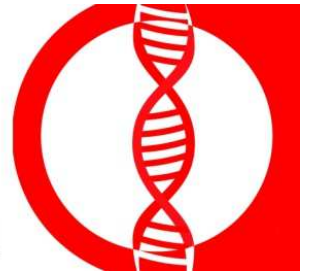


**Research Group for  
Biological Arms Control**



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# **2018 Reader on Publicly Available CBMs**

**November 2018**

## About this Reader

The exchange of information under the Biological Weapons Convention (BWC) in the form of the Confidence Building Measures (CBMs) remains the only permanent transparency building tool of the BWC.

This Reader, as its forerunners, presents information on CBM-related developments and the data provided in the openly available CBMs 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 tool for the BWC and to highlight the particular efforts of an increasing number of states to foster transparency by making their CBM submissions available to the public. The CBM Reader series is prepared as part of our efforts to increase 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 2018

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 date 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, contributed working papers during the ISP and for the 8<sup>th</sup> Review Conference (see page 3). On the 8<sup>th</sup> Review Conference in 2016 Member States came to very few forward-looking decisions in general – and to no decision with regard to CBMs in particular.

Figures shown in this reader also illustrate the need for a debate on 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 development.

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

**BWC States Parties:** 182

**New BWC States Parties in 2018:** 3 - Central African Republic, Niue, State of Palestine

**States Parties with national contact points:** 77

**CBMs submitted in 2018:** 76 as of November 16, 2018

**Public CBMs in 2018:** 32 as of November 16, 2018

**First-time CBM submissions in 2018:** 0

**Number of states having participated in the CBM data exchange in 30 years:** 116

<sup>1)</sup> For reference see data provided by BWC Implementation Support Unit (ISU), accessible at [www.unog.ch](http://www.unog.ch)

## **CBM-specific publications in 2018**

We could not find any publication in 2018 with a particular focus on Confidence Building Measures in the Bioweapons Convention. 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 2018**

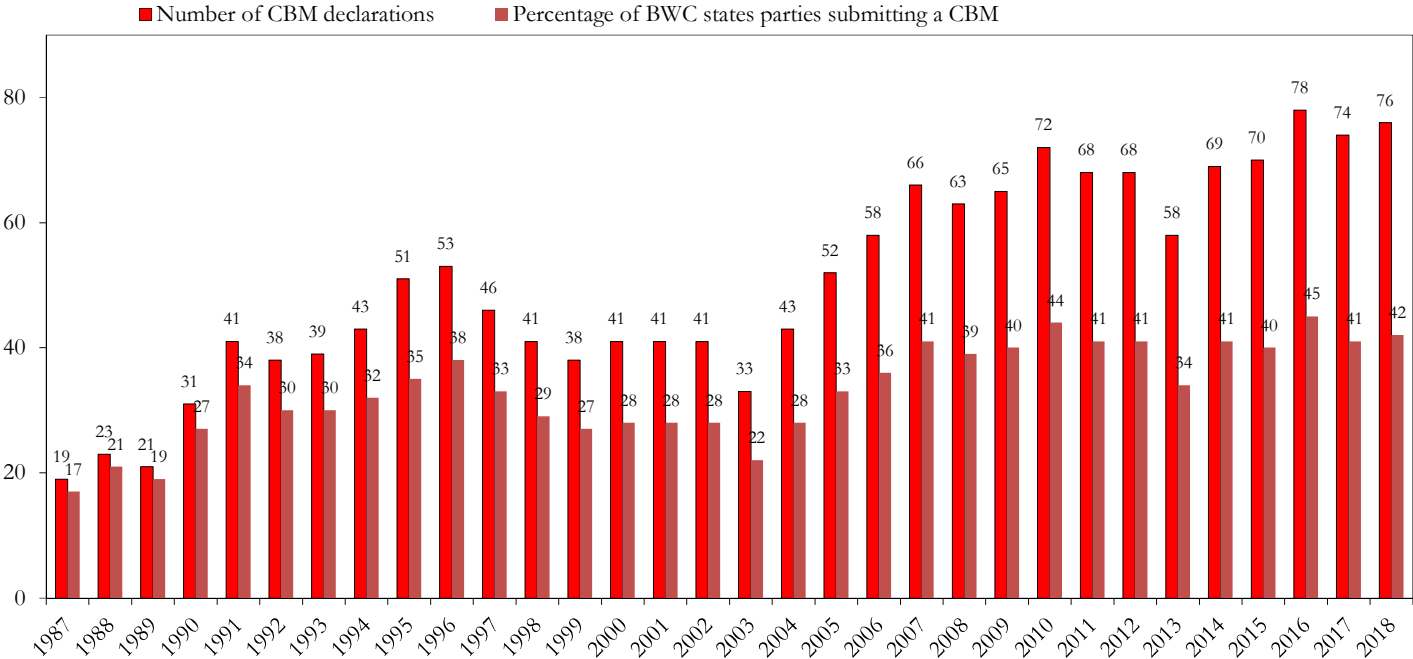
As on 16 November 2018, 76 BWC states parties had submitted their CBM (or expressed their intention to do so before the MSP), which marks the second highest number ever. Therewith the long-time phenomenon that participation is relatively high in years with Review Conferences, but drops down significantly in the following year, does only appear in a moderated form. The overall participation in the CBMs mechanism improved slightly over time. Since the beginning of the data exchange in 1987, the annual level of participation was never higher than 45 per cent of the BWC states parties, in 2018 76 of the member states have submitted a CBM. In total, 116 countries submitted a CBM at least once. This means that 66 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 25 countries have submitted a CBM only once or twice since 1987.

**First-time submissions in 2018:** none.

**CBM submissions in 2018** (States in bold made their CBM available to the public.):

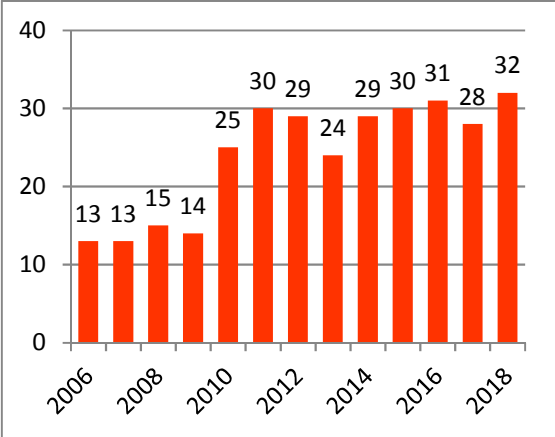
- |                     |                           |                       |                             |                          |
|---------------------|---------------------------|-----------------------|-----------------------------|--------------------------|
| 1. Albania          | 17. <b>Croatia</b>        | 31. India             | 47. Montenegro              | 62. Saudi Arabia         |
| 2. Algeria          | 18. Cuba                  | 32. Iraq              | 48. Morocco                 | 63. <b>Serbia</b>        |
| 3. Argentina        | 19. Cyprus                | 33. <b>Ireland</b>    | 49. <b>Myanmar</b>          | 64. Singapore            |
| 4. Armenia          | 20. <b>Czech Republic</b> | 34. Italy             | 50. <b>Netherlands</b>      | 65. <b>Slovakia</b>      |
| 5. <b>Australia</b> | 21. <b>Denmark</b>        | 35. <b>Japan</b>      | 51. <b>Norway</b>           | 66. <b>Slovenia</b>      |
| 6. <b>Austria</b>   | 22. Dominican Republic    | 36. Jordan            | 52. Oman                    | 67. South Africa         |
| 7. Azerbaijan       | 23. Ecuador               | 37. Kazakhstan        | 53. Peru                    | 68. Spain                |
| 8. Belarus          | 24. <b>Estonia</b>        | 38. <b>Latvia</b>     | 54. Philippines             | 69. <b>Sweden</b>        |
| 9. <b>Belgium</b>   | 25. <b>Finland</b>        | 39. Lebanon           | 55. Poland                  | 70. <b>Switzerland</b>   |
| 10. Bhutan          | 26. France                | 40. Liechtenstein     | 56. <b>Portugal</b>         | 71. <b>Turkey</b>        |
| 11. Brazil          | 27. Georgia               | 41. <b>Lithuania</b>  | 57. Qatar                   | 72. <b>Ukraine</b>       |
| 12. <b>Bulgaria</b> | 28. <b>Germany</b>        | 42. <b>Luxembourg</b> | 58. Rep. Korea              | 73. United Arab Emirates |
| 13. <b>Canada</b>   | 29. Greece                | 43. Malaysia          | 59. <b>Republic Moldova</b> | 74. <b>UK</b>            |
| 14. Chile           | 30. Hungary               | 44. Malta             | 60. <b>Romania</b>          | 75. <b>USA</b>           |
| 15. China           |                           | 45. Mauritius         | 61. Russia                  | 76. Uzbekistan           |
| 16. Colombia        |                           | 46. <b>Mexico</b>     |                             |                          |

**Figure 1. CBM submissions per year between 1987 and 2018** (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 16 November 2018, 32 countries have made their 2018 CBM declarations publicly available, a noticeably increase compared to the previous year and moreover an all time high, recorded up to the present (the phenomenon of record participation in RevCon-years could be recognised in earlier years, too). All of the 32 publicly available CBMs can be found on the website of the Implementation Support Unit (ISU) ([www.unog.ch/bwc/cbms](http://www.unog.ch/bwc/cbms)): Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Japan, Latvia, Lithuania, Luxembourg, Mexico, Myanmar, Netherlands, Norway, Portugal, Republic Moldova, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Turkey, Ukraine, United Kingdom and the USA.

At least Belgium 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, 2006-2018**

Country	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Albania					x								
Australia	x	x	x	x	x	x	x	x	x	x	x	x	x
Austria				x	x	x	x	x		x	x	x	x
Bangladesh			x										
Belgium						x	x	x	x	x	x	x	x
Brazil					x								
Bulgaria		x	x		x	x	x	x	x	x	x	x	x
Canada						x	x	x	x	x	x	x	x
Croatia	x								x				x
Cyprus						x	x						
Czech Republic	x			x	x	x	x	x	x	x	x	x	x
Denmark		x	x		x	x	x		x	x	x	x	x
Ecuador						x							
Estonia					x	x		x			x	x	x
Finland	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
Greece						x	x	x					
Hungary									x	x			
Ireland	x	x	x	x	x	x				x	x	x	x
Japan							x	x	x	x	x	x	x
Latvia	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
Luxembourg									x	x	x	x	x
Madagascar							x						
Malaysia	x					x							
Mauritius											x		
Mexico										x	x	x	x
Myanmar											x		x
Netherlands								x	x	x	x	x	x
New Zealand	x	x	x		x	x	x	x	x	x	x	x	
Norway			x		x	x	x	x		x	x	x	x
Poland					x								
Portugal					x	x	x	x	x	x	x	x	x
Quatar							x	x					
Republic of Moldova							x	x	x	x	x		x
Romania			x	x	x	x	x	x	x	x	x	x	x
Senegal					x								
Serbia							x		x	x		x	x
Slovakia									x				x
Slovenia									x	x	x	x	x
-Sweden	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
Thailand					x	x	x						
Turkey						x	x		x	x	x	x	x
Ukraine						x	x			x	x	x	x
United Kingdom	x	x	x	x	x	x	x	x	x	x	x	x	x
USA					x	x	x	x	x	x	x	x	x
<b>Total</b>	<b>13</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>

As shown in Table 1 above 50 countries have made their CBM publicly available at least once since 2006. 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 2018 CBM declarations

A summary of the data declared in the 32 publicly available CBMs of 2018 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 2018, seven of which were partially or wholly funded by ministries of defence. 17 of the 32 countries making their 2018 CBM publicly available declared having a biodefence programme; they provided information on 64 biodefence facilities. And lastly, 23 unusual disease outbreaks and 68 vaccine production facilities were declared in the 32 publicly available CBMs of 2018.

**Table 2. Summary of data in publicly available CBM declarations, 2018**

<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 (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:</b>	“Nothing to declare” indicated in Form X.
<b>NN:</b>	“Nothing new to declare” indicated in Form X.

Country	Form A, part 1	Form A, part 2 (i)	Form A, part 2 (iii)	Form B (ii)	Form F (off/def)	Form G
Australia	4	yes	1	0	no/no	1
Austria	0	yes	1	ND	no/no	ND
Belgium	0	yes	3	ND	ND	1
Bulgaria	0	no	ND	ND	ND	NN
Canada	2	yes	2	5	yes/yes	14
Croatia	ND	no	ND	ND	ND	ND
Czech Republic	2	no	ND	ND	NN	NN
Denmark	0	yes	1	ND	no/yes	NN
Estonia	0	no	ND	ND	ND	ND
Finland	0	yes	1	ND	ND	ND
Germany	3	yes	5	2	NN	5
Ireland	0	no	ND	0	ND	NN
Japan	2	yes	2	ND	NN	NN
Latvia	0	yes	1	ND	NN	ND
Lithuania	0	no	ND	ND	no/no	NN
Luxembourg	0	no	ND	NN	no / no	ND
Mexico	0	no	ND	ND	ND	NN
Myanmar	ND	ND	ND	ND	ND	2
Netherlands	0	yes	1	0	no/yes	8
Norway	0	yes	3	ND	no/no	3
Portugal	0	yes	1	ND	no/yes	1
Republic Moldova	ND	ND	ND	ND	ND	ND
Romania	0	ND	ND	ND	ND	2
Serbia	ND	no	ND	ND	no/no	ND
Slovakia	ND	ND	ND	ND	ND	ND
Slovenia	0	no	ND	ND	ND	ND
Sweden	1	yes	2	ND	no/no	1
Switzerland	2	yes	12	0	no/yes	2
Turkey	0	yes	0	ND	no/no	7
Ukraine	0	no	ND	1	ND	9
United Kingdom	8	yes	1	2	yes/yes	3
USA	8	yes	27	13	NN	9

### **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 2018 (covering 2017) and compares them with the information in publicly available CBMs from 2007 to 2018. 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 ministries of defence (MoD). Grey cells indicate that there was no CBM submission or that it was not made publicly available (either on the ISU-website or by providing the Hamburg Research Group with the CBM) 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 and provided no further information. “-” indicates that no data were provided.

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
Australia	1. Australian Animal Health Laboratory (Geelong)	BL4	x	x	x	x	x	x	x	x	x	x	NN	no	NN	no
	2. National High Security Quarantine Laboratory (North Melbourne)	BL4	x	x	x	x	x	x	x	x	x	x	NN	no	NN	no
	3. Queensland Health and Forensic Scientific Services (Cooper Plains)	BL4	x	x	x	x	x	x	x	x	x	x	NN	no	NN	no
	4. Emerging Infectious Disease and Biohazard Response Unit (Westmead)	BL4	-	x	x	x	x	x	x	x	x	x	NN	no	NN	no
Austria	1. Federal Ministry of Defence and Sport / Armament and Defence Technology Agency Div NBC & Environmental Protection Technology (Vienna)	BL3			x	x	x	x	x	x	x	x	x	partly	x	wholly
Belgium	1. Federaal orientatielab (FOL)	BL3					ND	ND	ND	ND	x	x	x	wholly	ND	partly
Bulgaria	1. National Center of Infectious and Parasitic Diseases (Sofia)	BL3	x	x	x	x	x	x	x	x	x	x	x	no	NN	-
	2. Department of Microbiology and Centre for Virology Military Medical Academy (Sofia)	BL3	-	-	-	-	-	-	-	-	-	x	x	wholly	NN	-
	3. National Diagnostic and Research Veterinary Medical Institute (Sofia)	BL3	-	-	-	x	x	-	-	-	-	x	x	no	NN	-
Canada	1. National Microbiology Laboratory (Winnipeg)	BL4					x	x	x	-	x	x	x	no	NN	no
	2. National Centre for Foreign Animal Disease (Winnipeg)	BL4					x	x	x	-	x	x	x	no	NN	no
Croatia	<i>Nothing to declare</i>	-								ND						
Cyprus	<i>Nothing to declare</i>	-					ND	n.a.								
Czech	1. State Veterinary Institute (Jihlava)	BL3			-	x	x	-	NN	-	NN	NN	NN	-	NN	-

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
<b>Republic</b>	2. State Veterinary Institute (Lysolaje)	BL3			-	-	x	-	NN	-	NN	NN	NN	-	NN	-
	3. Tekro, spol.s.r.o. (Uničov)	BL3			-	x	x	-	NN	-	NN	NN	NN	-	NN	-
	4. Collection of Animal Pathogenic Microorganisms (Brno)	BL3			x	-	-	-	NN	-	NN	NN	NN	-	NN	-
	5. Institute of Molecular Pathology (Hradec Králové)	BL3			x	-	x	-	NN	-	NN	NN	NN	-	NN	-
	6. Central Military Health Institute, Department Těchonín (Těchonín)	BL4			x	-	x	x	NN	x	NN	NN	NN	-	NN	-
	7. Central Military Health Institute, Department Prague (Prague)	BL2			-	-	x	-	NN	-	NN	NN	NN	-	NN	-
	8. Laboratory for Biological Monitoring and Protection (Milín)	BL4			x	-	x	x	NN	x	NN	NN	NN	-	NN	-
	9. Laboratory of Molecular Biology (Hradec Králové)	BL2			x	-	-	-	NN	-	NN	NN	NN	-	NN	-
	10. Division of Infectious Diseases, Department of Infectious Diseases and Epizootology, Faculty of Veterinary Medicine (Brno)	BL3			x	-	x	-	NN	-	NN	NN	NN	-	NN	-
	11. National Institute of Public Health; Centre of Epidemiology and Microbiology (Šrobárova)	BL3			-	-	x	-	NN	-	NN	NN	NN	-	NN	-
	12. Bioveta, a.s. (Ivanovice na Haně)	BL3			-	-	x	-	NN	-	NN	NN	NN	-	NN	-
	<b>Denmark</b>	1. Centre for Biosecurity and Biopreparedness (Copenhagen)	BL2	x	x		x	-	ND		x	ND	ND	ND	-	NN
2. Anonymous larger university in Denmark ( <i>no location provided</i> )		BL3	-	-		-	x	ND		-	ND	ND	ND	-	NN	no
3. TB Vaccine Research (Copenhagen)		BL3	-	-		-	x	ND		-	ND	ND	ND	-	NN	no
4. QC Bio (Copenhagen)		BL3	-	-		-	x	ND		-	ND	ND	ND	-	NN	no
5. International Reference Laboratory of Mycobacteriology (Copenhagen)		BL3	-	-		-	x	ND		-	ND	ND	ND	-	NN	no
<b>Ecuador</b>	<i>Nothing to declare</i>	n.a.					ND									
<b>Estonia</b>	1. Joint Laboratories of Tartu University Clinics (Tartu)	BL3				ND	ND					x		-	x	-
	2. Microbiology Laboratory of North-Estonia Regional Hospital	BL3										x		-	x	-
	3. Veterinary & Food Laboratory	BL3										x		-	x	-
	4. Mycobacteriosis Laboratory of University of Life Sciences	BL3										x		-	x	-
<b>Finland</b>	1. Centre for Biothreat Preparedness (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	partly	x	partly

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
	2. National Institute for Health and Welfare, Bacteriological and Virological Lab (Helsinki, Turku)	BL3	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	3. Yersinia Research Laboratory (Helsinki, Turku)	BL2	x	x	x	x	x	x	x	x	x	x	-	partly	x	partly
	4. Department of Virology, University of Helsinki (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	5. Institute of Biotechnology (Helsinki)	BL3	-	-	-	-	-	-	x	-	-	-	-	n.a.	x	-
	6. Finnish Food Safety Authority (Helsinki)	BL3	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	7. Finnish Defence Research Agency (FDRA) (Lakiala)	BL3	x	x	x	x	x	x	x	x	x	x	x	wholly	x	wholly
	8. Department of Food and Environmental Sciences (Helsinki)	BL3	-	-	-	-	-	-	-	x	x	x	x	no	x	-
	9. Clostridium botulinum laboratory (Helsinki)	BL2	-	-	-	-	-	-	-	x	x	x	x	no	x	no
	<b>Georgia</b>	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									
<b>Germany</b>	1. Bernhard-Nocht-Institut für Tropenmedizin (Hamburg)	BL4	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	2. Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health (Insel Riems)	BL4 <sup>1</sup>	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	3. Institut für Virologie der Philipps Universität Marburg (Marburg)	BL4	x	x	x	x	x	x	x	x	x	x	x	no	x	no
<b>Greece</b>	1. University of Crete School of Medicine(Heraklion)	BL3					x	NN	NN							
	2. Kapodistrian University of Athens School of Medicine (Athens)	BL3					x	NN	NN							
	3. Aristotelian University of Thessaloniki (Thessaloniki)	BL3					x	NN	NN							
	4. Infectious Diseases Hospital(Thessaloniki)	BL3					x	NN	NN							
	5. Hellenic Pasteur Institute(Athens)	BL3					x	NN	NN							
	6. Athens School of Public Health (Athens)	BL3					x	NN	NN							
<b>Hungary</b>	1. National Center for Epidemiology (Budapest)	BL4								x	x					
<b>Ireland</b>	1. National Virus Reference Laboratory, University College Dublin (Dublin)	BL3+	x	x	x	x	x				x	x	x	no	x	-

<sup>1</sup>Maximum containment facility not suitable for work with human pathogens.

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
	2. Public Health Laboratory (Dublin)	BL3	x	x	x	x	x				x	x	x	no	x	-
Japan	1. Murayama Annex of National Institute of Infectious Diseases (Tokyo)	BL4						x	x	x	x	x	x	no	NN	no
	2. Riken Tsukuba Institute (Ibaraki)	BL4						-	x	x	x	x	x	no	NN	no
Latvia	1. National Microbiology Reference Laboratory (Riga)	BL3					x	x	x	x	x	x	x	no	x	no
	2. Centre for Disease Prevention and Control of Latvia (Riga)	-					-	x	-	-	-	-	-	-	x	-
Liechtenstein	<i>Nothing new to declare</i>	-	NN	NN	NN	NN	NN		NN	NN				-	-	-
Lithuania	1. Microbiological laboratory of Vilnius Public Health Centre (Vilnius)	BL3	x	x	x	x	-	-	-	-	-	-	-	-	NN	-
	2. Laboratory of Centre for Communicable Diseases (Vilnius)	BL2	x	x	x	x	-	-	-	-	-	-	-	-	NN	-
	3. National Food and Veterinary Risk Assessment Institute (Vilnius)	BL3	x	x	x	x	x	x	x	x	x	x	x	no	NN	no
	4. National Public Health Surveillance Laboratory (Vilnius)	BL3	-	-	-	-	x	x	x	x	x	x	x	no	NN	no
Luxembourg	1. Laboratoire national de santé (Dudelange)	n.a.								x	x	x	x	no	NN	no
Madagascar	-	-						-								
Malaysia	1. Biotechnology Research Institute, Universiti Malaysia Sabah (Kota Kinabalu)	BL3					x									
	2. Medical Laboratories for Medical Microbiology, Parasitology and Virology, University of Putra Malaysia (Serdang)	BL2					x									
	3. Institute of Systems Biology, Universiti Kebangsaan (Bangi)	BL2					x									
	4. Veterinary Research Institute (Ipoh)	BL3					x									
	5. Science and Technology Research Institute for Defence (Kajang)	"normal"					-									
Mauritius	-	-												-		
Mexico	1. Universidad de Monterrey (Nuevo León)	BL3									x	x	NN	no	NN	no
	2. Instituto Nacional de Ciencias Médicas y Nutrición "Salvador Zubirán" (Tlalpan)	BL3									x	-	NN	no	NN	no
	3. Centro de Investigación en Tecnología y Diseño del Estado de Jalisco A.C. (Jalisco)	BL3									x	x	NN	no	NN	no

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
	4. Laboratorios de Diagnostico del Departamento de Medicina Zootecnia de Cerdos (Coyoacán)	BL3									x	x	NN	no	NN	no
	5. Unidad de Investigación del Instituto Nacional de Enfermedades Respiratorias (Tlalpan)	BL3									x	x	NN	no	NN	no
	6. Dirección General de Epidemiología, Instituto de Diagnóstico y Referencia Epidemiológicos (Álvaro Obregón)	BL3									x	x	NN	no	NN	no
	7. Comisión México - Estados Unidos para la prevención de la Fiebre Aftosa y otras enfermedades exóticas de los animales (Cuajimalpa)	BL3									x	x	NN	no	NN	no
	8. Laboratorio Estatal de Salud Pública del Estado de Sonora (Sonora)	BL3									x	x	NN	no	NN	no
	9. Instituto de Investigaciones Biomédicas de la Universidad Nacional Autónoma de México (Coyoacán)	BL3									x	x	NN	no	NN	no
	10. Laboratorio Estatal de Salud Pública de Veracruz (Veracruz)	BL3									x	x	NN	no	NN	no
	11. Laboratorio Nacional de Máxima Seguridad Biológica para el Estudio de la Tuberculosis y Enfermedades Emergentes (Tlalpan)	BL3									-	x	NN	-	NN	-
	12. Centro Nacional de Servicios de Diagnóstico en Salud Animal (Pachuca de Soto)	BL3									x	x	NN	no	NN	no
<b>Moldova</b>	1. National Center for Public Health (Chisinau)	BL3						x	NN	NN	x	NN			NN	-
	2. Republican Center for Veterinary Diagnostics (Chisinau)	BL2						x	NN	NN	x	NN			NN	-
<b>Myanmar</b>	-	-										ND			ND	-
<b>Netherlands</b>	1. TNO Department of CBRN Protection	BL3							x	-	-	x	x	partly	x	mostly
	2. National Institute for Public Health and the Environment (Bilthoven)	BL3							x	x	x	x	x	no	x	no
<b>New Zealand</b>	National Centre for Biosecurity and Infectious Disease (Upper Hutt)	BL3+	x	x		x	x	x	-	ND	ND	ND	x	no		

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?	
Norway	Institute of Microbiology, Armed Forces Medical Services (Oslo)	BL3		x		x	x	x	x		x	x	NN	wholly	ND	mostly	
Portugal	1. Laboratório de Bromatologia e Defesa Biológica (Lisbon)	BL3				x	x	x	-	-	-	x	x	partly	NN	partly/ mostly	
	2. Unidade de reposta a Emergências e Biopreparação (Lisbon)	BL3				x	x	-	-	-	-	-	-	-	-	-	
	3. Instituto Nacional de Saude Doutor Ricardo Jorge (Lisbon)	BL3				-	-	x	x	x	x	x	x	no	NN	no	
	5. Unidade de reposta a Emergências e Biopreparação (Braga)	BL3				-	-	-	x	-	-	-	-	-	-	-	
	6. Instituto Nacional de Investigação Agrária e Veterinária (Lisbon)	BL3				-	-	x	x	x	x	x	x	no	NN	no	
	7. Life and Health Sciences Research Institute (Braga)	BL3				-	-	-	-	x	x	x	-	no	-	-	
	8. Instituto de Tecnologia Química e Biológica (Lisbon)	BL3				-	-	-	-	x	x	x	x	no	NN	no	
	9. Departamento de Farmácia Galénica e Tecnologia Farmacêutica (Lisbon)	BL3				-	-	-	-	-	-	-	-	x	no	NN	no
	10. Departamento de Microbiologia e Imunologia (DMI) (Lisbon)	BL3				-	-	-	-	-	x	x	x	no	NN	no	
	Qatar	<i>Nothing new to declare</i>	-						ND								
Romania	1. Laboratory of Microbiology and Epidemiology, Military Medical Research Center (Bucharest)	BL2 <sup>2</sup>		NN	x	NN	x	x	x	-	-	x	x	wholly	x	wholly	
	2. Pasteur Institute (Bucharest)	BL2		NN	-	NN	-	-	-	x	x	x	x	no	x	no	
	3. Institute for Hygiene and Veterinary Public Health (Bucharest)	BL3		NN	-	NN	-	-	-	x	x	x	x	no	x	no	
	4. The National Institute of Research (NIR) "Cantacuzino" (Bucharest)	BL3 <sup>3</sup>		-	-	-	-	-	-	-	x	x	x	-	x	-	
	5. Institute for Diagnosis and Animal Health (Bucharest)	BL3		-	-	-	-	-	-	-	x	x	x	-	x	-	
	6. Institute for Control of Veterinary Biological Products and Medicines (Bucharest)	BL2		-	-	-	-	-	-	-	x	x	x	-	x	-	
Serbia	<i>Nothing to declare</i>	-						ND		ND	ND		ND	ND	ND	-	

<sup>2</sup> BSL 3 is under construction.

<sup>3</sup> BSL3 exists but not operational, BSL2 yes.

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?
<b>Slovakia</b>	<i>Nothing to declare</i>	-								ND						
<b>Slovenia</b>	N.A. <sup>4</sup>	-								ND	NN	NN	x	-	NN	-
<b>Sweden</b>	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	no	x	no
	3. National Veterinary Institute (Uppsala)	BL3	x	x	x	x	x	-	-	-	-	-	-	-	x	-
<b>Switzerland</b>	1. Labor Spiez (Spiez)	BL3	NN	NN	NN	x	x	x	x	x	x	x	x	partly	x	partly
	2. Institute of Virology and Immunology (Mittelhäusern)	BL3	NN	NN	NN	x	x	x	x	x	x	x	x	no	x	no
	3. National Reference Center for Emerging Viral Infections (Geneva)	BL4	NN	NN	NN	x	x	x	x	x	x	x	x	no	x	no
	4. Institute of Medical Virology (Zürich)	BL4	NN	NN	NN	-	-	-	-	x	x	x	x	no	x	no
<b>Thailand</b>	<i>Nothing new to declare</i>	-				NN	NN	NN								
<b>Turkey</b>	1. Ankara University Biotechnology Institute (Ankara)	BL2					x	x		-	NN	NN	NN	-	NN	-
	2. Refik Saydam National Public Health Agency (Ankara)	BL3					x	-		-	NN	NN	NN	-	NN	-
	3. Bornova Veterinary Control and Research Institute (Ankara)	BL3					x	-		-	NN	NN	NN	-	NN	-
	4. Diagnosis of Poultry Disease Laboratory (Ankara)	BL3					x	-		-	NN	NN	NN	-	NN	-
	5. Biosafety Level-3 Laboratory Institute	BL3					-	x		-	NN	NN	NN	-	NN	-
<b>Ukraine</b>	1. Governmental Scientific Oversight Institute for Biotechnology and Microorganism Culture Collection (Kiev)	<sup>5</sup>					x	x			x	-	-	-	x	no
	2. Mechnikov Institute for Microbiology and Immunology (Charkov)	<sup>6</sup>					x	x			x	x	x	-	x	no
	3. Gromashevsky Institute for Epidemiology and Infectious Diseases (Kiev)	BL <sup>7</sup>					x	x			x	-	x	-	x	no

<sup>4</sup> Slovenia declared in 2017 that it has one BSL3 laboratory but does not provide further Information.

<sup>5</sup>Ukraine declared four units with an overall floorspace of 780 sqm, without indicating the containment level.

<sup>6</sup>BL4 does not exist; highest level of containment is not indicated (until 2011); BL3 and BL4 do not exist (2012).

<sup>7</sup>BL4 does not exist; highest level of containment is not indicated.

Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?	
	4. Mechnikov Scientific Research Anti-Plague Institute (Odessa)	BL3					x	x			x	-	x	-	x	no	
	5. Central Sanitary Epidemiological Station (Kiev)	BL3					x	x			-	-	-	-	-	-	
	6. Lviv Scientific Research Institute for Epidemiology and Hygiene (Lvov)	BL3 <sup>8</sup>					x	x			x	x	x	-	x	no	
	7. Anti-Plague Station (Simferopol)	BL3					x	x			-	-	-	-	-	-	
	8. Institute for Experimental and Clinical Veterinary Medicine (Charkov)	BL2					-	x			x	x	x	no	x	no	
	9. Institute for Veterinary Medicine (Kiev)	- <sup>9</sup>					-	x			-	x	-	-	x	no	
	10. Ukrainian Centre for Disease Control and Monitoring of the Ministry of Health of Ukraine (Kiev)	BL3					-	-			x	x	x	no	x	no	
	11. State Scientific Control institute of biotechnology and strains of microorganisms (Donetsk)	BL2					-	-			x	x	x	-	-	-	
<b>United Kingdom</b>	1. Defence Science and Technology Laboratory (Porton Down, Salisbury)	BL4	x	x	x	x	x	x	x	x	x	x	x	wholly	x	mostly	
	2. Public Health England (Colindale, London)	BL4	x	x	x	x	x	x	x	x	x	x	x	no	x	no	
	3. Public Health England (Porton)	BL4	x	x	x	x	x	x	-	x	x	x	x	no	x	no	
	4. National Institute for Biological Standards and Control (Potters Bar)	BL4	x	x	x	x	x	x	x	x	x	x	x	no	x	no	
	5. The Francis Crick Institute Containment 4 Building C (London)	BL4	x	x	x	x	x	x	x	x	x	x	x	no	x	no	
	6. The Pirbright Institute (Pirbright)	SAPO4 <sub>10</sub>	-	-	-	-	-	-	-	x	x	x	x	x	no	x	no
	7. Animal and Plant Health Agency (Addlestone)	SAPO4	x	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	8. Institute for Animal Health, Pirbright Laboratory (Woking)	SAPO4	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-
	9. Merial Animal Health (Pirbright)	SAPO4	-	x	x	x	x	x	x	x	x	x	x	x	no	x	no
	10. Schering-Plough Animal Health (Uxbridge)	SAPO4	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-

<sup>8</sup>Until 2011, Ukraine declared three units with an overall floorspace of 1,273 sqm, without indicating the containment level.

<sup>9</sup>Ukraine declared four units with an overall floorspace of 780 sqm, without indicating the containment level.

<sup>10</sup>Specified Animal Pathogens Order.



Country	Name and location of facilities declared in CBM Form A, part 1	Cont. level	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	MoD funded in 2017?	Decl. 2018	MoD funded in 2018?	
USA	1. Viral Immunology Center, Georgia State University (Atlanta, GA)	BL4				x	x	x	x	x	x	x	x	no	x	no	
	2. The Betty Slick and Lewis J. Moorman, Jr. Laboratory Complex (San Antonio, TX)	BL4				x	x	x	x	x	x	x	x	partly	x	partly	
	3. Galveston National Laboratory (Galveston, TX)	BL4				x	x	x	x	x	x	x	x	partly	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	partly	x	partly	
	6. National Biodefense Analysis and Countermeasures Center (Fort Detrick, MD)	BL4				-	-	x	x	x	x	x	x	partly	x	partly	
	7. Integrated Research Facility at Rocky Mountain Laboratories (Hamilton, MT)	BL4				-	-	x	x	x	x	x	x	no	x	no	
	8. Coordinating Center for Infectious Diseases (Atlanta, GA)	BL4				x	-	-	-	-	-	-	-	-	-	-	x
	9. CDC, Office of Infectious Diseases (Atlanta, GA)	BL4				-	-	x	x	x	x	x	x	x	partly	x	partly
	10. Integrated Research Facility at Fort Detrick - NIAID (Fort Detrick, MD)	BL4				-	-	-	-	-	x	x	x	no	x	no	

The following table summarizes the data declared in **CBM Form A, part 2 (ii) and (iii)** of the publicly available CBM submissions from 2017 and compares them with the information in publicly available CBMs from 2007 to 2016. 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	Total funding in million EUR <sup>11</sup>												Name and location of biodefence facilities declared in CBM Form A, Part 2 (iii)												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018	
Australia	1.5	1.6	1.9	1.7	1.7	2.0	2.0	2.0	1.7	1.7	2.1	3.0	x	x	x	x	x	x	x	x	x	x	x	x	x
Austria			0.01	0.03	0.05	0.03	0.02	0.09	0.09	0.09	0.02	0.086			x	x	x	x	x	x	x	x	x	x	x
Belgium																									
																	x	x	x	x	x	x	x	x	x
					0.6	1.0	0.3	0.3	0.4	0.2	0.3	0.26					-	-	-	-	-	x	x	x	x
																	x	x	x	x	x	x	x	x	x
																	x	-	-	-	-	-	-	-	-

<sup>11</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, was selected as the date for the currency conversion.



														protection (Milin)													
<b>Denmark</b>	1.9	2.0		2.9	2.8	2.7		2.6	2.7	2.7	2.7	2.7	2.7	Centre for Biosecurity and Biopreparedness (Copenhagen)	x	x		x	x	x		x	x	x	NN	x	
<b>Ecuador</b>					ND									<i>Nothing to declare</i>						ND							
<b>Estonia</b>				ND	ND						ND		ND	<i>Nothing to declare</i>					ND	ND		n.a.			ND		ND
<b>Finland</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	Centre for Biothreat Preparedness (Helsinki)	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Georgia</b>			0.3	1.7	1.6									1. National Center for Disease Control and Public Health (Tbilisi)				x	x	x							
														2. Laboratory of Ministry of Agriculture of Georgia (Tbilisi)				-	x	x							
<b>Germany</b>														1. CBRN Defence, Safety and Environmental Protection School (Sonthofen)	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	
	11.7	11.2	8.4	9.9	9.5	9.1	9.1	9.2	9.1	8.9	17.4	17.3		3. Bundeswehr Research Institute for Protective Technologies and NBC-Protection (Munster)	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	
														5. Centre for Biological Threats and Special Pathogens at the Robert Koch	-	-	-	-	-	-	-	-	x	x	x	x	x











USA					451.6	475	779	743	670	812.4	730.4	668.8	822	1. Plum Island Animal Disease Center (Greenport, NY)				x	x	x	x	x	x	x	x	x	
														2. Tyndall AFB, Research Road (Tyndall, FL)				x	x	x	x	-	-	-	-	-	
														3. Tyndall AFB, Barnes Drive (Tyndall, FL)				x	x	x	x	-	-	-	-	-	
														4. Lothar Salomon Life Sciences Test Facility (Dugway, UT)				x	x	x	-	-	-	x	x	x	
														5. U.S. Army Edgewood Chemical and Biological Center (Aberdeen, MD)				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
														7. U.S. Army Medical Research Institute of Infectious Diseases (Fort Detrick, MD)				x	x	x	x	x	x	x	x	x	x
														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 (Dahlgren, VA)				x	x	x	-	x	x	x	x	x	x
														11. Naval Research				x	x	x	x	x	x	x	x	x	x







The following table summarizes the data declared in **CBM Form G** of the publicly available CBM submissions from 2018 and compares them with the information in publicly available CBMs from 2007 to 2017. 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. 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	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018
Australia	1. bioCSL Limited (Parkville and Broadmeadows,)	no	yes	x	x	x	x	x	x	x	x	NN	x	NN	-
	2. Q Fever Manufacturing Facility (Broadmeadows)	no	yes	-	-	x	x	x	-	-	NN	NN	-	NN	-
	3. Ludwig Institute for Cancer Research (Heidelberg, VIC)	no	yes	-	-	x	x	x	x	x	NN	NN	-	NN	-
	4. Queensland Institute of Medical Research (Queensland)	no	no	-	-	-	-	-	x	x	NN	NN	-	NN	-
	5. Seqirus (Australia) Pty Ltd														x
Austria	<i>Nothing to declare</i>	n.a.	n.a.			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Belgium	1. GlaxoSmithKline Biologicals S.A (Rixensart)	_ <sup>17</sup>	_ <sup>16</sup>					x	x	x	x	x	x	x	x
	2. Pfizer Animal Health (Louvain-la-Neuve)	_ <sup>16</sup>	_ <sup>16</sup>					x	-	-	-	-	-	-	-
Bulgaria	1. BulBio- NCIPD Ltd (Sofia)	n.a.	n.a.	x	x		x	x	x	x	x	x	ND	x	NN
	2. National Diagnostic and Research Veterinary Medical Institute (Sofia)	n.a.	n.a.	-	-		x	-	-	-	-	-	ND	-	NN
Canada	1. Artemis Technologies Inc. (Guelph)	no	yes					x	x	x	x	x	x	x	x
	2. Bioniche Life Sciences Inc. (Belleville)	no	yes					x	x	x	x	-	-	-	-
	3. Gallant Custom Laboratories Inc. (Cambridge)	no	yes					x	x	x	x	x	x	x	x
	4. Pfizer Animal Health (Saanichton)	no	yes					x	x	x	-	-	-	-	-
	5. Elanco Canada Limited (Ontario)	no	yes					x	x	x	x	x	x	x	-
	6. Elanco Canada Limited - Aqua Health (Charlottetown and Victoria)	no	yes					x	x	x	x	x	x	x	x
	7. Nutratech Inc. (Winnipeg)	no	yes					x	x	x	x	x	x	x	x
	8. Saskatchewan Research Council (Saskatoon)	no	yes					x	x	x	-	-	-	-	-
	9. Saskatoon Colostrum Co. Ltd. (Saskatoon)	no	yes					x	x	x	x	x	x	x	x
	10. Vetcovac Ltée. (Saint-Hyacinthe)	no	yes					x	x	x	-	-	-	-	-
	11. Ceva Animal Health Inc. (Ontario)	no	yes					x	x	-	x	x	x	x	x

<sup>16</sup>As designated by the Centers for Disease Control and Prevention (CDC) in the USA.

<sup>17</sup>This information is not provided in the public version of the CBM.

Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018	
	12. Biovet Inc. (Saint-Hyacinthe)	no	yes					x	x	x	x	x	x	x	x	
	13. Intervet Canada Corp. (Kirkland)	no	yes					x	x	-	-	-	-	-	-	
	14. Vétoquinol N.A. Inc. (Lavaltrie)	no	yes					x	x	-	-	-	-	-	-	
	15. Vacci-Vet Inc. (Québec)	n.a.	yes					-	-	-	x	x	x	x	x	
	16. ID Biomedical Corporation of Quebec (GlaxoSmithKline Inc.) (Quebec City)	n.a.	yes					-	-	x	x	x	x	x	x	
	17. Medicago (Québec)	n.a.	yes					-	-	-	-	x	x	x	x	
	18. Immunovaccine (Halifax)	Anthrax	yes					-	-	-	-	x	x	x	x	
	20. Sanofi Pasteur Limited (Toronto)	n.a.	yes					-	-	x	x	x	x	x	x	
	21. InventVac															x
	22. Prevtect Microbia Inc.															x
<b>Croatia</b>	1. Institute of Immunology	no.	Yes								x	x				
<b>Cyprus</b>	<i>Nothing to declare</i>	n.a.	n.a.					ND	ND							
<b>Czech Republic</b>	1. Baxter BioScience s.r.o (Kostolec nad Černými Lesy)	no	yes			NN	ND	x	NN	NN	NN	NN	-	NN	NN	
	2. SEVAPHARMA a.s. (Prague)	no	yes			NN	ND	x	NN	NN	NN	NN	x	NN	NN	
	3. Bioveta a.s. (Ivanovice nad Hané)	Anthrax	yes			NN	ND	x	NN	NN	NN	NN	x	NN	NN	
	4. Dyntec s.r.o. (Terezín)	no	yes			NN	ND	x	NN	NN	NN	NN	x	NN	NN	
	5. BIOPHARM, Research Institute of Biopharmacy and Veterinary Drugs (Jiluvé u Prahy)	no	yes			NN	ND	x	NN	NN	NN	NN	x	NN	NN	
<b>Denmark</b>	1. Statens Serum Institute (Copenhagen)	no	yes	x	x		NN	x	x		x	x	x	-	NN	
	2. Bavarian Nordic A/S (Kvistgard)	Smallpox	yes	x	x		NN	x	x		x	x	x	x	NN	
	3. AJ Vaccines (Copenhagen)	no	yes	-	-		NN	-	-		-	-	-	x	NN	
<b>Ecuador</b>	<i>Nothing to declare</i>	n.a.	n.a.					ND								
<b>Estonia</b>	<i>Nothing to declare</i>	n.a.	n.a.					ND	ND		n.a.			ND		
<b>Finland</b>	<i>Nothing to declare</i>	n.a.	n.a.	NN	NN	NN	NN	ND	ND	ND	ND	ND	ND	ND	ND	
<b>Georgia</b>	<i>Nothing to declare</i>	n.a.	n.a.			ND	ND	ND								
<b>Germany</b>	1. Novartis Vaccines and Diagnostics GmbH & Co. KG (Marburg)	Botulism	yes	x	x	x	x	x	x	NN	x	x	-	-	-	
	2. GlaxoSmithKline Biologicals (Marburg)	Botulism	yes	-	-	-	-	-	-	-	-	-	x	x	x	
	3. GlaxoSmithKline (Branch of SB Pharma GmbH & Co KG) (Dresden)	no	yes	x	x	x	x	x	x	NN	x	x	x	x	x	

Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018
	4. IDT Biologika GmbH (Rosslau)	Smallpox	yes	x	x	x	x	x	x	NN	x	x	x	x	x
	5. Rhein Biotech GmbH (Düsseldorf)	no	yes	-	-	-	x	x	x	NN	x	x	-	x	
	6. Bavaria Nordic GmbH (Berlin)	Smallpox	no	-	-	-	x	x	x	NN	-	-	-	-	-
	7. Dynavax GmbH (Düsseldorf)	no	yes	-	-	-	-	-	-	-	-	-	x	-	x
	8. Vivalogics GmbH (Cuxhaven)	no	yes	-	-	-	-	-	x	NN	x	x	x	x	x
	9. Burgwedel Biotech GmbH	Ebola													
<b>Greece</b>	<i>Nothing to declare</i>	n.a.	n.a.						ND	ND	ND				
<b>Hungary</b>	1. Omninvest Ltd. (Budapest)	no	yes								x	x			
	2. GlaxoSmithKline Biological Kft. (Budapest)	no	yes								-	x			
<b>Ireland</b>	1. Elanco Laboratories (Sligo)	-	-	x	x	x	x	x				x	-	-	NN
	2. MSD International GmbH (Carlow)	-	-	-	-	-	-	-				x	x	x	NN
	3. MSD International GmbH (Brinny)	-	-	-	-	-	-	-				-	-	x	NN
	4. Schering Plough (Brinny)	-	-	-	-	-	-	-				x	x	-	NN
	5. Pfizer Ireland Pharmaceuticals (Dublin)	-	-	-	-	-	-	-				x	x	x	NN
<b>Japan</b>	1. Denka Seiken Co., Ltd (Tokyo)	no	yes						x	x	x	x	x	x	NN
	2. Kitasato Daiichi Sankyo Vaccine Co., Ltd (Saitama)	no	yes						x	x	x	x	x	x	NN
	3. Takeda Pharmaceutical co., Ltd (Osaka)	no	yes						x	x	x	x	x	x	NN
	4. The Research Foundation for Microbial Diseases of Osaka University (Osaka)	no	yes						x	x	x	x	x	x	NN
	5. Chemo-Sero-Therapeutic Research Institute (Kumamoto)	no	yes						x	x	x	x	x	x	NN
	6. Japan BCG Laboratory (Tokyo)	no	yes						x	x	x	x	x	x	NN
	7. Japan Poliomyelitis Research Institute (Tokyo)	no	yes						x	x	x	x	x	-	NN
<b>Latvia</b>	<i>Nothing to declare</i>	-	-					-	ND	ND	ND	ND	ND	ND	ND
<b>Liechtenstein</b>	<i>Nothing new to declare</i>	-	-	NN	NN	NN	NN	NN		NN	NN	NN			
<b>Lithuania</b>	<i>Nothing new to declare</i>	-	-	NN	NN	NN	NN	NN	NN	NN	NN	ND	ND	ND	NN
<b>Luxembourg</b>	<i>Nothing to declare</i>	-	-								ND	ND	ND	ND	ND
<b>Madagascar</b>	-	-	-						-						
<b>Mauritius</b>	-	-	-										ND		

Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018
Mexico	1. Centro de Investigación y Estudios Avanzados en Salud Animal, Universidad Autónoma del Estado de México (Toluca)	no	yes									x	-	-	NN
	2. Laboratorios de Biológicos y Reactivos de México S.A de C.V. (Colonia Popotla)	no	yes									x	x	x	NN
Malaysia	1. Institute of Veterinary Services (Putrajaya)	no	yes					x							x
Moldova	<i>Nothing to declare</i>	n.a.	n.a.					ND	ND	ND	ND	ND	ND		ND
Netherlands	1. Wageningen Bioveterinary Research (Lelystad)	no	yes							x	x	x	x	x	-
	2. Intervet / MSD Animal Health (Boxmeer)	no	yes							x	x	x	x	x	x
	3. Nederlands Vaccin Instituut (Bilthoven)	no	yes							x	-	-	-	-	-
	4. Abbott Biologicals B.V. WWP (Weesp)	no	yes							x	x	x	x	x	x
	5. Boehringer Ingelheim Animal Health Operation (Weesp)	n.a.	n.a.								x	x	x	x	x
	6. Janssen Vaccines & Prevention (Leiden)	no	yes								x	x	x	x	x
	7. Erasmus Medical Centre (Rotterdam)	no	yes								-	x	x	x	x
	8. Bilthoven Biologicals B.V. (Bilthoven)	no	yes								-	x	x	x	x
	9. Merial Lelystad (Lelystad)	no	yes								-	-	-	-	x
	10. SynCo Biopartners B.V. (Amsterdam)	no	yes								-	-	-	-	x
10. Patheon Biologics B.V. (Groningen)	no	yes								-	x	x	x	x	
New Zealand	<i>Nothing to declare</i>	n.a.	n.a.	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	
Norway	1. Pharmaq (Overhalla)	no	yes		x		x	x	x	x	x	NN	NN	NN	NN
	2. The National Veterinary Institute (Oslo)	no	yes		x		x	x	x	x	x	NN	NN	NN	NN
	3. Norwegian Institute of Public Health (Nydalén)	no	yes		x		x	x	x	x	x	NN	NN	NN	NN
Portugal	1. Genibet Biopharmaceuticals	no	yes				ND	ND	x	x	x	x	NN	ND	NN
Qatar	<i>Nothing to declare</i>	n.a.	n.a.						ND						
Romania	1. "Cantacuzino" National Institute of R&D for Microbiology and Immunology (Bucharest)	no	yes		-	-	x	NN	x	x	x	-	-	x	x
	2. National Society Pasteur Institute S.A. (Bucharest)	no	yes		x	x	-	NN	x	x	x	-	-	-	-
	3. S.C. Pasteur Filiala Filipeti S.R.L. (Prahova)	no	yes		-	-	-	-	-	x	x	-	x	x	-
	4. S.C. Romvac Company S.A. (Voluntari)	Anthrax	yes		-	-	-	-	-	-	x	x	x	x	-



Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018
	5. SC Pasteur – Filiala Filipesti Srl, working point Bucharest	no													x
<b>Serbia</b>	Institute of Immunology and Virology “Torlak” (Belgrad)	no	yes						x		x	x		x	ND
<b>Slovakia</b>	<i>Nothing to declare</i>	n.a.	n.a.								ND	ND			ND
<b>Slovenia</b>	<i>Nothing to declare</i>	n.a.	n.a.								ND	ND	ND	ND	ND
<b>Sweden</b>	1. SBL Vaccin AB (Solna)	no	yes	x	x	x	x	x	-	NN	-	-	-	-	NN
	2. UniTech Biopharma (Matfors)	no	yes	x	x	x	x	x	-	NN	-	-	-	-	NN
	3. Cobra Biopharma (Matfors)	no	yes	-	-	-	-	-	x	NN	-	-	-	-	NN
	4. Valneva Sweden AB (Stockholm)	no	yes	-	-	-	-	-	x	x	x	x	x	x	NN
<b>Switzerland</b>	1. Janssen Vaccines AG (Bern)	no	yes	NN	NN	NN	x	x	x	x	x	-	x	x	x
	2. Cytos Biotechnology AG (Schlieren)	no	no	NN	NN	NN	x	x	x	-	-	-	-	-	-
	3. Pevion Biotech Ltd. (Ittingen)	no	yes	NN	NN	NN	x	x	x	x	-	-	-	-	-
	4. PaxVax Berna GmbH (Thörishaus)	no	yes	-	-	-	-	-	-	-	-	x	x	x	x
<b>Thailand</b>	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						
<b>Turkey</b>	1. Konya Veterinary Control and Research Institute (Meram-Konya)	no	yes					x	NN		-	-	-	-	-
	2. Veterinary Control Institute (Pendik-Istanbul)	Brucellosis	yes					x	NN		-	-	x	x	x
	3. Veterinary Control Central Research Institute (Ankara)	Anthrax	yes					x	NN		x	x	-	x	x
	4. Veterinary Control Institute (Atakum)	no	yes					-	NN		x	x	-	-	-
	5. Veterinary Control Institute	no													x
	6. Foot and Mouth Disease Institute (Ankara)	no	yes					-	NN		x	x	x	x	x
	7. VETAL Animal Health Products Company (Adiyaman)	Brucellosis	yes					-	NN		x	x	-	x	x
	8. DOLLVET Veterinary Vaccine (Sanliurfa)	Brucellosis	yes					-	NN		x	x	-	x	x
	9. ATAFEN Veterinary Materials Production Company (Ismir)	Brucellosis	yes					-	NN		x	x	-	x	x
	10. AKUAKIM Medical, Chemical, Pharmaceutical, Feed Additives and Water Prducts Industry and Trade Company (Manisa)	no	yes					-	-		-	x	-	-	-

Country	Name and location of vaccine production facilities declared in CBM Form G	Cat. A diseases <sup>16</sup>	Other diseases	Decl. 2007	Decl. 2008	Decl. 2009	Decl. 2010	Decl. 2011	Decl. 2012	Decl. 2013	Decl. 2014	Decl. 2015	Decl. 2016	Decl. 2017	Decl. 2018
Ukraine	1. Biofabrika Sumy (Sumy)	Anthrax	yes					x	x			x	x	NN	NN
	2. Biofabrika Dnepropetrovsk (Dnepropetrovsk)	no	yes					x	x			-	-	NN	NN
	3. Biofabrika Kharkiv (Kharkov)	no	yes					x	x			x	x	NN	NN
	4. Biofabrika Kherson (Kherson)	Anthrax	yes					x	x			x	x	NN	NN
	5. Biofabrika Novogalechinsk (Kiev)	no	yes					x	x			x	-	NN	NN
	6. OOO "Ukrvetpromsnab" (Brovary)	no	yes					x	x			x	x	NN	NN
	7. Corporation "Ukrvetpromsnab" (Kiev)	no	yes					x	x			-	-	NN	NN
	8. Institute for Experimental and Clinical Veterinary Medicine (Kharkiv)	no	yes					x	x			x	-	NN	NN
	9. Institute for Veterinary Medicine of the National Academy of Science (Kiev)	no	yes					x	x			x	-	NN	NN
	10. PSJC "Pharmstandard-Biolek" (Kharkiv)	no	yes					x	-			x	x	NN	NN
	11. OOO "Farmex Group" (Kiev)	no	yes					-	-			-	x	NN	NN
	12. LLC Pharmalife GmbH (Lvov)	no	yes					x	-			-	x	NN	NN
	13. Laboratory of leptospirosis, bacterial diseases of animals and control of veterinary immunobiological agents (Kiev)	no	yes					-	-			-	-	NN	NN
	14. PSJC "Farmak" (Kiev)	no	yes					x	-			-	x	NN	NN
United Kingdom	1. Porton Biopharma Limited (Porton Down)	Anthrax	no	x	x	x	x	x	x	x	x	x	x	x	x
	2. MedImmune (Liverpool)	no	yes	x	x	x	x	x	x	x	x	x	x	x	x
	3. Seqirus Vaccines Limited (Liverpool)	no	yes	x	x	x	x	x	x	x	x	x	x	x	x
USA	1. Emergent BioDefense Operations Lansing Inc. (Lansing, MI)	Anthrax	no				x	x	x	x	x	x	x	x	x
	2. MassBiologics (Boston, MA)	no	yes				x	x	x	x	x	x	x	x	x
	3. Med Immune LLC (Gaithersburg, MD)	no	yes				x	x	x	x	x	x	-	-	-
	4. Merck Sharp & Dohme Corp (North Wales, PA)	no	yes				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
	6. Sanofi Pasteur Inc. (Swiftwater, PA)	no	yes				x	x	x	x	x	x	x	x	x
	7. Sanofi Pasteur Biologics Co. (Cambridge, MA)	Smallpox	no				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
	9. Barr Laboratories, Inc. (Forrest, VA)	no	yes				-	-	x	x	x	x	x	x	x
	10. Protein Sciences Corporation (Meriden, CT)	no	yes				-	-	-	x	x	x	x	x	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.

### **Contact**

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