare</i>	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—
Republic of Moldova	1. National Center for Public Health (Chinsinau)	BL3	—	—	—	—	x	x	NN	NN	NN	NN	—	NN	—	NN	NN	NN	NN	—
	2. Republican Center for Veterinary Diagnostics (Chinsinau)	BL2	—	—	—	—	—	x	NN	NN	NN	NN	—	NN	—	NN	NN	NN	NN	—



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
Romania	1. Military Medical Research Center (Bucharest)	BL2+ ⁶	x				x	x	x	—	—	x	x	x	x	x	x	x	x ⁷	wholly
	2. Pasteur Filipești Branch SA – former National Society "Pasteur Institute" (Bucharest)	BL2	—				—	—	—	x	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	x	no
	4. "Cantacuzino" National Medico – Military Institute of Research and Development (Bucharest)	BL2 ⁸	—	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+ ⁹	—				—	—	—	—	—	—	—	—	x	x	x	x	x	no
Serbia	<i>Nothing to declare</i>	—	—	—	—	—	—	ND	—	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	—
Slovakia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	NN	ND	ND	ND	—
Slovenia ¹⁰	1. University of Ljubljana, Faculty of Medicine Institute of Microbiology and Immunology (Ljubljana)	—															x	x	x	
	2. Ministry of Defence – Mobile Laboratory (Kranj)	BL3	—	—	—	—	—	—	—	NN	NN	NN	NN	NN	NN	ND	x	x	x	—
	3. University of Ljubljana, Veterinary Faculty, National Veterinary Institute (Ljubljana)	BL3															x	x	x	
Sweden	1. Swedish Defence Research Agency Division of NBC Defence (Umeå)	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	x	no

⁶ Cantacuzino” NMMIRD has a BSL3 facility, which is not operational as there still are several validation procedures to be performed. (2023, p. 5).

⁷ The Military Medical Research Center was incorporated in the structure of The “Cantacuzino” National Medico-Military Institute for Research and Development (“Cantacuzino” NMMIRD).

⁸ Biosafety level 3 is not operational (2022, p. 9; 2023, p. 5).

⁹ Biosafety level 3 is not fully operational, pending validation (2022, p. 7; 2023, p.5f.).

¹⁰ Slovenia has mistakenly ticked “nothing to declare” in Form 0 although in its CBM submission it declared three facilities with no further information provided (2021;2022;2023, p. 4).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	3. National Veterinary Institute (Uppsala)	BL3	x	x	x	x	x	—	—	—	—	—	—	x	—	—	—	—	—	—
Switzerland	1. Labor Spiez (Spiez)	BL4	NN NN NN			x	x	x	x	x	x	x	x	x	x	x	x	x	x	partly
	2. Institute of Virology and Immunology (Mittelhäusern)	BL3				x	x	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	x	x	no
	4. Institute of Medical Virology (Zurich)	BL4 ¹¹				—	—	—	—	x	x	x	x	x	x	x	x	x	x	no
Thailand	<i>Nothing new to declare</i>	—	—	—	—	NN NN NN	NN NN NN	—	—	—	—	—	—	—	—	—	—	—	—	—
Türkiye	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	—												
	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 National Academy of Medical Sciences of Ukraine" (Kharkov)	BL2					x	x					x	x	x	x	x	x	—	partly
	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	—	no
	4. State institution "Ukrainian Research Anti-Plague Institute I.I. Mechnikov" of the Ministry of Health of Ukraine (Odesa)	BL3					x	x					x	x	x	x	x	x	x	no
	5. Central Sanitary Epidemiological Station (Kiev)	BL3					x	x					—	—	—	—	—	—	—	—

¹¹ BL 3 containment unit but holds a BSL4 license for diagnostic purposes (2023, p.6).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	MoD funded?
	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)	BL2+					—	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		x	no
	10. State Scientific Control Institute of Biotechnology and Microorganism Strains (Kiev)	BL2					—	—			x	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. Defense 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
	2. UK Health Security Agency – Colindale – formerly Public Health England – Colindale (London)	BL4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no
	3. UK Health Security Agency – Porton – former Public Health England – Porton (Salisbury)	BL4	x	x	x	x	x	x	—	x	x	x	x	x	x	x	x	x	x	no
	4. The Medicines and Healthcare Products Regulatory Agency former 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	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	x	x	no
	6. The Pirbright Institute (Pirbright)	SAPO4	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x	no ¹²
	7. Animal and Plant Health Agency (Addlestone)	SAPO4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	no

¹² Partially funded by the US Defense Advanced Research Projects Agency (2022, p. 8; 2023, p.6).



Country	Name and location of facilities declared in CBM Form A, Part 1	Cont. Level																			MoD funded?
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
USA	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)	SAPO4	—	x	x	x	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	x	x	x	no
	1. Georgia State University – High Containment Core (Atlanta, GA)	BL4				x	x	x	x	x	x	x	x	x	—	x	x	x	x	x	partly
	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	x	x	x	partly
	3. Galveston National Laboratory (Galveston, TX)	BL4				x	x	x	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	x	x	x	partly
	6. National Biodefense Analysis and Countermeasures Center (Fort Detrick, MD)	BL4	—	—	—	—	—	x	x	x	x	x	x	x	x	x	—	x	x	x	partly
	7. Integrated Research Facility at Rocky Mountain Laboratories (Hamilton, MT)	BL4	—	—	—	—	—	x	x	x	x	x	x	x	x	x	—	x	x	x	partly
	8. Coordinating Center for Infectious Diseases (Atlanta, GA)	BL4				x	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	9. Center for Disease Control CDC, Deputy Director for Infectious Diseases (Atlanta, GA)	BL4				—	—	x	x	x	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	x	x	x	no
	11. The Boston University National Emerging Infectious Diseases Laboratories –NEIDL (Boston)	BL4				—	—	—	—	—	—	—	—	—	x	x	x	x	x	x	partly ¹³

¹³ Since 2023 partially funded by the U.S. Department of Defense (2023, p.15)



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 2023 and compares them with the information in publicly available CBMs from 2007 to 2023. The table indicates the overall funding for the biodefence programme as declared in CBM Form A, part 2 (ii). 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.

Year of Declaration – Total funding in million EUR declared in Form A, Part 2 (ii)¹⁴

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Australia	1.5	1.6	1.7	1.7	2	2	2	1.7	1.7	2.1	2.3	2.3	2.2	1.8	2.5	2.1	1.8
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	5	5
Belgium	—	—	—	—	0.6	1	0.3	0.3	0.4	0.2	0.3	0.26	0.24	0.27	0.35	0.36	NN
Bulgaria	—	—	—	—	—	NN	NN	NN	NN	ND	ND	ND	NN	—	NN	ND	ND
Canada	—	—	—	—	6	6.6	9.3	9.6	6.5	6.6	6.3	4	3.1	2.4	1.9	2.4 ¹⁵	2.3 ¹⁶
Croatia	—	—	—	—	—	—	—	ND	—	—	—	ND	—	—	—	ND	ND
Cyprus	—	—	—	—	—	—	—	—	—	—	—	—	NN	NN	NN	NN	NN
Czech Rep.	—	—	NN	—	—	NN	—	—	NN	NN	NN	NN	NN	NN	NN	NN	NN
Denmark	1.9	2	—	2.9	2.8	2.7	2.7	2.7	2.7	2.7	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	ND	ND
Finland	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

¹⁴ National currencies were converted to Euros using the online service, <http://www.finanzen.net/waehrungsrechner>.

¹⁵ This does not include the Innovation for Defence Excellence and Security (IDEaS) COVID effort, which had an investment of \$8,732,678¹⁴ (approx. 6.4 million EUR) or the Canadian Safety and Security Program (CSSP) which receives \$43.5 million annually (approx. 31.9 million EUR) and funds biological projects, among other things (2022, p. 10).

¹⁶ No exact calculation of all three projects. Estimated that in 2022, the amount spent on the Canadian biological defence program was approximately \$3,198,752 including salaries, but excluding contracts to external entities (2023, p.10)



Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
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	19.9	18.9
Greece	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	NN	—
Ireland	—	—	—	—	—	—	—	—	—	—	—	NN	NN	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	0.23	—
Latvia	—	—	—	—	—	—	—	NN	—	—	ND	ND	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	ND	ND
Luxembourg	—	—	—	—	—	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Madagascar	—	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—	—
Malaysia	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—	—	—
Mauritius	—	—	—	—	—	—	—	—	—	ND	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	ND	ND	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	3.6	4 ¹⁷
New Zealand	ND	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	1.2	1.4
Portugal	—	—	—	0.2	0.1	0.1	0.03	0.05	0.26	0.26	0.04	0.11	NN	0.23	0.24	NN	0.20
Qatar	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—
Republic of Moldova	—	—	—	—	—	NN	NN	0.03	NN	NN	—	0.03	—	0.03	0.03	0.03	0.03
Romania	—	—	NN	NN	—	0.01	0.01	ND	ND	ND	ND	ND	ND	ND	ND	—	ND
Serbia	—	—	—	—	—	ND	—	ND	ND	—	ND	ND	ND	ND	ND	ND	ND
Slovakia	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	ND	ND	ND	ND
Slovenia	—	—	—	—	—	—	—	ND	ND	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	3.8	3.7
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	5.1	5.2
Thailand	—	—	—	NN	NN	NN	—	—	—	—	—	—	—	—	—	—	—
Turkey	—	—	—	—	2.3	NN	NN	1.7	ND	ND	ND	ND	—	—	—	—	—

¹⁷ 3.6 million/4.million EUR is the part of the CBRN defence research programme budget for the period 2018-2021, which is dedicated to biological defence (2022, p. 24; 2023, p.12).



Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Ukraine	—	—	—	—	ND	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	45.2	62.9
USA	—	—	—	451.6	475	779	743	670	812.4	730.4	668.8	547.7	694	693	618	660.9	665.1

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 2023 and compares them with the information in publicly available CBMs from 2007 to 2023. 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. “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	2022	2023
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	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	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	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	—	—	—	—	—	—	—
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	ND ND ND NN — NN ND ND							
	2. National Research Diagnostic Veterinary Institute, Bulgarian Food Safety Agency (BFSA) of the Republic of Bulgaria (Sofia)	—	—		—	—	—	—	—	x								
Canada	1. Defence Research and Development Canada – Suffield Research Centre (Medicine Hat, AB)					x	x	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	x	x
Croatia	University Hospital for Infectious Diseases “Dr. Fran Mihaljevic”, Central Diagnostic Laboratory (Zagreb)	—	—	—	—	—	—	—	ND	—	—	—	ND	—	x	x	x	x ¹⁸
Cyprus	Nothing to declare	—	—	—	—	—	—	—	—	—	—	—	—	ND	NN	NN	NN	NN
Czech Rep.	1. Central Military Health Institute, department Techonin (Techonin)	x	x	NN ND		x	x	—	ND ND NN ND ND ND ND ND ND ND									
	2. Central Military Health Institute, department Prague (Prague)	—	—			x	x	x										
	3. Institute of Molecular Pathology (IMP) (Hradec Králové)	x	x			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	x	NN	x	x	x	x	x	x
Ecuador	Nothing to declare	—	—	—	—	ND	—	—	—	—	—	—	—	—	—	—	—	—



Estonia	<i>Nothing to declare</i>	—	—	—	ND	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	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	x	x
	2. Bundeswehr Institute of Microbiology (Munich)	x	x	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	x	x
	4. Central Institute of the Bundeswehr Medical Service (Kiel)	—	x	x	—	x	x	x	x	x	x	x	x	x	x	x	x	x
	5. Centre for Biological Threats and Special Pathogens at the Robert Koch Institute (Berlin)	—	—	—	—	—	—	x	x	x	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	—	—	—	—	—	—	—	—	NN	—
	2. Biosafety Laboratory (Budapest)	—	—	—	—	—	—	—	x	—	—	—	—	—	—	—	—	—
Ireland ¹⁹	<i>Nothing new to declare</i>	—	—	—	—	—	—	—	—	ND	ND	ND	NN	NN	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	x	x
	3. Ground Systems Research Center, Acquisition, Technology & Logistics Agency (ATLA) (Tokyo)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	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	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	ND	ND
Luxembourg ²⁰	<i>Nothing to declare</i>	—	—	—	—	—	ND	—	ND	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	—	ND

¹⁸ Croatia ticked “nothing to declare” but reports the facility since 2020.

¹⁹ Ireland does not have a national biological defence R&D programme (2022; 2023, p. 26).

²⁰ Luxembourg does not have any national research and development programmes for biological defence on the territory (2022, p. 8; 2023, p.7).



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	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. Institute of Microbiology, FML (Kjeller)	—	x	—	x	—	—	—	—	x	—	—	—	—	—	—	—	—
	2. Norwegian Defence Research Establishmend, FFI (Kjeller)	—	—	—	—	NN	NN	NN	NN	x	NN	NN	NN	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	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	—	—	—	ND	ND
Romania	Military Medical Research Center (Bucharest)	—	x	NN	NN	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Serbia	<i>Nothing to declare</i>	—	—	—	—	—	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Slovakia	<i>Nothing to declare</i>	—	—	—	—	—	—	—	ND	—	—	—	ND	ND	ND	ND	ND	ND
Slovenia ²¹	1. University of Ljubljana, Veterinary Faculty, National Veterinary Institute (Ljubljana)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x
	2. University of Ljubljana, Medical Faculty, Institute of microbiology and immunology (Ljubljana)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x
Sweden	1. Swedish Defence Research Agency (Umea)	x	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	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	x
	2. Institute of Virology and Immunology (Mittelhäusern)	—	—	—	x	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	x
	4. National Reference Center for Anthrax (Bern)	—	—	—	x	x	x	x	x	x	—	—	—	—	—	—	—	—
	5. Bacteriological Laboratory (Geneva)	—	—	—	x	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	—	—	—	—	—	—
	7. Diagnostic Laboratories of the Institute of Microbiology (Lausanne)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	8. Spiez Laboratory – National Reference Center (Spiez)	—	—	—	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	x	x
	10. Institute of Medical Microbiology (Zurich)	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x	x	x

²¹ Slovenia has mistakenly ticked “nothing to declare” in Form 0 although in its CBM submission it declared two facilities with no further information provided (2021,2022 and 2023, p. 7).



	11. Institute for Medical Virology (Zurich)	—	—	—	x	x	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	x	x
	13. Institute of Microbiology – formerly Laboratory of Applied Microbiology (Bellinzona)	—	—	—	x	x	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	NN	ND	ND	ND	ND	—	—	—	—
	2. Refik Saydam National Public Health Agency (Ankara)	—	—	—	—	x												
Ukraine	State Scientific and Control Institute for Biotechnology and Microorganism Strains (Kiev)	—	—	—	—	ND	ND	—	—	ND	ND	ND	ND	ND	ND	ND	x	—
United Kingdom	Defense Science and Technology Laboratory (Porton Down Salisbury)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	1. Plum Island Animal Disease Center (Orient Point, NY)				x	x	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	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	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	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	x	x
USA	8. Walter Reed Army Institute of Research (Silver Spring, MD)	—	—	—	x	x	x	—	—	—	—	—	—	—	—	—	—	—
	9. Battelle Biomedical Research Center (West Jefferson, OH)				x	x	—	—	—	—	—	—	—	—	—	—	—	—
	10. Naval Surface Warfare Center –Dahlgren Division Chemical, Biological, Radiological Defense Laboratory (Dahlgren, VA)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	11. Naval Research Laboratory (Washington, DC)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	12. Naval Medical Research Center (Fort Detrick, MD)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	13. Brookhaven National Laboratory (Upton, NY)				x	x	x	x	x	x	x	x	—	—	—	—	—	—
	14. Idaho National Laboratory (Idaho Falls, ID)				x	x	x	x	—	—	—	—	—	—	—	—	—	—
	15. Los Alamos National Laboratory (Los Alamos, NM)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	16. Lawrence Livermore National Laboratory (Livermore, CA)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	17. Oak Ridge National Laboratory (Oak Ridge, TN)				x	—	—	—	—	—	—	—	—	—	—	—	—	—
	18. Pacific Northwest National Laboratory (Richland & Sequim, WA)				x	x	x	x	x	x	x	x	x	x	x	x	x	x
	19. Sandia National Laboratories (Albuquerque, NM and Livermore, CA)				x	x	x	x	x	x	x	x	x	x	x	x	x	x



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)
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)
39. Floral and Nursery Plants Research, Beltsville Agricultural Research Center (Beltsville, 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	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



CBM Form G

The following table summarizes the data declared in **CBM Form G** of the publicly available CBM submissions from 2023 and compares them with the information in publicly available CBMs from 2007 to 2023. 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 or modified 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. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Australia	1. Seqirus (Australia) Pty Ltd (Parkville and Broadmeadows, VIC)	no	yes	x	x	x	x										x	x	x	x	x	x
	2. Queensland Institute of Medical Research (Herston Road)	no	yes	—	x	x	x	N	N	N	N	N	N	N	N	N	—	—	—	—	—	—
	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	x	x
Austria	<i>Nothing to declare</i>	—	—	—	—	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Belgium ²³	1. GlaxoSmithKline Biologicals S.A (Rixensart)	—	—			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
	2. Pfizer Animal Health (Louvain-la-Neuve)	—	—					x									—	—	—	—	—	—
Bulgaria	1. BulBio-NCIPD Ltd (Sofia)	—	—	x	x		x	x	x	x		N	N	N	N	N	N	N		N	N	N
	2. National Diagnostic and Research Veterinary Medical Institute (Sofia)	—	—	—		x	—	—	—		N	N	N	N	N	N	N	—	N	N	N	N
Canada	1. ID Biomedical Corporation of Quebec (GlaxoSmithKline Inc.) (Quebec City, QC)	—	yes					—			x	x	x	x	x	x	x	x	x	x	x	x
	2. Sanofi Pasteur Limited (Toronto, ON)	—	yes					—			x	x	x	x	x	x	x	x	x	x	x	x
	3. Medicago (Quebec City, QC)	—	yes					—			—	—	x	x	x	x	x	x	x	x	x	x ²⁴
	4. Immunovaccine (Halifax, NS)	Anthrax	yes					—			—	—	x	x	x	x	x	x	x	x	x	x
	5. Artemis Technologies Inc., No. 50 (Guelph, ON)	no	yes	—	—	—	—	x	N	x	x	x	x	x	x	x	x	x	x	x	—	
	6. Bioniche Life Sciences Inc., No. 8 (Belleville)	no	yes	—	—	—	—	x	N	x	x	—	—	—	—	—	—	—	—	—	—	
	7. Biovet Inc., No. 49 (Saint-Hyacinthe, QC)	no	yes					x		x	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	x	x	—	
	9. Elanco Canada Limited, No. 40 - former Novartis Animal Health Canada Inc. (Mississauga, ON)	no	yes					x		x	x	x	x	—	—	—	—	—	—	—	—	

²² As designated by the Centers for Disease Control and Prevention (CDC) in the USA.

²³ The list of vaccines is removed in the public version of the CBM.

²⁴ Medicago has ceased operations, and is awaiting dissolution by its parent company Mitsubishi Chemical Corporation (2023, p.52).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
	10. Novartis Animal Health Canada Inc. (Mississauga, ON)	no	yes					—			—	—	—	x	x	x	—	—	—	—	—	
	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	x	—		
	12. Nutratech Inc., No. 58 (Winnipeg, MB)	no	yes					x		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	x	—		
	14. Vacci-Vet Inc., No. 59 (Saint-Hyacinthe, QC)	—	yes					—		—	x	—	—	—	—	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	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	x	x		
	18. National Research Council of Canada (Ottawa, ON)	no	yes					—		—	—	—	—	—	x	x	x	x	x	x		
	19. Prevtex 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	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		—	—	—	—	—	—	—	—	—	—	—		
	25. Vétoquinol N.A. Inc., No. 34 (Lavaltrie)	no	yes					x		—	—	—	—	—	—	—	—	—	—	—		
	Croatia	Institute of Immunology	no	yes	—	—	—	—	—	—	—	x	—	—	—	x	—	—	N D	N D	N D	
	Cyprus	Nothing to declare	—	—	—	—	—	—	N D	N D	—	—	—	—	—	—	N D	N D	N N	N N	N N	
	Czech Republic	1. Baxter BioScience s.r.o (Kostolec nad Černými Lesy)	no	yes	x				x					—						—		
		2. SEVAPHARMA a.s. (Hostivar)	no	yes	x	N	N	N	x	N	N	N	N	x	N	N	N	N	N	—	N	
		3. Bioveta, a.s. (Ivanovice na Hané)	Anthrax	yes	x	N	N	N	x	N	N	N	N	x	N	N	N	N	N	x	N	
		4. DYNTEC, spol. s.r.o. (Terezín)	no	yes	x				x					x						x		



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Denmark	5. BIOPHARM, Research Institute of Biopharmacy and Veterinary Drugs (Jíluvě u Prahy)	no	yes	x				x					x						x			
	6. NOVAVAX CZ a.s. (Kostelec nad Černými lesy)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x		
	1. Statens Serum Institute (Copenhagen)	no	yes	x	x			x					—	—	—							
	2. Bavarian Nordic A-S (Kvistgaard)	Smallpox; Ebola	yes	x	x	—	N	x	N	N	N	N	x	x	x	N	N	N	N	N		
	3. AJ Vaccines (Copenhagen)	no	yes	—	—			—					x	x	x							
Ecuador	Nothing to declare	—	—	—	—			N	—	—	—	—	—	—	—	—	—	—	—	—		
Estonia	Nothing to declare ²⁵	—	—	—			N	N	—	—	—	N	N	N	N	N	N	N	N	N		
							D	D				D	D	D	D	D	D	D	D	D		
Finland	Nothing to declare ²⁶	—	—	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
				N	N	N	N	D	D	D	D	D	D	D	D	D	D	D	D	D		
Georgia	Nothing to declare	—	—	—	—	N	N	N	—	—	—	—	—	—	—	—	—	—	—	—		
						D	D	D														
Germany	1. GlaxoSmithKline Vaccines – former Novartis Vaccines and Diagnostix GmbH & Co. KG (Marburg)	Botulism	yes	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	—	—		
	2. GlaxoSmith Kline 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	x	x		
	3. IDT Biologika GmbH (Dessau-Rosslau)	Smallpox, Filovirus	yes	x	x	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	x	x		
	6. Vibalogics GmbH (Cuxhaven)	Smallpox	yes	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x	x		
	7. Burgwedel Biotech GmbH, MSD Group (Burgwedel)	Ebola	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x	x		

²⁵ There are no vaccine production facilities in Estonia (2023, p. 3).

²⁶ There are no vaccine producing facilities in Finland (2022, p. 18).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
	8. CureVac Real Estate GmbH – former CureVac AG (Tübingen)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x	
	9. BioNTech Innovative Manufacturing Services GmbH	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	—	x	
	10. Rentschler Biopharma SE (Laupheim)	Yes	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	—	
	11. Allergopharma GmbH & Co. KG (Reinbek)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	
	12. Baxter Oncology GmbH (Halle/Westfalen)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	
	13. Sanofi-Aventis Deutschland GmbH (Frankfurt am Main)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	
	14. Siegfried Hameln GmbH (Hameln)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	
	15. mibe GmbH Arzneimittel (Brehna)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	
Greece	Nothing to declare	—	—	—	—	—	N D	N D	N D	—	—	—	—	—	—	—	—	—	—	—	—	
Hungary	1. Omninvest Ltd. (Budapest)	no	yes	—	—	—	—	—	—	—	—	x	x	—	—	—	—	—	—	N	N	
	2. GlaxoSmithKline Biological Kft. (Budapest)	no	yes	—	—	—	—	—	—	—	—	—	x	—	—	—	—	—	—	N	N	
Ireland	1. Elanco Laboratories (Sligo)	no	yes	x	x	x	x	x	—	—	—	x	x	—	—	—	—	—	—	—	—	
	2. MSD International GmbH (Carlow)	no	yes	—	—	—	—	—	—	—	—	x	x	x	x	N	N	N	N	N	N	
	3. MSD International GmbH – former Schering-Plough (Brinny)	no	no ²⁷	—	—	—	—	—	—	—	—	x	x	x	x	N	N	N	N	N	N	
	4. Pfizer Ireland Pharmaceuticals (Dublin)	no	yes	—	—	—	—	—	—	—	—	x	x	x	x	—	—	—	—	—	—	
Japan	1. Denka Co., Ltd (Niigata) – formerly Denka Seiken Co., Ltd (Tokyo)	no	yes	—	—	—	—	—	—	x	x	—	x	—	x	—	—	x	x	x	—	
	2. Daiichi Sankyo Biotech Co., Ltd (Saitama)	no	yes	—	—	—	—	—	—	x	x	N	x	N	x	N	N	x	x	x	N	
	3. Takeda Pharmaceutical Co., Ltd (Osaka)	no	yes	—	—	—	—	—	—	x	x	N	x	N	x	N	N	x	x	x	N	
	4. The Research Foundation for Microbial Diseases of Osaka University (Osaka)	no	yes	—	—	—	—	—	—	x	x	—	x	—	x	—	—	x	x	—	—	

²⁷ 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) (2022, p. 41).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																	
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
	5. KM Biologics Co., Ltd emerged from The Chemo-Sero-Therapeutic Research Institute (Kumamoto)	no	yes						x	x		x		x			x	x	x		
	6. Japan BCG Laboratory (Tokyo)	no	yes						x	x		x		x			x	x	x		
	7. Japan Poliomyelitis Research Institute (Tokyo)	no	yes						x	x		x		—			—	—	—		
	8. BIKEN Co., Ltd (Tokyo)	no	yes						—	—		—		—			—	—	x		
	9. JCR Pharmaceuticals (Tokyo)	no	yes						—	—		—		—			—	—	x		
Latvia	Nothing to declare	—	—	—	—	N D	—	—	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	
Liechtenstein	Nothing new to declare	—	—	N N	N N	N N	N N	N N	— N	N N	— N	— N	— N	— N	— N	— N	— N	— N	N D	—	
Lithuania	Nothing new to declare	—	—	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N N	N D	N D	
Luxembourg	Nothing to declare	—	—	—	—	—	—	N D	—	—	N D	N D	N D	N D	N D	N D	N D	N D	N N	N N	
Madagascar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Malaysia	Institute of Veterinary Services (Putrajaya)	no	yes	—	—	—	—	x	—	—	—	—	—	—	—	—	—	—	—	—	
Mauritius	—	—	—	—	—	—	—	—	—	—	—	N D	—	—	—	—	—	—	—	—	
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	N	x	N	N	x	—	x	
	3. Productora Nacional De Biológicos Veterinarios (Colonia Lomas Altas)	no	yes									—	—		x			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				



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Myanmar	1. Vaccine Research Centre, Department of Medical Research (Yangon)	no	yes	—	—	—	—	—	—	—	—	—	—	x	—	x	—	—	—	—		
	2. Vaccine Production Division, LBVD (Yangon)	Anthrax	yes	—	—	—	—	—	—	—	—	—	—	x	—	x	—	—	—	—		
Netherlands	1. Wageningen Bioveterinary Research – former Central Veterinary Institute (Lelystad)	no	yes	—	—	—	—	—	—	—	x	x	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	x	x	
	3. Nederlands Vaccin Instituut (Bilthoven)	no	yes	—	—	—	—	—	—	—	x	—	—	—	—	—	—	—	—	—		
	4. WWY-WWP, Abbott Biologicals B.V. (Weesp)	no	yes	—	—	—	—	—	—	—	x	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	x		
	6. Janssen Vaccines & Prevention – former Janssen-Crucell Holland B.V. (Leiden)	yes ²⁸	yes	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x	x	
	7. Erasmus Medical Center (Rotterdam)	yes ²⁹	yes	—	—	—	—	—	—	—	—	x	x	x	x	x	x	x	x	x	x	
	8. Bilthoven Biologicals B.V. (Bilthoven)	no	yes	—	—	—	—	—	—	—	—	x	x	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	x	x	
	10. Patheon Biologics (Groningen)	no	yes	—	—	—	—	—	—	—	—	x	x	x	x	x	x	—	x	x	x ³⁰	
New Zealand	Nothing to declare	—	—	N D	N D	—	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D		
Norway	1. Pharmaq (Overhalla)	no	yes	—	x	—	x	x	x	x	x	—	N	N	N	N	N	N	N	N		
	2. The National Veterinary Institute (Oslo)	no	yes	—	x	—	x	x	x	x	x	—	N	N	N	N	N	N	N	N		
	3. The Norwegian Institute of Public Health (Nydalen)	no	yes	—	x	—	x	x	x	x	x	—	N	N	N	N	N	N	N	N		
Portugal	Genibet Biopharmaceuticals (Oeiras)	no	yes	—	—	—	N D	x	x	N D	N D	N D	N D	N D	N D	N D	x	N D	N D	N D		
Qatar	Nothing to declare	—	—	—	—	—	—	N D	N D	—	—	—	—	—	—	—	—	—	—	—		

²⁸ The site holds a manufacturer's authorisation for medicinal products for human use for the manufacture of monovalent bulk conjugate drug substance (2022, p. 28).

²⁹ Viral diseases: Ebola, Marburg, Zika, RSV, HIV, HPV, Influenza, SARS- CoV-2. Bacterial infectious diseases: ExPEC (E. coli) and MRSA (S. aureus) (2022; 2023 p. 36).

³⁰ No vaccine production, only API (active pharmaceutical ingredients), mostly for Cancer related therapies (2023, p. 36).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
Republic of Moldova	Nothing to declare	—	—	—	—	—	—	N D	N D	N D	N D	N D	N D	—	—	—	N D	N D	N D	N D		
Romania	1. The "Cantacuzino" National Medico – Military Institute for Research and Development (Bucharest)	no ³¹	yes	—	—	—	x		x	x	x	x	x	x	x	x	x	x	x	—		
	2. SC Pasteur – Filiala Filipesto Srl, working point Bucharest – former National Society "Pasteur Institute" S.A. (Bucharest)	Anthrax	yes	x	x	x	—	N N	x	x	x	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	x	x		
Serbia	Institute of Immunology and Virology "Torlak" (Belgrad)	no	yes	—	—	—	—	—	x	—	x	x	—	x	x	x	x	x	x	x ³²		
Slovakia	Nothing to declare	—	—	—	—	—	—	—	—	—	N D	N D			N D	N D	N D	N D	N D	N D		
Slovenia	Nothing to declare	—	—	—	—	—	—	—	—	—	N D	N D	N D	N D	N D	N D	N D	N D	N D	N D		
Sweden	1. Valneva Sweden AB – former Crucell Sweden AB – former SBL Vaccin AB, Solna (Stockholm)	no	yes	x	x	x		N N	x	N	x	N	N	N	N	N	N	N	N	N		
	2. UniTech Biopharma (Matfors)	no	yes	x	x	x		N N	—	N	—	N	N	N	N	N	N	N	N	N		
	3. Cobra Biopharma (Matfors)	no	yes	—	—	—			x		—											
Switzerland	1. Janssen Vaccines, Branch of Cilag International GmbH – former Crucell Switzerland AG (Bern)	no	yes					x	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		
	5. Lonza AG (Lonzastr)	no	no					—	—	—	—	—	—	—	—	—	—	x	x	x		

³¹ While the “Cantacuzino” NMMIRD has a production facility and has, in the past, produced several vaccines, the facility is not currently operational (2022, p. 41).

³² Serbia ticked nothing to declare in Form 0, but reports the facility (2023, p.15).



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																	
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
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												
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	—	—	—	—	—	N	N	N	x	x	x	x	x	—	—	—		
	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					
	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	N	N	N	N
2. Biofabrika Dnepropetrovsk (Dnepropetrovsk)		no	yes	—	—	—	—	x	x	—	—	—	—	—	—	—	N	N	N	N	



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	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. Novogaleshchinsky 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	—	—	—	—				
	9. Institute of Veterinary Medicine of the National Academy of Agrarian Science of Ukraine (Kiev)	no	yes					x	x			x	—	—	—	—				
	10. PJSC "PHARMSTAN-DART BIOLEC " (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	—				
	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	x	x
	2. AstraZeneca Liverpool (registered in Companies House as MedImmune UK Ltd) (Liverpool)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	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	x
	4. Merck BioReliance® Services (Glasgow)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x	x
	5. Valneva Scotland Ltd (Livingston)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	x	x	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	x	x	x
	8. Charles River Gene Therapy Solutions, Keel Facility (Formerly known as Cobra Biologics Limited)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	x



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat A. Disease ²²	Other diseases	Year of Declaration																		
				2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
	9. FUJIFILM Diosynth Biotechnologies UK Ltd (Billingham)	no	yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x	x	
USA	1. Emergent Biosolutions (Lansing, MI)	Anthrax, Smallpox	no				x	x	x	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	x	x	x	
	3. MedImmune, LLC (Gaithersburg, MD)	no	yes				x	x	x	x	x	x	—	—	—	—	—	—	—	—	—	
	4. Merck Sharp & Dohme Corp (North Wales, PA)	Ebola	yes				x	x	x	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	x	x	x	
	6. MCM Vaccine Company/ Sanofi Pasteur, Inc. (Swiftwater, PA)	no	yes				—	—	—	—	—	—	—	—	—	x	x	x	x	—	—	
	7. Sanofi Pasteur Biologics Co. (Cambridge, MA)	Smallpox	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	x	x	
	9. Barr Laboratories, Inc. (Forrest, VA)	no	yes				—	—	x	x	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	x	x	
	11. Sanofi Pasteur, Inc (Swiftwater, PA)	no	yes				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
	12. Seqirus Inc. (Holly Springs, NC)	no	yes				—	—	—	—	—	—	—	—	—	—	x	x	x	x	x	
	13. Emergent Travel Health (Gaithersburg, MD)	no	yes				—	—	—	—	—	—	—	—	—	—	—	x	x ³³	—	—	
	14. BioNTech Manufacturing GmbH/Pfizer Inc. (New York, NY)	no	yes				—	—	—	—	—	—	—	—	—	—	—	—	x	—	x	—
	15. Dynavax Technologies Corporation (Emeryville, CA)	no	yes				—	—	—	—	—	—	—	—	—	—	—	—	x	x	x	—
	16.ModernaTX, Cambridge	no	yes				—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	x

³³ Listed twice (2022, p. 173 and 182).







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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