

## **6. Other arrangements**

While the BWC lies at the heart of the international regime governing the prohibition of biological weapons, other arrangements complement and strengthen the norm against the hostile use of disease. These arrangements, which range from informal groupings to more formally-constituted groups of States, tend to entail collective agreement to take or renounce certain actions to prevent BW proliferation. These arrangements are initiated by groups of like-minded States, rather than by widespread international consensus among States, as multilateral treaties are.

### **Australia Group**

The Australia Group, which began work in 1984/85, seeks to harmonize supply-side controls on dual-use technology, including equipment, chemical agents and biological pathogens, applicable to chemical and biological warfare, by promoting common standards for the formation and implementation of national export-control policies. The Australia Group is one of the earliest plurilateral initiatives on non-proliferation, arising as a direct result of the discovery that the chemical weapons that Iraq used in its war with Iran had been manufactured using 'dual use' commodities and know-how imported from the global marketplace. During the 1980s, a number of countries implemented national export controls on certain chemical precursors, but these suffered from a lack of uniformity. Australia therefore proposed a meeting of countries with relevant export controls and the first meeting of what became the Australia Group took place in Brussels in June 1985. All subsequent plenary meetings until 2003 took place in the Australian Embassy in Paris, but from 2004 onwards meetings have taken place in the Kleber Centre in Paris (except the 20th anniversary meeting in 2005 which took place in Sydney).

Its membership and range of activities have expanded over the years, most notably in the early 1990s, when it expanded its scope to include biological export controls. Regarding BW proliferation, the Group now maintains lists of biological agents, plant pathogens and animal pathogens, in addition to a list of dual-use biological equipment. All four lists are included in this section of the Briefing Book. The Australia Group lists form the basis of the CBW-related sections of the European Union's dual-use goods regime, and they have been adopted as the basis for national export controls by many non-participating countries. The Australia Group now has 40 participating countries, plus the European Commission. All Australia Group participants are States Parties to both the BWC and CWC.

### **Group of Eight Nations**

The Group of Eight Nations (G8) comprises eight major industrialised nations (Canada, France, Germany, Italy, Japan, Russia, the UK and the US) whose leaders meet annual to discuss issues of mutual concern. At their 2003 summit meeting in Evian, France, the G8 leaders adopted a declaration on non-proliferation of weapons of mass destruction, in which they described the threat posed by the proliferation of WMD and their means of delivery, together with the spread of international terrorism, as "the pre-eminent threat to international security." At each summit meeting since Evian, except for 2010, the G8 leaders have included reference to the BWC in their summit communiqué:

Summit	Year	BWC reference
Heiligendamm (Germany)	2007	Determined to exclude completely the possibility of biological agents and toxins being used as weapons, we welcome the outcome of the Sixth Review Conference of the BTWC in 2006, which made a significant contribution to strengthening the effectiveness of the Convention. We are committed to fully comply with the decisions taken by that conference and to work for successful outcomes of the meetings during the intercessional period leading to the next Review Conference in 2011.
Tōyako (Japan)	2008	We are determined to make every effort to overcome the danger of the proliferation of weapons of mass destruction (WMD) and their delivery means and to prevent acquisition of WMD by terrorists, by upholding, strengthening and universalizing all relevant multilateral non-proliferation and disarmament instruments...We welcome the current progress of the Biological and Toxin Weapons Convention and the Chemical Weapons Convention (CWC)... and reiterate the vital importance of their full and effective implementation.
L'Aquila (Italy)	2009	All States must meet in full their arms control, disarmament, and non-proliferation commitments under relevant international treaties and multilateral arrangements. The universalization and reinforcement of the non-proliferation regime remains an urgent priority. We call upon all States still not party to the ... Biological and Toxin Weapons Convention (BTWC) to accede without delay....We welcome the ongoing progress under the CWC and BTWC and highlight the vital importance of the full and effective implementation of both Conventions.
Deauville (France)	2011	<p>...we emphasize that strengthening of the BTWC regime plays a principal role in diminishing the threat of proliferation and acquisition of dangerous biological agents, deliberate misuse of life sciences and biotechnologies for development of biological and toxin weapons. The 7th BTWC Review Conference to be held in December 2011 in Geneva provides an opportunity to reaffirm the authority and increased relevance of this vital instrument for our collective security in an ever changing context....</p> <p>Aware of the importance of the intersessional work of the Convention to achieve this objective, we are determined to engage in discussions with all States Parties on a new and substantive work programme addressing the central issues of the Convention, including looking at more effective ways to enhance assurance of compliance with the BTWC as well as the implications of relevant scientific and technological developments for all appropriate articles of the Convention ...</p> <p>...We will also support the strengthening of the current UNSG mechanism for investigating cases of alleged use of chemical and biological weapons in accordance with General Assembly Resolution 42/37.</p>

The G8 had launched the Global Partnership against the Spread of Weapons and Materials of Mass Destruction at its summit meeting in Kananaskis, Canada, in 2002 with an initial ten year mandate. The Global Partnership served to attract and provide a framework for international financing of the destruction of chemical weapons, the dismantlement of decommissioned nuclear submarines, the disposition of fissile materials and the employment of former weapons scientists, initially in Russia (Ukraine has now also been accepted as a recipient country).

The Global Partnership has since broadened its objectives to include the development of measures for “international non-proliferation, disarmament, counter-terrorism and nuclear safety issues”, including biosecurity projects and supportive activities in states beyond Russia that have renounced WMD. Recognising that proliferation and terrorist acquisition and use of weapons and materials of mass destruction are global security challenges, in 2008, G-8 Leaders agreed that the Global Partnership should implement projects worldwide on the basis of the Kananaskis principles and guidelines. Work is now being done in several regions of the world including Central Asia, Southeast Asia, Africa, the Middle East and the Americas.

At Kananaskis, the G8 leaders committed to raising US\$20 billion to support such activities over the following ten years. By the 2011 summit, held in Deauville, France, 15 non-G8 countries had also joined the Global Partnership as donors (Australia, Belgium, the Czech Republic, Denmark, European Union, Finland, Ireland, the Netherlands, New Zealand, Norway, Poland, Republic of Korea, Sweden, Switzerland and the Ukraine).

The initial ten-year mandate for the Global Partnership ends in 2012. The 2010 summit meeting in Muskoka Canada had particular focus on the continuing Global Partnership. At that meeting the G8 nations welcomed

the concrete achievements and measurable results of the Global Partnership against the Spread of Weapons and Materials of Mass Destruction, launched at the Kananaskis Summit in 2002, and we remain committed to completing priority projects in Russia. We recognize the continuing global threats before us, and we all recognize the importance of continuing our joint efforts as partners to address them in the years ahead. Toward that end, we ask our senior experts to evaluate the results of the Global Partnership to date, as a point of departure for developing options for programming and financing beyond 2012, focusing on nuclear and radiological security, bio security, scientist engagement and facilitation of the implementation of UN Security Council Resolution 1540, as well as the potential participation of new countries in the initiative.

The Global Partnership Working Group presented an assessment and options for future programming at the 2011 G8 meeting in Deauville France.



# Control List of Dual-use Biological Equipment and Related Technology and Software

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## I. Equipment

June 2011

### 1. Complete containment facilities at P3 or P4 containment level

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Complete containment facilities that meet the criteria for P3 or P4 (BL3, BL4, L3, L4) containment as specified in the WHO Laboratory Biosafety Manual (3rd edition, Geneva, 2004) should be subject to export control.

### 2. Fermenters

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Fermenters capable of cultivation of pathogenic micro-organisms, viruses or for toxin production, without the propagation of aerosols, having a capacity of 20 litres or greater. Fermenters include bioreactors, chemostats and continuous-flow systems.

### 3. Centrifugal Separators

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Centrifugal separators capable of the continuous separation of pathogenic micro-organisms, without the propagation of aerosols, and having all the following characteristics:

- a. one or more sealing joints within the steam containment area;
- b. a flow rate greater than 100 litres per hour;
- c. components of polished stainless steel or titanium;
- d. capable of in-situ steam sterilisation in a closed state.

Technical note: Centrifugal separators include decanters.

### 4. Cross (tangential) Flow Filtration Equipment

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Cross (tangential) flow filtration equipment capable of separation of pathogenic micro-organisms, viruses, toxins or cell cultures having all the following characteristics:

- a. a total filtration area equal to or greater than 1 square metre; and
- b. having any of the following characteristics:
  - i. capable of being sterilized or disinfected in-situ; or
  - ii. using disposable or single-use filtration components.

(N.B. This control excludes reverse osmosis equipment, as specified by the manufacturer.)

Cross (tangential) flow filtration components (eg modules, elements, cassettes, cartridges, units or plates) with filtration area equal to or greater than 0.2 square metres for each component and designed for use in cross (tangential) flow filtration equipment as specified above.

Technical note: In this control, 'sterilized' denotes the elimination of all viable microbes from the equipment through the use of either physical (eg steam) or chemical agents. 'Disinfected' denotes the destruction of potential microbial infectivity in the equipment through the use of chemical agents with a germicidal

effect. 'Disinfection' and 'sterilization' are distinct from 'sanitization', the latter referring to cleaning procedures designed to lower the microbial content of equipment without necessarily achieving elimination of all microbial infectivity or viability.

#### 5. Freeze-drying Equipment

Steam sterilisable freeze-drying equipment with a condenser capacity of 10 kgs of ice or greater in 24 hours and less than 1000 kgs of ice in 24 hours.

#### 6. Protective and containment equipment as follows:

- a. protective full or half suits, or hoods dependent upon a tethered external air supply and operating under positive pressure;

Technical note: This does not control suits designed to be worn with self-contained breathing apparatus.

- b. class III biological safety cabinets or isolators with similar performance standards (e.g. flexible isolators, dry boxes, anaerobic chambers, glove boxes, or laminar flow hoods (closed with vertical flow)).

#### 7. Aerosol inhalation chambers

Chambers designed for aerosol challenge testing with micro-organisms, viruses or toxins and having a capacity of 1 cubic metre or greater.

#### 8. Spraying or fogging systems and components therefore, as follows:

- a. Complete spraying or fogging systems, specially designed or modified for fitting to aircraft, lighter than air vehicles or UAVs, capable of delivering, from a liquid suspension, an initial droplet "VMD" of less than 50 microns at a flow rate of greater than two litres per minute.
- b. Spray booms or arrays of aerosol generating units, specially designed or modified for fitting to aircraft, lighter than air vehicles or UAVs, capable of delivering, from a liquid suspension, an initial droplet "VMD" of less than 50 microns at a flow rate of greater than two litres per minute.
- c. Aerosol generating units specially designed for fitting to systems that fulfil all the criteria specified in paragraphs 8.a and 8.b.

#### Technical Notes

Aerosol generating units are devices specially designed or modified for fitting to aircraft such as nozzles, rotary drum atomisers and similar devices.

This entry does not control spraying or fogging systems and components as specified in paragraph 8 above that are demonstrated not to be capable of delivering biological agents in the form of infectious aerosols.

Pending definition of international standards, the following guidelines should be followed:

Droplet size for spray equipment or nozzles specially designed for use on aircraft or UAVs should be measured using either of the following methods:

- a. Doppler laser method
- b. Forward laser diffraction method

## Items for inclusion in Awareness Raising Guidelines

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Experts propose that the following items be included in awareness raising guidelines to industry:

1. Equipment for the micro-encapsulation of live micro-organisms and toxins in the range of 1-10 um particle size, specifically:
  - a. interfacial polycondensators;
  - b. phase separators.
2. Fermenters of less than 20 litre capacity with special emphasis on aggregate orders or designs for use in combined systems.
3. Conventional or turbulent air-flow clean-air rooms and self-contained fan-HEPA filter units that may be used for P3 or P4 (BL3, BL4, L3, L4) containment facilities.

## II. Related Technology

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Technology, including licenses, directly associated with

- AG-controlled biological agents; or
- AG-controlled dual-use biological equipment items

to the extent permitted by national legislation.

This includes

- a) transfer of technology (technical data) by any means, including electronic media, fax or telephone
- b) transfer of technology in the form of technical assistance.

Controls on 'technology' do not apply to information 'in the public domain' or to 'basic scientific research' or the minimum necessary information for patent application.

The approval for export of any AG-controlled item of dual-use equipment also authorises the export to the same end-user of the minimum 'technology' required for the installation, operation, maintenance, or repair of that item.

## III. SOFTWARE

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Controls on 'software' transfer only apply where specifically indicated in sections I and II above, and do not apply to 'software' which is either:

1. Generally available to the public by being:
  - a. Sold from stock at retail selling points without restriction, by means of:
    - i. Over-the-counter transactions;
    - ii. Mail order transactions;
    - iii. Electronic transactions; or
    - iv. Telephone call transactions; and
  - b. Designed for installation by the user without further substantial support by the supplier; or
2. 'In the public domain'.

## Definition of Terms

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### 'Basic scientific research'

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Experimental or theoretical work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts, not primarily directed towards a specific practical aim or objective.

### 'Development'

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'Development' is related to all stages before production such as:

- assembly of prototypes,
- configuration design,
- design,
- design analysis,
- design concepts,
- design data,
- design research,
- integration design,
- layouts,
- pilot production schemes, and
- process or transforming design data into a product.

### 'Export'

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An actual shipment or transmission of AG-controlled items out of the country. This includes transmission of technology by electronic media, fax or telephone.

### 'In the public domain'

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'In the public domain', as it applies herein, means technology that has been made available without restrictions upon its further dissemination. (Copyright restrictions do not remove technology from being in the public domain.)

### 'Lighter than air vehicles'

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Balloons and airships that rely on hot air or on lighter-than-air gases such as helium or hydrogen for their lift.

### 'Microprogramme'

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A sequence of elementary instructions maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction register.

### 'Production'

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Production means all production phases such as:

- construction,
- production engineering,
- manufacture,
- integration,
- assembly (mounting),
- inspection,
- testing, and
- quality assurance.



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**'Programme'**

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A sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer.

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**'Software'**

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A collection of one or more 'programmes' or 'microprogrammes' fixed in any tangible medium of expression.

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**'Technical assistance'**

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May take forms, such as: instruction, skills, training, working knowledge, consulting services. Technical assistance includes oral forms of assistance. Technical assistance may involve transfer of 'technical data'.

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**'Technical data'**

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May take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.

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**'Technology'**

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Specific information necessary for the 'development', 'production', or 'use' of a product. The information takes the form of 'technical data' or 'technical assistance'.

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**'UAVs'**

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Unmanned Aerial Vehicles.

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**'Use'**

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Operation, installation, (including on-site installation), maintenance, (checking), repair, overhaul or refurbishing.

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**'VMD'**

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Volume Median Diameter (*note: for water-based systems, VMD equates to MMD – the Mass Median Diameter*).

## List of Biological Agents for Export Control

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### Core List<sup>[1]</sup>

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June 2011

#### Viruses

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1. Andes virus
2. Chapare virus
3. Chikungunya virus
4. Choclo virus
5. Congo-Crimean haemorrhagic fever virus
6. Dengue fever virus
7. Dobrava-Belgrade virus
8. Eastern equine encephalitis virus
9. Ebola virus
10. Guanarito virus
11. Hantaan virus
12. Hendra virus (Equine morbillivirus)
13. Japanese encephalitis virus
14. Junin virus
15. Kyasanur Forest virus
16. Laguna Negra virus
17. Lassa fever virus
18. Louping ill virus
19. Lujo virus
20. Lymphocytic choriomeningitis virus
21. Machupo virus
22. Marburg virus
23. Monkey pox virus
24. Murray Valley encephalitis virus
25. Nipah virus
26. Omsk haemorrhagic fever virus
27. Oropouche virus
28. Powassan virus
29. Rift Valley fever virus
30. Rocio virus
31. Sabia virus
32. Seoul virus
33. Sin nombre virus
34. St Louis encephalitis virus

35. Tick-borne encephalitis virus (Russian Spring-Summer encephalitis virus)
36. Variola virus
37. Venezuelan equine encephalitis virus
38. Western equine encephalitis virus
39. Yellow fever virus

## Bacteria

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1. Bacillus anthracis
2. Brucella abortus
3. Brucella melitensis
4. Brucella suis
5. Chlamydophila psittaci (formerly known as Chlamydia psittaci)
6. Clostridium botulinum
7. Francisella tularensis
8. Burkholderia mallei (Pseudomonas mallei)
9. Burkholderia pseudomallei (Pseudomonas pseudomallei)
10. Salmonella typhi
11. Shigella dysenteriae
12. Vibrio cholerae
13. Yersinia pestis
14. Clostridium perfringens, epsilon toxin producing types<sup>[2]</sup>
15. Enterohaemorrhagic Escherichia coli, serotype O157 and other verotoxin producing serotypes
16. Coxiella burnetii
17. Rickettsia prowazekii

## Toxins as follow and subunits thereof:<sup>[3]</sup>

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1. Botulinum toxins<sup>[4]</sup>
2. Clostridium perfringens toxins
3. Conotoxin<sup>[4]</sup>
4. Ricin
5. Saxitoxin
6. Shiga toxin
7. Staphylococcus aureus toxins
8. Tetrodotoxin
9. Verotoxin and shiga-like ribosome inactivating proteins
10. Microcystin (Cyanginosin)
11. Aflatoxins
12. Abrin
13. Cholera toxin

14. Diacetoxyscirpenol toxin
15. T-2 toxin
16. HT-2 toxin
17. Modeccin toxin
18. Volkensin toxin
19. Viscum Album Lectin 1 (Viscumin)

## Fungi

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1. *Coccidioides immitis*
2. *Coccidioides posadasii*

[1] Biological agents are controlled when they are an isolated live culture of a pathogen agent, or a preparation of a toxin agent which has been isolated or extracted from any source, or material including living material which has been deliberately inoculated or contaminated with the agent. Isolated live cultures of a pathogen agent include live cultures in dormant form or in dried preparations, whether the agent is natural, enhanced or modified.

An agent is covered by this list except when it is in the form of a vaccine. A vaccine is a medicinal product in a pharmaceutical formulation licensed by, or having marketing or clinical trial authorisation from, the regulatory authorities of either the country of manufacture or of use, which is intended to stimulate a protective immunological response in humans or animals in order to prevent disease in those to whom or to which it is administered.

[2] It is understood that limiting this control to epsilon toxin-producing strains of *Clostridium perfringens* therefore exempts from control the transfer of other *Clostridium perfringens* strains to be used as positive control cultures for food testing and quality control.

[3] Excluding immunotoxins.

[4] Excluding botulinum toxins and conotoxins in product form meeting all of the following criteria:

- are pharmaceutical formulations designed for testing and human administration in the treatment of medical conditions;
- are pre-packaged for distribution as clinical or medical products; and
- are authorised by a state authority to be marketed as clinical or medical products.

## Genetic Elements and Genetically-modified Organisms:

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1. Genetic elements that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.
2. Genetic elements that contain nucleic acid sequences coding for any of the toxins in the list, or for their sub-units.
3. Genetically-modified organisms that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.
4. Genetically-modified organisms that contain nucleic acid sequences coding for any of the toxins in the list or for their sub-units.

## Technical note:

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Genetically-modified organisms includes organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

Genetic elements include inter alia chromosomes, genomes, plasmids, transposons, and vectors whether genetically modified or unmodified, or chemically synthesized in whole or in part.

Nucleic acid sequences associated with the pathogenicity of any of the micro-organisms in the list means any sequence specific to the relevant listed micro-organism:

- that in itself or through its transcribed or translated products represents a significant hazard to human, animal or plant health; or
- that is known to enhance the ability of a listed micro-organism, or any other organism into which it may be inserted or otherwise integrated, to cause serious harm to human, animal or plant health.

These controls do not apply to nucleic acid sequences associated with the pathogenicity of enterohaemorrhagic *Escherichia coli*, serotype O157 and other verotoxin producing strains, other than those coding for the verotoxin, or for its sub-units.

## Warning List<sup>[1]</sup>

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### Bacteria

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1. *Clostridium tetani*\*
2. *Legionella pneumophila*
3. *Yersinia pseudotuberculosis*

\* Australia Group recognises that this organism is ubiquitous, but, as it has been acquired in the past as part of biological warfare programs, it is worthy of special caution.

### Fungi

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1. *Fusarium sporotrichioides*
2. *Fusarium langsethiae*

<sup>[1]</sup> Biological agents are controlled when they are an isolated live culture of a pathogen agent, or a preparation of a toxin agent which has been isolated or extracted from any source, or material including living material which has been deliberately inoculated or contaminated with the agent. Isolated live cultures of a pathogen agent include live cultures in dormant form or in dried preparations, whether the agent is natural, enhanced or modified.

An agent is covered by this list except when it is in the form of a vaccine. A vaccine is a medicinal product in a pharmaceutical formulation licensed by, or having marketing or clinical trial authorisation from, the regulatory authorities of either the country of manufacture or of use, which is intended to stimulate a protective immunological response in humans or animals in order to prevent disease in those to whom or to which it is administered.

## Genetic Elements and Genetically-modified Organisms:

1. Genetic elements that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.
2. Genetic elements that contain nucleic acid sequences coding for any of the toxins in the list, or for their sub-units.
3. Genetically-modified organisms that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.
4. Genetically-modified organisms that contain nucleic acid sequences coding for any of the toxins in the list or for their sub-units.

## Technical note:

Genetically-modified organisms includes organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

Genetic elements include inter alia chromosomes, genomes, plasmids, transposons, and vectors whether genetically modified or unmodified, or chemically synthesized in whole or in part.

Nucleic acid sequences associated with the pathogenicity of any of the micro-organisms in the list means any sequence specific to the relevant listed micro-organism:

- that in itself or through its transcribed or translated products represents a significant hazard to human, animal or plant health; or
- that is known to enhance the ability of a listed micro-organism, or any other organism into which it may be inserted or otherwise integrated, to cause serious harm to human, animal or plant health.

# LIST OF ANIMAL PATHOGENS FOR EXPORT CONTROL CORE LIST<sup>[1]</sup>

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## Viruses

June 2011

1. African swine fever virus
2. Avian influenza virus<sup>[2]</sup>
3. Bluetongue virus
4. Foot and mouth disease virus
5. Goat pox virus
6. Herpes virus (Aujeszky's disease)
7. Hog cholera virus (synonym: swine fever virus)
8. Lyssa virus
9. Newcastle disease virus
10. Peste des petits ruminants virus
11. Porcine enterovirus type 9 (synonym: swine vesicular disease virus)
12. Rinderpest virus
13. Sheep pox virus
14. Teschen disease virus
15. Vesicular stomatitis virus
16. Lumpy skin disease virus
17. African horse sickness virus

<sup>[1]</sup> Except where the agent is in the form of a vaccine.

<sup>[2]</sup> This includes only those Avian influenza viruses of high pathogenicity as defined by competent international authorities or regulatory bodies such as the World Organization for Animal Health (OIE) or the European Union (EU).

## Bacteria

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1. *Mycoplasma mycoides* subspecies *mycoides* SC (small colony)
2. *Mycoplasma capricolum* subspecies *capripneumoniae* ("strain F38")

## Genetic Elements and Genetically-modified Organisms

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1. AG1 Genetic elements that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.
2. AG2 Genetically-modified organisms that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the list.

**Technical note:** Genetically-modified organisms includes organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

Genetic elements include inter alia chromosomes, genomes, plasmids, transposons, and vectors whether genetically modified or unmodified, or chemically synthesized in whole or in part.

Nucleic acid sequences associated with the pathogenicity of any of the micro-organisms in the list means any sequence specific to the relevant listed micro-organism:

- that in itself or through its transcribed or translated products represents a significant hazard to human, animal or plant health; or
- that is known to enhance the ability of a listed micro-organism, or any other organism into which it may be inserted or otherwise integrated, to cause serious harm to human, animal or plant health.



## List of Plant Pathogens for Export Control

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### Core List

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June 2011

#### Bacteria

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1. *Xanthomonas albilineans*
2. *Xanthomonas campestris* pv. *citri*
3. *Xanthomonas oryzae* pv. *oryzae* (*Pseudomonas campestris* pv. *oryzae*)
4. *Clavibacter michiganensis* subsp. *sepedonicus* (*Corynebacterium michiganensis* subsp. *sepedonicum* or *Corynebacterium sepedonicum*)
5. *Ralstonia solanacearum* races 2 and 3 (*Pseudomonas solanacearum* races 2 and 3 or *Burkholderia solanacearum* races 2 and 3)

#### Fungi

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1. *Colletotrichum coffeanum* var. *virulans* (*Colletotrichum kahawae*)
2. *Cochliobolus miyabeanus* (*Helminthosporium oryzae*)
3. *Microcyclus ulei* (syn. *Dothidella ulei*)
4. *Puccinia graminis* (syn. *Puccinia graminis* f. sp. *tritici*)
5. *Puccinia striiformis* (syn. *Puccinia glumarum*)
6. *Pyricularia grisea* / *Pyricularia oryzae*

#### Viruses

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1. Potato Andean latent tymovirus
2. Potato spindle tuber viroid

#### Genetic Elements and Genetically-modified Organisms:

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1. Genetic elements that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the Core List.
2. Genetically-modified organisms that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the Core List.

**Technical note:** Genetically-modified organisms includes organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

Genetic elements include inter alia chromosomes, genomes, plasmids, transposons, and vectors whether genetically modified or unmodified, or chemically synthesized in whole or in part.

Nucleic acid sequences associated with the pathogenicity of any of the micro-organisms in the list means any sequence specific to the relevant listed micro-organism:

- that in itself or through its transcribed or translated products represents a significant hazard to human, animal or plant health; or

- that is known to enhance the ability of a listed micro-organism, or any other organism into which it may be inserted or otherwise integrated, to cause serious harm to human, animal or plant health.

## Items for Inclusion in Awareness-raising Guidelines

### Bacteria

1. *Xylella fastidiosa*

### Fungi

1. *Deuterophoma tracheiphila* (syn. *Phoma tracheiphila*)
2. *Monilia rorei* (syn. *Moniliophthora rorei*)

### Viruses

1. Banana bunchy top virus

### Genetic Elements and Genetically-modified Organisms:

1. Genetic elements that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the Awareness-raising Guidelines.
2. Genetically-modified organisms that contain nucleic acid sequences associated with the pathogenicity of any of the microorganisms in the Awareness-raising Guidelines.

**Technical note:** Genetically-modified organisms includes organisms in which the genetic material (nucleic acid sequences) has been altered in a way that does not occur naturally by mating and/or natural recombination, and encompasses those produced artificially in whole or in part.

Genetic elements include inter alia chromosomes, genomes, plasmids, transposons, and vectors whether genetically modified or unmodified, or chemically synthesized in whole or in part.

Nucleic acid sequences associated with the pathogenicity of any of the micro-organisms in the list means any sequence specific to the relevant listed micro-organism:

- that in itself or through its transcribed or translated products represents a significant hazard to human, animal or plant health; or
- that is known to enhance the ability of a listed micro-organism, or any other organism into which it may be inserted or otherwise integrated, to cause serious harm to human, animal or plant health.

## **Statement by G8 Leaders**

### **The G8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction**

The attacks of September 11 demonstrated that terrorists are prepared to use any means to cause terror and inflict appalling casualties on innocent people. We commit ourselves to prevent terrorists, or those that harbour them, from acquiring or developing nuclear, chemical, radiological and biological weapons; missiles; and related materials, equipment and technology. We call on all countries to join us in adopting the set of non-proliferation principles we have announced today.

In a major initiative to implement those principles, we have also decided today to launch a new G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction. Under this initiative, we will support specific cooperation projects, initially in Russia, to address non-proliferation, disarmament, counter-terrorism and nuclear safety issues. Among our priority concerns are the destruction of chemical weapons, the dismantlement of decommissioned nuclear submarines, the disposition of fissile materials and the employment of former weapons scientists. We will commit to raise up to \$20 billion to support such projects over the next ten years. A range of financing options, including the option of bilateral debt for program exchanges, will be available to countries that contribute to this Global Partnership. We have adopted a set of guidelines that will form the basis for the negotiation of specific agreements for new projects, that will apply with immediate effect, to ensure effective and efficient project development, coordination and implementation. We will review over the next year the applicability of the guidelines to existing projects.

Recognizing that this Global Partnership will enhance international security and safety, we invite other countries that are prepared to adopt its common principles and guidelines to enter into discussions with us on participating in and contributing to this initiative. We will review progress on this Global Partnership at our next Summit in 2003.

**The G8 Global Partnership:  
Principles to prevent terrorists, or those that harbour them, from gaining  
access to weapons or materials of mass destruction**

The G8 calls on all countries to join them in commitment to the following six principles to prevent terrorists or those that harbour them from acquiring or developing nuclear, chemical, radiological and biological weapons; missiles; and related materials, equipment and technology.

1. Promote the adoption, universalization, full implementation and, where necessary, strengthening of multilateral treaties and other international instruments whose aim is to prevent the proliferation or illicit acquisition of such items; strengthen the institutions designed to implement these instruments.
2. Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage and domestic and international transport; provide assistance to states lacking sufficient resources to account for and secure these items.
3. Develop and maintain appropriate effective physical protection measures applied to facilities which house such items, including defence in depth; provide assistance to states lacking sufficient resources to protect their facilities.
4. Develop and maintain effective border controls, law enforcement efforts and international cooperation to detect, deter and interdict in cases of illicit trafficking in such items, for example through installation of detection systems, training of customs and law enforcement personnel and cooperation in tracking these items; provide assistance to states lacking sufficient expertise or resources to strengthen their capacity to detect, deter and interdict in cases of illicit trafficking in these items.
5. Develop, review and maintain effective national export and transshipment controls over items on multilateral export control lists, as well as items that are not identified on such lists but which may nevertheless contribute to the development, production or use of nuclear, chemical and biological weapons and missiles, with particular consideration of end-user, catch-all and brokering aspects; provide assistance to states lacking the legal and regulatory infrastructure, implementation experience and/or resources to develop their export and transshipment control systems in this regard.
6. Adopt and strengthen efforts to manage and dispose of stocks of fissile materials designated as no longer required for defence purposes, eliminate all chemical weapons, and minimize holdings of dangerous biological pathogens and toxins, based on the recognition that the threat of terrorist acquisition is reduced as the overall quantity of such items is reduced.

## **The G8 Global Partnership: Guidelines for New or Expanded Cooperation Projects**

The G8 will work in partnership, bilaterally and multilaterally, to develop, coordinate, implement and finance, according to their respective means, new or expanded cooperation projects to address (i) non-proliferation, (ii) disarmament, (iii) counter-terrorism and (iv) nuclear safety (including environmental) issues, with a view to enhancing strategic stability, consonant with our international security objectives and in support of the multilateral non-proliferation regimes. Each country has primary responsibility for implementing its non-proliferation, disarmament, counter-terrorism and nuclear safety obligations and requirements and commits its full cooperation within the Partnership.

Cooperation projects under this initiative will be decided and implemented, taking into account international obligations and domestic laws of participating partners, within appropriate bilateral and multilateral legal frameworks that should, as necessary, include the following elements:

- (i) Mutually agreed effective monitoring, auditing and transparency measures and procedures will be required in order to ensure that cooperative activities meet agreed objectives (including irreversibility as necessary), to confirm work performance, to account for the funds expended and to provide for adequate access for donor representatives to work sites;
- (ii) The projects will be implemented in an environmentally sound manner and will maintain the highest appropriate level of safety;
- (iii) Clearly defined milestones will be developed for each project, including the option of suspending or terminating a project if the milestones are not met;
- (iv) The material, equipment, technology, services and expertise provided will be solely for peaceful purposes and, unless otherwise agreed, will be used only for the purposes of implementing the projects and will not be transferred. Adequate measures of physical protection will also be applied to prevent theft or sabotage;
- (v) All governments will take necessary steps to ensure that the support provided will be considered free technical assistance and will be exempt from taxes, duties, levies and other charges;
- (vi) Procurement of goods and services will be conducted in accordance with open international practices to the extent possible, consistent with national security requirements;

- (vii) All governments will take necessary steps to ensure that adequate liability protections from claims related to the cooperation will be provided for donor countries and their personnel and contractors;
- (viii) Appropriate privileges and immunities will be provided for government donor representatives working on cooperation projects; and
- (ix) Measures will be put in place to ensure effective protection of sensitive information and intellectual property.

Given the breadth and scope of the activities to be undertaken, the G8 will establish an appropriate mechanism for the annual review of progress under this initiative which may include consultations regarding priorities, identification of project gaps and potential overlap, and assessment of consistency of the cooperation projects with international security obligations and objectives. Specific bilateral and multilateral project implementation will be coordinated subject to arrangements appropriate to that project, including existing mechanisms.

For the purposes of these guidelines, the phrase “new or expanded cooperation projects” is defined as cooperation projects that will be initiated or enhanced on the basis of this Global Partnership. All funds disbursed or released after its announcement would be included in the total of committed resources. A range of financing options, including the option of bilateral debt for program exchanges, will be available to countries that contribute to this Global Partnership.

The Global Partnership’s initial geographic focus will be on projects in Russia, which maintains primary responsibility for implementing its obligations and requirements within the Partnership.

In addition, the G8 would be willing to enter into negotiations with any other recipient countries, including those of the Former Soviet Union, prepared to adopt the guidelines, for inclusion in the Partnership.

Recognizing that the Global Partnership is designed to enhance international security and safety, the G8 invites others to contribute to and join in this initiative.

With respect to nuclear safety and security, the partners agreed to establish a new G8 Nuclear Safety and Security Group by the time of our next Summit.

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## **MEETING OF FOREIGN MINISTERS, 14-15 MARCH 2011, STATEMENT ON THE 7TH REVIEW CONFERENCE FOR THE BIOLOGICAL AND TOXIN WEAPONS CONVENTION**

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1. We, the G8 Foreign Ministers, affirm our unconditional support to the Biological and Toxin Weapons Convention (BTWC), which is both the first multilateral instrument banning an entire category of weapons of mass destruction and the cornerstone of international efforts to prohibit biological and toxin weapons. We value the work undertaken by States Parties in recent years.

2. The possible misapplication of technological developments in the area of life sciences and the risk posed by development or use of a biological or toxin weapon by States or non-state-actors are major issues for the international community. In this regard, we emphasize that strengthening of the BTWC regime plays a principal role in diminishing the threat of proliferation and acquisition of dangerous biological agents, deliberate misuse of life sciences and biotechnologies for development of biological and toxin weapons. The 7th BTWC Review Conference to be held in December 2011 in Geneva provides an opportunity to reaffirm the authority and increased relevance of this vital instrument for our collective security in an ever changing context. Tangible progress with respect to increasing mutual confidence in compliance is very much needed for the BTWC as one of the most important global arms control treaties.

3. We intend to pursue our consultations with all BTWC States Parties to establish a consensus on the major issues of the Review Conference and on the necessary actions to address these issues. We will support the efforts of the appointed President of this Review Conference, Ambassador van den IJssel, to succeed in adopting a balanced and substantive final declaration, which will pave the way for tangible progress with respect to implementation of and compliance with the provisions of the Convention. We, the G8 Foreign Ministers, invite all States Parties to take an active part in the Review Conference and welcome their substantive contribution.

4. Guided by the objective of a more secure and safer world, and convinced that the use of such weapons is unacceptable to the conscience of humanity and would pose a grave threat to international security, we reaffirm our commitment to fully respect all obligations under the BTWC and in particular to never, under any circumstances, develop, produce, stockpile or otherwise acquire, retain or use this type of weapon. We call upon all States Parties to the Convention to join us in the effort to effectively preclude the acquisition and use of biological weapons by both State and non-state actors and we will continue assistance and cooperation actions through all appropriate channels.

5. Full and effective implementation of the provisions of the Convention by all States Parties is required to achieve its objectives. Aware of the importance of the intersessional work of the Convention to achieve this objective, we are determined to engage in discussions with all States Parties on a new and substantive work programme addressing the central issues of the Convention, including looking at more effective ways to enhance assurance of compliance with the BTWC as well as the implications of relevant scientific and technological developments for all appropriate articles of the Convention.


6. We are likewise determined to work with States Parties and others to devise ways to strengthen the Convention and its regime, with a view to considering and taking relevant decisions at the 7th Review Conference. We will also support the strengthening of the current UNSG mechanism for investigating cases of alleged use of chemical and biological weapons in accordance with General Assembly Resolution 42/37.

7. We commend the quality of the work conducted by the Implementation Support Unit over the past five years. We pledge our full support to renewing the ISU's mandate and, if necessary, to consolidating it, following an assessment of its tasks and resources by the Review conference.

8. Transparency among States Parties is an essential condition for confidence. With this in mind, it is necessary to ensure confidence building measures of the Convention remain relevant and useful in order to reflect recent scientific and technical developments. We are determined to pursue with all States Parties work to improve transparency and to step up efforts to increase participation in the confidence building measures. We call upon States that have not yet submitted their confidence-building measures to do so on a regular basis so that their initial objective can be met. Like the European Union, whose efforts we commend, we will continue to assist States that wish to benefit from technical assistance in submitting their confidence-building measures.

9. The involvement of civil society, particularly the academic and industrial sectors, is essential to the effective implementation of the provisions of the Convention. We will therefore step up such engagement to fully take account of scientific and technical developments in the biological area. We will likewise work on better awareness raising among those involved in the development of life sciences in order to limit the possibilities of misuse of technical developments, including supporting dual-use education programs on bioethics.

10. The universality of the Convention is indispensable. We will make every effort to achieve this objective and urge all States that have not already done so, to accede to the Convention.

 French Presidency of the G-8