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MISSILE TECHNOLOGY CONTROL REGIME: NON-PROLIFERATION OF DELIVERY VEHICLES

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The Missile Technology Control Regime (MTCR) is a companion document to the Nuclear Non-Proliferation Treaty. It is not, however, a formal treaty. It is a non-binding, informal, and voluntary agreement in which 33 countries currently participate.¹ It came into being in 1987. The basic purpose is to limit proliferation of technology which could be used to deliver weapons of mass destruction. Weapons of mass destruction are identified as chemical, biological, and nuclear.

Although all countries are encouraged to observe the principles of the MTCR, not all states are eligible to join. Membership is determined by consensus and is based on the prospective members export control effectiveness, its contribution to the Regime, and its proliferation record. Each member state enforces the MTCR according to its own design. The most ardent participants implement the MTCR with sanctions laws while others use a lower profile approach.

PURPOSE OF THE MTCR

The purpose of the MTCR is to restrict the proliferation of missiles, unmanned vehicles, and technology which can deliver a 500 kilogram (1,102 pound) payload a distance of at least 300 kilometers (187 miles) regardless of intended use, or any system specifically intended to deliver weapons of mass destruction. Manned aircraft are not covered in the MTCR. Transfers between MTCR members is governed the same as transfers between a member and non-member.

The term "missiles" includes ballistic missiles, space-launch vehicles, and sounding rockets. The term "unmanned vehicles" includes cruise missiles, drones, unmanned aerial vehicles, and remotely piloted vehicles. The MTCR guidelines state that it is not intended to impede national space programs or international cooperation in those programs, as long as those programs can not contribute to delivery systems for weapons of mass destruction. But because the technology used in space-launch vehicles is the same as that used for weapons delivery systems, export of that technology and equipment must be very carefully considered.

¹Member countries in the MTCR are: Argentina, Australia, Austria, Belgium, Brazil, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, The Netherlands, New Zealand, Norway, Poland, Portugal, Russia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States.

CONTROLLED EQUIPMENT AND TECHNOLOGY

An annex of controlled equipment and technology was adopted on 16 April 1987 and replaced by an annex which came into effect on 7 January 1993. This annex is divided into Category I and Category II items. These categories include both military and dual-use items that can be used for missile development, production, and operation.

1. *Category I Items.*

Category I items include:

- a. **Complete rocket systems** (including ballistic missiles, space-launch vehicles, and sounding rockets) capable of delivering 500 kilograms over 300 kilometers.
- b. **Unmanned air-vehicle systems** (including cruise missile systems, target drones, and reconnaissance drones) capable of delivering 500 kilograms over 300 kilometers.
- c. **Specially-designed production facilities** for these systems.
- d. **Complete subsystems** (individual rocket stages, reentry vehicles, solid and liquid fuel rocket engines, guidance sets, thrust vector control systems, and warhead safing/arming/fuzing/firing mechanisms) which can be used in items “a” and “b” above, as well as specially designed production facilities/equipment for such subsystems.

If a Category I item is included in a system, that system shall be considered Category I unless that incorporated item cannot be separated, removed, or duplicated. Although not expressly forbidden, it is presumed that export of Category I items will not be allowed. The transfer of Category I production facilities, however, is forbidden.

2. *Category II Items.*

Category II covers a wide range of parts, components, and subsystems such as:

- a. Propulsion components.
- b. Propellants and constituents.
- c. Propellant production technology and equipment.
- d. Missile structural components: production technology and equipment.
- e. Pyrolytic deposition/densification technology and equipment.
- f. Structural materials.
- g. Flight Instruments, inertial navigation equipment, software, and production equipment.
- h. Flight control systems.
- i. Avionics equipment.
- j. Launch/ground support equipment and facilities.
- k. Missile computers.
- l. Analog-to-digital converters.
- m. Test facilities and equipment.
- n. Software and related analog or hybrid computers.
- o. Reduced observables technology, materials, and devices.
- p. Nuclear effects protection.

These items can be approved by a MTCR partner on a case-by-case basis for acceptable use. They may also be exported under government-to-government assurances that they will not be used for missile systems capable of delivering a 500 kilogram payload over 300 kilometers.

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REFERENCES

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GLOSSARY

ACDA Arms Control and Disarmament Agency.

MTCR Missile Technology Control Regime.