

Faculty of Law and Political Science

Lists of controlled goods and technologies

Quentin MICHEL



- List(s) of items is one of the core elements of an Trade Control System
Authorisation and operations.
- Content and forms might diverse from country to country
- Objective of the presentation is to illustrate the diversity

Two categories of lists

Lists could be:

- An economic policy instrument
- An **non** economic policy instrument

- **Smoot-Hawley Tariff Act (1930)**

US Act increasing tariffs on agricultural products imported from third countries

- **Chicken war (1962)**

EU raised the tariff on U.S. poultry import. US responded with targeted tariffs on trucks (Germany), brandy (France) and potato starch (Netherlands).

- **Pasta War (1985)**

United States imposed duties on imports of European pasta, The EU responded by adopting duties on imports of United States lemons and walnuts.

- **Steel and Aluminium War (2018)**

United States imposed 25 percent and 10 percent of additional import duty respectively on certain steel products and aluminum products, from most countries

- **Prohibition lists**

Used to identify items that could no be transferred due to the risk of potential misused or to exercise pressure to states targeted

- **Control lists**

Used to identify items that required an assessment of the potential misused by the end user before being or not transferred

Lists could be adopted at the

- National
- Regional or
- International level

Lists could be

- Permanent
- temporary

Decided at the National Level

Prohibition list: Romanian government decision to ban exports of wheat, corn, rice, sunflower and other grains as long as the Covid-19 state of emergency is in force

Control list: The consolidated list of strategic military and dual-use items that require export authorisation from Great Britain and Northern Ireland

UK Strategic Export Control Lists

- **UK Military List** [Schedule 2 to the Export Control Order 2008]
- **UK Dual-Use List** [Schedule 3 to the Export Control Order 2008]
- **Non-military Firearms List** [Annex I to Regulation¹ No. 258/2012]
- **Human Rights List** [Annexes II, III & IV of Regulation¹ No. 125/2019]
- **UK Security and Human Rights List** [Articles 4A and 42S to the Export Control Order 2008]
- **UK Radioactive Source List** [Schedule to the Export of Radioactive Sources (Control) Order 2006]
- **Dual-Use List** [Annex I to Regulation (EC)¹ No. 428/2009]:
 - Category 0 Nuclear materials, facilities and equipment
 - Category 1 Special materials and related equipment
 - Category 2 Materials processing
 - Category 3 Electronics
 - Category 4 Computers
 - Category 5 Telecommunications and "information security"
 - Category 6 Sensors and lasers
 - Category 7 Navigation and avionics
 - Category 8 Marine
 - Category 9 Aerospace and Propulsion
- **Dual-Use List** [Annex IV to Regulation (EC)¹ No. 428/2009]

Decided at the Regional Level

Prohibition list: : EU Regulation 2019/125 that prohibit the export goods which have no practical use other than for the purpose of capital punishment or for the purpose of torture and other cruel, inhuman or degrading treatment or punishment.

Control list: Annex I of the Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items

ANNEX I

List referred to in Article 3 of this Regulation

LIST OF DUAL-USE ITEMS

This list implements internationally agreed dual-use controls including the Wassenaar Arrangement, the Missile Technology Control Regime (MTCR), the Nuclear Suppliers' Group (NSG), the Australia Group and the Chemical Weapons Convention (CWC).

CONTENTS

Notes

Acronyms and abbreviations

Definitions

Category 0	Nuclear materials, facilities and equipment
Category 1	Special materials and related equipment
Category 2	Materials processing
Category 3	Electronics
Category 4	Computers
Category 5	Telecommunications and "information security"
Category 6	Sensors and lasers
Category 7	Navigation and avionics
Category 8	Marine
Category 9	Aerospace and propulsion

Prohibition lists: CWC article VI.3

Each State Party shall subject chemicals listed in Schedule 1 (hereinafter referred to as “Schedule 1 chemicals”) to the prohibitions on production, acquisition, retention, transfer and use as specified in Part VI of the Verification Annex.



A. Toxic Chemicals

	(CAS registry number)
(1) O-Alkyl (<=C10, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates	
e.g. Sarin: O-Isopropyl methylphosphonofluoridate	(107-44-8)
Soman: O-Pinacolyl methylphosphonofluoridate	(96-64-0)
(2) O-Alkyl (<=C10, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	
e.g. Tabun: O-Ethyl N,N-dimethyl phosphoramidocyanidate	(77-81-6)
(3) O-Alkyl (H or <=C10, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts	
e.g. VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)
(4) Sulfur mustards:	
2-Chloroethylchloromethylsulfide	(2625-76-5)
Mustard gas: Bis(2-chloroethyl)sulfide	(505-60-2)
Bis(2-chloroethylthio)methane	(63869-13-6)
Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane	(3563-36-8)
1,3-Bis(2-chloroethylthio)-n-propane	(63905-10-2)
1,4-Bis(2-chloroethylthio)-n-butane	(142868-93-7)
1,5-Bis(2-chloroethylthio)-n-pentane	(142868-94-8)

Control lists: MTCR

These Guidelines, including the attached Annex, form the basis for controlling transfers to any destination beyond the Government's jurisdiction or control of all delivery systems (other than manned aircraft) capable of delivering weapons of mass destruction, and of equipment and technology relevant to missiles whose performance in terms of payload and range exceeds stated parameters.

CATEGORY II - ITEM 10

FLIGHT CONTROL

- 10.A.1. Pneumatic, hydraulic, mechanical, electro-optical or electromechanical flight control systems
- 10.A.2. Attitude control equipment
- 10.A.3. Flight control servo valves
- 10.B.1. Test calibration and alignment equipment
- 10.C. None
- 10.D.1. "Software"
- 10.E.1. Design "technology" for integration of air vehicle fuselage, propulsion system and lifting control surfaces
- 10.E.2. Design "technology" for integration of the flight control, guidance, and propulsion data into a flight management system
- 10.E.3. "Technology"

CATEGORY II - ITEM 11

AVIONICS

- 11.A.1. Radar and laser radar systems including altimeters
- 11.A.2. Passive sensors
- 11.A.3. Receiving equipment for navigation satellite systems
- 11.A.4. Electronic assemblies and components
- 11.A.5. Umbilical and interstage electrical connectors
- 11.B. None
- 11.C. None
- 11.D.1. "Software"
- 11.D.2. "Software"
- 11.E.1. Design "technology"
- 11.E.2. "Technology"

CATEGORY II - ITEM 12

LAUNCH SUPPORT

- 12.A.1. Apparatus and devices
- 12.A.2. Vehicles
- 12.A.3. Gravity meters (gravimeters), gravity gradiometers
- 12.A.4. Telemetry and telecontrol equipment, including ground equipment
- 12.A.5. Precision tracking systems
 - a. Tracking systems
 - b. Range instrumentation radars
- 12.A.6. Thermal batteries
- 12.B. None

CATEGORY II - ITEM 13

COMPUTERS

- 13.A.1. Analogue or digital computers or digital differential analysers
- 13.B. None
- 13.C. None
- 13.D. None
- 13.E.1. "Technology"

CATEGORY II - ITEM 14

ANALOGUE TO DIGITAL CONVERTERS

- 14.A.1. Analogue-to-digital converters
- 14.B. None
- 14.C. None
- 14.D. None
- 14.E.1. "Technology"

CATEGORY II - ITEM 15

TEST FACILITIES AND EQUIPMENT

- 15.A. None
- 15.B.1. Vibration test equipment
 - a. Vibration test systems
 - b. Digital controllers
 - c. Vibration thrusters (shaker units)
 - d. Test piece support structures and electronic units
- 15.B.2. Aerodynamic test facilities
- 15.B.3. Test benches/stands
- 15.B.4. Environmental chambers
- 15.B.5. Accelerators
- 15.B.6. Aerothermodynamic test facilities
- 15.C. None
- 15.D.1. "Software"
- 15.E.1. "Technology"

CATEGORY II - ITEM 16

MODELLING-SIMULATION AND DESIGN INTEGRATION

- 16.A.1. Hybrid (combined analogue/digital) computers
- 16.B. None
- 16.C. None
- 16.D.1. "Software"
- 16.E.1. "Technology"

CATEGORY II - ITEM 17

STEALTH

UN Charter Article 39

*The Security Council shall determine the existence of any **threat to the peace**, breach of the peace, or act of aggression and **shall make recommendations**, or **decide** what **measures** shall be taken in accordance with Articles 41 and 42, to maintain or **restore** international peace and security*

Article 40

*The Security Council **may decide what measures not involving the use of armed force** are to be employed to give effect to its decisions, and it may call upon the Members of the United Nations to apply such measures. These may include complete or **partial interruption of economic ...***

List of countries under UNSCR sanctions



UNITED NATIONS SECURITY

COUNCIL

Search the UN



About the Council ▾

Sanctions ▾

Members ▾

Meetings ▾

Documents ▾

News ▾

Home » Sanctions Committee

Sanctions

Somalia Sanctions Committee
 ISIL (Da'esh) & Al-Qaida Sanctions Committee
 1518 Sanctions Committee (Iraq)
 The Democratic Republic of Congo Sanctions Committee
 The Sudan Sanctions Committee
 1636 Sanctions Committee
 1718 Sanctions Committee (DPRK)
 Libya Sanctions Committee
 1988 Sanctions Committee
 Guinea-Bissau Sanctions Committee
 The Central African Republic Sanctions Committee
 2140 Sanctions Committee (Yemen)
 South Sudan Sanctions Committee
 Mali Sanctions Committee
 Narrative Summaries of Reasons for Listing
 Ombudsperson to the ISIL (Da'esh) and Al-Qaida Sanctions Committee
 Focal Point for De-listing
 Roster of Experts
 Terminated Sanctions Regimes

international peace and security under the Charter, under Article 41, encompass a wide range of measures, including a complete or partial ban on the use of armed force. Since 1966, the Security Council has imposed sanctions on Southern Rhodesia, South Africa, the Democratic Republic of the Congo, Somalia and Eritrea, Eritrea and Liberia, Iran, Libya (2), Guinea-Bissau, CAR, Sudan, Syria, and Al-Qaida and the Taliban.

Sanctions take many forms, in pursuit of a variety of goals. They range from broad trade and trade sanctions to more targeted financial and commodity restrictions. The Security Council's sanctions, deter non-constitutional regimes, deter non-proliferation.

Sanctions are most effective at deterring non-proliferation, strategy encompassing peacekeeping, and are designed to support peacekeeping operations. Regimes all exemplify this.

maintaining or restoring peacebuilding and peacekeeping operations and regional approach.

Today, there are 14 ongoing sanctions regimes which focus on supporting political settlement of conflicts, nuclear non-proliferation, and counter-terrorism. Each regime is administered by a sanctions committee chaired by a non-permanent member of the Security Council. There are 10 monitoring groups, teams and panels that support the work of 11 of the 14 sanctions committees.

UN sanctions lists could concern

- Countries (States authorities):
North Korea,...
- Non Governmental forces: Al-Qaida, Taliban, ISIL (Da'esh)
- Individuals, entities

Not only weapons

- Embargo on **arms** and **related materials**
- Ban on exports of equipment that might be used for **internal repression**
- Ban on provision of certain **services**
- Restrictions on **admission of certain** individuals
- **Freezing of funds** and economic resources of certain persons who constitute a threat to the peace and national reconciliation process

Resolution 1718 (2006) on People's Democratic Republic of North Korea (reaffirmed and extended UNSCR lastly by 2467(2019))

...

8. *Decides that:*

(a) *All Member States shall **prevent** the direct or indirect **supply**, sale or transfer to the DPRK, ..., of:*

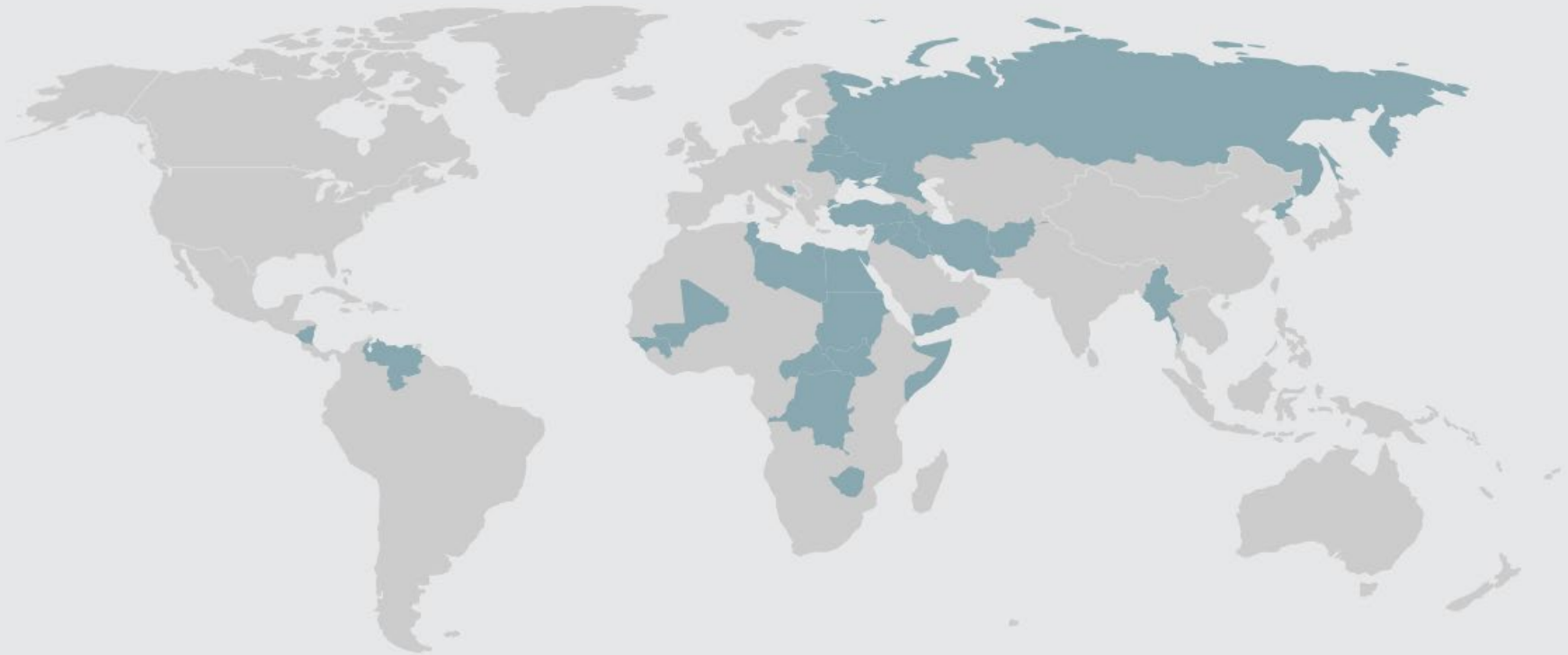
*(ii) All items, materials, equipment, goods and technology as set out in the lists in documents S/2006/814 (NSG trigger and dual-use lists) and S/2006/815 (**MTCR list**), unless within 14 days of adoption of this resolution the Committee has amended or completed their provisions also taking into account the list in document S/2006/816 (**Australia Group list**),*

UNSCR 2339(2017) CAR

1. Decides that, until 31 January 2018, all Member States shall continue to take the necessary measures to prevent ...transfer to the CAR, ...of arms and related materiel of all types, including weapons and ammunition, military vehicles and equipment, paramilitary equipment, and spare parts for the aforementioned, and technical assistance, training, financial or other assistance, related to military activities ...

THEMATIC RESTRICTIONS ▾

A useful tool the EU sanction map
<https://www.sanctionsmap.eu/#/main>



Search...

REGIMES, PERSONS, ENTITIES 

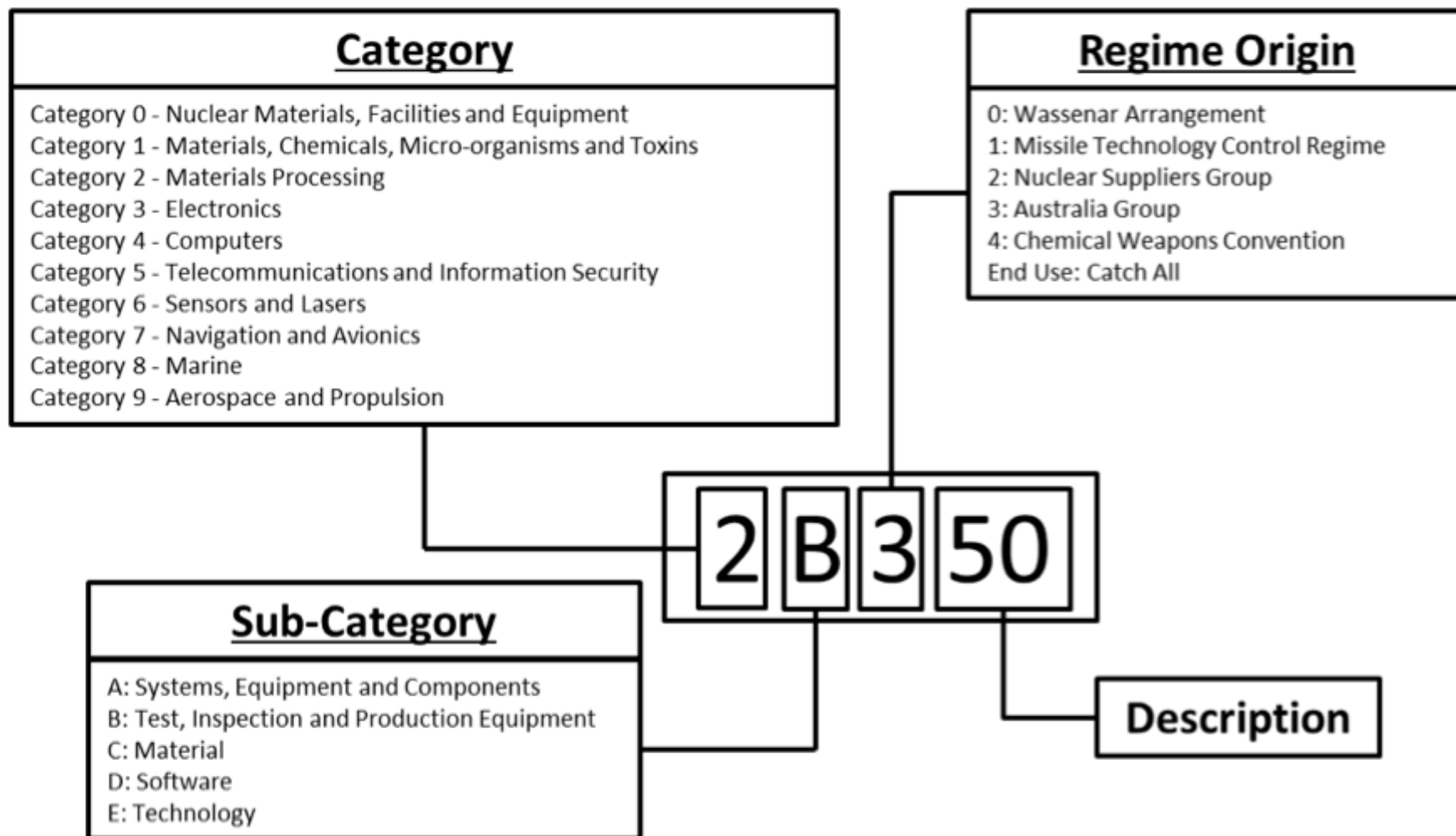
Lists adopted by National Trade Control Systems controlling transfers of weapons and dual-use items

Example: Annex I of the Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items

Annex I: “The reference” ?

EU Annex I often consider as reference to follow :

- One document that compiles lists of non proliferation regimes (NSG, WA, AG, MTCR, CWC)
- An specific system of references



Annex I could be by third States:

- Inserted **exactly** into their national trade control system
- Inserted **partially** into their national trade control system
- Inserted into their national trade control system with **additionnal** items

- Annex I **updates** could be by third States:
- Inserted into their national trade control system via a **direct reference** (automatic update)
 - Inserted **by an amending act** into their national trade control system
 - **No** update mechanisms defined

Country	Correspondence with the EU list			Updating mechanism		Latest version of the national list	Remarks
	Partially (EU -)	Exactly (EU =)	Additionally (EU +)	Automatic (formal link to EU list)	Ad hoc		
EUROPE							
Albania		X		(?)	X	2008: Council of Ministers Decision No. 1569	Art. 10.1 (Law): The Council of Ministers approves the list of military goods, dual use items and technologies in line with the respective lists of the European Union
Armenia		X			X	2011: Decision N° 1785-N of 15 December 2004 (revised)	Art. 6.1 (Law): the list shall be approved by the Government
Bosnia		X		X			Art. 4.1 (Law): The Ministry shall publish in the Official Gazette of <u>BiH</u> the List of Dual-use Goods (hereinafter referred to as: <u>the List</u>), which is the official translation of the relevant List of Dual-use Items of the European Union
FYROM		X			X	2012: Decision on the Establishment of National Controlled List	Art. 5 (Law): the list shall be approved by the Government
Kosovo			X		X	2013: Decision from Government No.03/153 (25 October 2013) on Approval of the List of Dual Use Goods	Art. 6 (Law): the list shall be approved by the Government
Georgia		X			X	2014: Ordinance of Government of Georgia # 394 from June 13, 2014 On "Adoption of military and dual use items' lists"	Art. 2 (Law): the list shall be approved by the Government

	1	2	3	4	5	6
						<p>information, technology and software, works, services, intellectual property (rights to them), goods that are weapons of mass destruction, their means of delivery and other types of weapons, equipment and ammunition, including dual-use products, due to their characteristics and properties, can be used in preparation or the commission of terrorist acts and sabotage and there are other crimes;</p> <ul style="list-style-type: none"> - dual-use products - products, equipment, materials, raw materials, software, technology and scientific and technical information that are used for civilian purposes, and can be used for the production of weapons, military equipment and ammunition, including weapons of mass destruction and weapons its delivery; - weapons of mass destruction - nuclear, chemical, bacteriological (biological) weapons; - delivery vehicles - missiles, unmanned aerial vehicles and other systems capable of delivering weapons of mass destruction.
						<p>Partially</p> <p>Ad hoc</p>
Kyrgyzstan*	X				X	<p>2017: Government Decree of the Kyrgyz Republic No. 197 (02 April 2, 2014) on Approval of National control list of the Kyrgyz Republic of controlled products (Changes & Additions: September 21, 2017)</p> <p>The national list is updated according to the changes in the control lists of international export control regimes, but at least once within two years since its last update. There are six detailed annexes with information about Foreign Economic Activity Commodity, FEACN (in addition notes and terms with explanations in every annex):</p> <ol style="list-style-type: none"> 1. List of export-controlled pathogens of diseases (pathogens) of humans, animals and plants, genetically modified microorganisms, toxins, equipment and technology; 2. The list of export controlled chemicals, equipment and technologies that can be used in the creation of chemical weapons; 3. List of export controlled nuclear materials, equipment, special non-nuclear materials and related technologies; 4. List of export-controlled dual-use equipment and material, and related technologies used for nuclear purposes; 5. The list of equipment, materials and technologies, which can be used to create rocket weapons;

From list to catch-all

The gaz station syndrome :

Phase I: 1910/20: Distribution via Gasoline container



Phase II: 1930



Phase III: 1960



Phase IV: 1970



Phase V: 2000



Control lists have followed a similar evolution

1. 1978: adoption by the NSG of the first dedicated nuclear **especially designed** list of items: from A to F

CLARIFICATIONS OF ITEMS ON THE TRIGGER LIST

A. Complete nuclear reactors
(Item 2.1.1 of the Trigger List)

1. A "nuclear reactor" basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come in direct contact with or control the primary coolant of the reactor core.
2. The export of the whole set of major items within this boundary will take place only in accordance with the procedures of the Guidelines. Those individual items within this functionally defined boundary which will be exported only in accordance with the procedures of the Guidelines are listed in paragraphs 2.1.1 to 2.1.5.

The Government reserves to itself the right to apply the procedures of the Guidelines to other items within the functionally defined boundary.

3. It is not intended to exclude reactors which could reasonably be capable of modification to produce significantly more than 100 grams of plutonium per year. Reactors designed for sustained operation at significant power levels, regardless of their capacity for plutonium production, are not considered as "zero energy reactors".

B. Pressure vessels
(Item 2.1.2 of the Trigger List)

4. A top plate for a reactor pressure vessel is covered by item 2.1.1 as a major shop-fabricated part of a pressure vessel.
5. Reactor internals (e. g. support columns and plates for the core and other vessel internals, control rod guide tubes, thermal shields, baffles, core grid plates, diffuser plates, etc.) are normally supplied by the reactor supplier. In some cases, certain internal support components are included in the fabrication of the pressure vessel. These items are sufficiently critical to the safety and reliability of the operation of the reactor (and, therefore, to the guarantees and liability of the reactor supplier), so that their supply, outside the basic supply arrangement for the reactor itself, would not be common practice. Therefore, although the separate supply of these unique, especially designed and prepared, critical, large and expensive items would not necessarily be considered as falling outside the area of concern, such a mode of supply is considered unlikely.

2. 1985: adoption of the first list of **chemical and biological** related items: Australia Group
3. 1988: adoption of the first list of dedicated **missile technology** related items: MTCR

But controlling especially designed items didn't prevent WMD proliferation

4. 1992: NSG nuclear related dual use items list (8 categories divided in numerous subcategories)

ANNEX CONTENTS

INDUSTRIAL EQUIPMENT

1.1.	Spin-forming and flow-forming machines	
1.2.	“Numerical control” units ... machine tools	
1.3.	Dimensional inspection systems	
1.4.	Vacuum induction furnaces	
1.5.	Isostatic presses	
1.6.	Robots and end effectors	
1.7.	Vibration test equipment	
1.8.	Furnaces - arc remelt, electron beam, and plasma	

2. MATERIALS

2.1.	Aluminum, high-strength	
2.2.	Beryllium	
2.3.	Bismuth (high purity)	
2.4.	Boron (isotopically enriched in boron-10)	
2.5.	Calcium (high purity)	
2.6.	Chlorine trifluoride	
2.7.	Crucibles made of materials resistant to liquid actinide metals	
2.8.	Fibrous and filamentary materials	
2.9.	Hafnium	
2.10.	Lithium (isotopically enriched in lithium-6)	
2.11.	Magnesium (high purity)	
2.12.	Maraging steel, high-strength	
2.13.	Radium	
2.14.	Titanium alloys	
2.15.	Tungsten	
2.16.	Zirconium	

4 HEAVY WATER PRODUCTION PLANT RELATED EQUIPMENT (Other Than Trigger List Items)

4.1.	Specialized packings for water separation	4-1
4.2.	Pumps for potassium amide/liquid ammonia	4-1
4.3.	Water-hydrogen sulfide exchange my columns	4-1
4.4.	Hydrogen-cryogenic distillation columns	4-1
4.5.	Ammonia converters or synthesis reactors	4-2

5 IMPLOSION SYSTEMS DEVELOPMENT EQUIPMENT

5.1.	Flash x-ray equipment	5-1
5.2.	Multistage light gas guns/high-velocity guns	5-1
5.3.	Mechanical rotating mirror cameras	5-1
5.4.	Electronic streak and framing cameras and tubes	5-2
5.5.	Specialized instrumentation for hydrodynamic experiments	5-2

6 EXPLOSIVES AND RELATED EQUIPMENT

6.1.	Detonators and multipoint initiation systems	6-1
6.2.	Electronic components for firing sets	6-1
6.2.1.	Switching devices	6-1
6.2.2.	Capacitors	6-2
6.3.	Firing sets and equivalent high-current pulsers (for controlled detonators)	6-2
6.4.	High explosives relevant to nuclear weapons	6-2

7 NUCLEAR TESTING EQUIPMENT AND COMPONENTS

7.1.	Oscilloscopes	7-1
7.2.	Photomultiplier tubes	7-1
7.3.	Pulse generators (high speed)	7-1

8 OTHER

8.1.	Neutron generator systems	8-1
8.2.	General nuclear related equipment	8-1

5. 2002: Australia Group included a catch-all provisions in its guidelines

7. *The Government will ensure that its regulations require the following:*
- a. *an authorisation for the transfer **of non-listed items** where the exporter **is informed** by the competent authorities of the Government in which it is established that the items in question may be intended, in their entirety or part, for use in connection with chemical or biological weapons activities;*
 - b. *that if the **exporter is aware** that non-listed items are intended to contribute to such activities it must notify the authorities referred to above, which will decide whether or not it is expedient to make the export concerned subject to authorisation.*

- Evolution of lists : from small numbers of items to several hundreds
- Role of custom: controlling items listed to controlling items listed and potentially not listed