

# ADAPTING THE MISSILE TECHNOLOGY CONTROL REGIME FOR CURRENT AND FUTURE CHALLENGES

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The Missile Technology Control Regime (MTCR) is a cornerstone of states' efforts to prevent the proliferation of missiles and other uncrewed aerial vehicles (UAVs) capable of delivering chemical, biological or nuclear weapons. In the 35 years since its creation in 1987, the MTCR has expanded in scope and membership, developed new procedures and practices, and become more institutionalized in terms of regime bodies and their functions.

However, over the same period, missiles of various ranges and payload capacity and dual-use missile and space launch vehicle technologies have spread and new proliferation pathways have emerged. Geopolitical developments have upset the fragile consensus among the MTCR partner states on the objectives and direction of the MTCR and have made finding agreement on individual decisions increasingly difficult. Russia's full-scale invasion of another partner—Ukraine—is the most serious such episode and has made reaching the consensus required for regime decisions even more difficult since February 2022.

In this context, normative, membership, operational, political and technical challenges threaten the future effectiveness and role of the MTCR.<sup>1</sup> The MTCR therefore requires reform across a number of areas, and the partners need to agree on and implement a strategic approach to strengthening the regime's effectiveness.

## MTCR MEMBERSHIP AND ADHERENCE

Since its creation, the MTCR's reach, which includes the implementation of the MTCR guidelines and adoption of the equipment, software and technology annex (the MTCR control list), has been extended both through the expansion of membership from 7 to 35 partners and by encouraging unilateral adherence to the regime (see figure 1).<sup>2</sup> However, the growth in MTCR membership has largely stagnated since the early 2000s.

<sup>1</sup> Brockmann, K., 'The Missile Technology Control Regime at a crossroads', SIPRI, 1 Oct. 2021.

<sup>2</sup> Ozga, D. A., 'A chronology of the Missile Technology Control Regime', *Nonproliferation Review*, vol. 1, no. 2 (winter 1994).

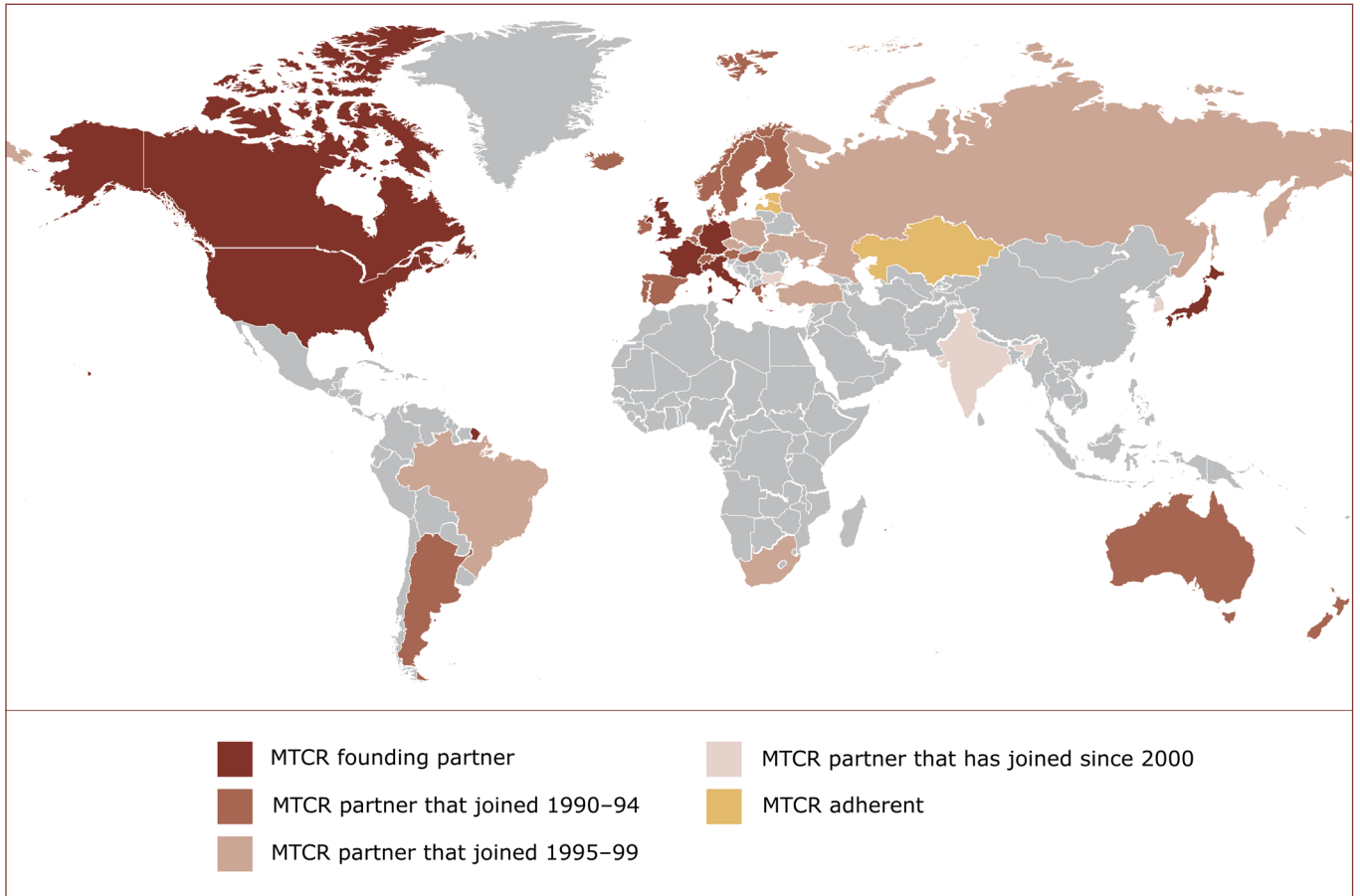
\* This Policy Brief summarizes findings and presents policy recommendations from the authors' report *The Missile Technology Control Regime at a Crossroads: Adapting the Regime for Current and Future Challenges* (SIPRI: Stockholm, Dec. 2022).

## SUMMARY

● The Missile Technology Control Regime (MTCR) is a cornerstone of the non-proliferation architecture for missiles and other uncrewed aerial vehicles. However, geopolitical and technical developments and operational challenges threaten the regime's effectiveness and create a need for reform across a number of areas.

The MTCR partners should develop a clear strategy for determining if and how to expand MTCR membership. To increase the number of adherents, partners should also pursue reinforced outreach and expand and promote the benefits offered. By improving the transparency of its procedures and deliberations, the regime can make them more understandable for non-partners. The partners can also improve the MTCR's legitimacy by emphasizing that it provides public goods and helps states to meet their international obligations. The regime can also address the challenges of emerging technologies by focusing on technical deliberations and sharing information and good practices.

Through all this, the MTCR must ensure its continued functioning in the face of geopolitical tensions and armed conflict between partners.



**Figure 1.** Map of Missile Technology Control Regime partners, by year joined, and adherents, 2022

Source: MTCR, ‘MTCR partners’, [n.d.].

The partners have seemingly entered into a stalemate over the admission of new partners, while only three states have used the official adherence procedure established in 2014.<sup>3</sup> This reflects a lack of agreement on the objectives and strategy that membership and adherence should serve.

It is therefore essential that the partners engage in a broader discussion about the MTCR’s membership objectives, strategy and assessment procedure—to determine if the MTCR pursues a large membership or just limited expansion. The partners also need to focus on increasing the uptake of the adherence procedure through outreach and by expanding and

promoting the benefits offered to adherents.

**MTCR TRANSPARENCY AND GUIDANCE**

The partners generally view the MTCR as a ‘transparent regime’, but MTCR meetings, deliberations and information exchange are necessarily strictly confidential. A press release from the annual plenary meeting, limited news items on outreach activities, the use of the MTCR chair’s official Twitter account and the chair’s engagement in public events organized by third parties allow for only limited insights into the

<sup>3</sup> MTCR, ‘Partners’, [n.d.].



regime's work.<sup>4</sup> In combination with the limited membership, this lack of transparency has often been used to criticize the MTCR.

The MTCR guidelines, annex and annex handbook, and any changes to them, are public.<sup>5</sup> However, unlike other multilateral export control regimes, the MTCR does not publish any guidance or good practice documents that could help adherents and non-partners harmonize the implementation of their national export controls with the guidelines and annex.

To improve the transparency of the MTCR, its procedures and deliberations need to be understandable to adherents and non-partners and information needs to be shared more consistently through all MTCR channels. The production and publication of more targeted guidance materials could also strengthen harmonization.

### **MTCR LEGITIMACY**

The MTCR guidelines do not provide for any preferential treatment of partners, and any export licensing decisions remain sovereign decisions by the exporting state. Nonetheless, the MTCR, with its limited membership, has long been criticized as an exclusive cartel that prevents economic and technological development in states with emerging economies.

Some of the concerns appeared to dissipate during the 2000s,

<sup>4</sup> MTCR, 'Press releases', [n.d.]; MTCR, 'News', [n.d.]; MTCR, 'Other public documents', [n.d.]; and MTCR (@MTCR\_Chair), Twitter account, <[https://twitter.com/MTCR\\_Chair](https://twitter.com/MTCR_Chair)>.

<sup>5</sup> MTCR, 'Guidelines for missile-relevant transfers', [n.d.]; MTCR, 'Equipment, software and technology annex', MTCR/TEM/2022/Annex, 21 Oct. 2022; and US Government, *Missile Technology Control Regime (MTCR) Annex Handbook 2017* (MTCR: 2017).

particularly after the United Nations Security Council's adoption in 2004 of Resolution 1540. This created an obligation for all states to have effective export control systems in place and reduced the level of controversy around their use.<sup>6</sup> The MTCR guidelines, annex and annex handbook could thus be understood as public goods provided by the MTCR that support international capacity-building efforts to help states improve their export control systems and strengthen the implementation of Resolution 1540.<sup>7</sup>

More recently, the issue of legitimacy has been raised again by a UN General Assembly resolution sponsored by China that asserts concerns over the undue impact of export controls on peaceful uses of science and technology.<sup>8</sup> Further controversy has resulted from the USA's unilateral reinterpretation of the MTCR guidelines concerning the restrictiveness of their coverage of UAVs.<sup>9</sup> It is therefore important for the partners to emphasize and promote the MTCR's provision of public goods and its contribution to helping states to meet their international obligations.

### **ADDRESSING EMERGING TECHNOLOGIES THROUGH THE MTCR**

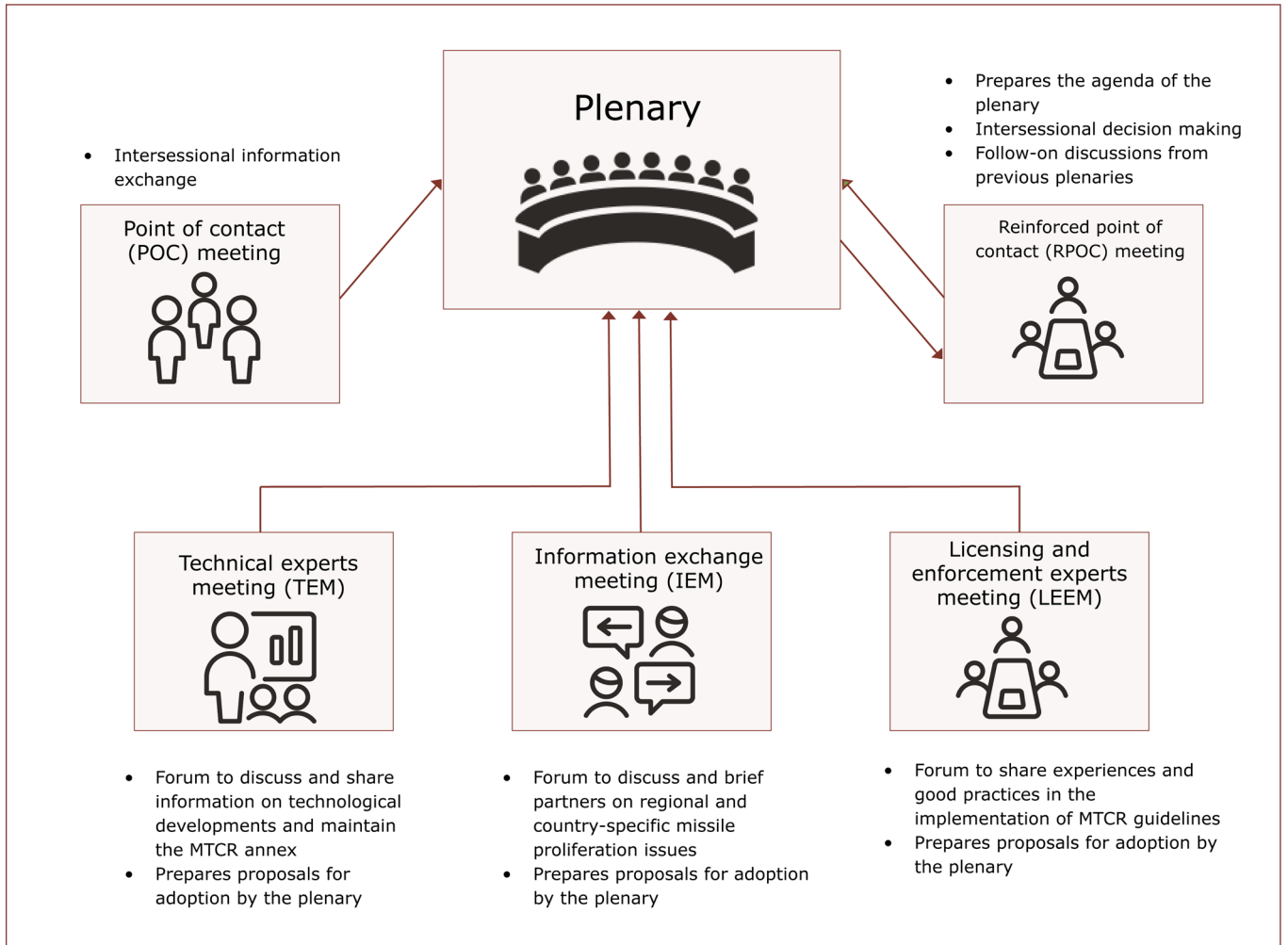
The maintenance of the MTCR annex ensures that partners,

<sup>6</sup> UN Security Council Resolution 1540, 28 Apr. 2004.

<sup>7</sup> Gahlaut, S., 'United Nations Security Council Resolution 1540 implementation: More of the same or brave new world?', *Strategic Trade Review*, vol. 5, no. 7 (winter 2019).

<sup>8</sup> UN General Assembly Resolution 76/234, 'Promoting international cooperation on peaceful uses in the context of international security', 21 Dec. 2021, preamble.

<sup>9</sup> Penney, H., 'US State Department must align UAV export policy with American interests', *Defense News*, 11 June 2020.



**Figure 2.** The institutional structure of the Missile Technology Control Regime

adherents and non-partners have an up-to-date control list. One of the most frequent criticisms of the MTCR is the pace at which the control list is updated and the time taken to adopt amendments or additions to the annex to address emerging technologies.<sup>10</sup> It can be difficult for all partners to follow technical developments, and the small number of meetings limits the opportunities for in-person discussions among the technical experts on such developments.

However, the speed of development and absence of technical

standards for emerging technologies complicate the design of control list entries that partners could agree on.<sup>11</sup> By continuing technical deliberations and the sharing of information and good practices on the implementation of catch-all controls, the partners can implement a certain level of control despite a lack of consensus on amendments or additions to the annex.

<sup>10</sup> Beck, M. D. and Jones, S. A., ‘The once and future multilateral export control regimes: Innovate or die’, *Strategic Trade Review*, vol. 5, no. 8 (winter/spring 2019), p. 67.

<sup>11</sup> Brockmann, K., ‘Drafting, implementing, and complying with export controls: The challenge presented by emerging technologies’, *Strategic Trade Review*, vol. 4, no. 6 (spring/summer 2018).



## **GEOPOLITICAL CONFLICT AND MULTILATERAL COOPERATION THROUGH THE MTCR**

The crisis over Russia's renewed invasion of Ukraine has created additional obstacles for the effective functioning and decision-making processes of the MTCR, far surpassing the impact of previous episodes of conflict between partners. It has also reinforced more general geopolitical trends, which are moving away from multilateral cooperation and the universalization of disarmament and non-proliferation norms.

Maintaining and strengthening technical collaboration and sharing of expertise through less politicized forums such as the MTCR's three subgroups—the technical expert meeting (TEM), the licensing and enforcement experts meeting (LEEM), and the information-exchange meeting (IEM)—are thus particularly important to demonstrate the value of this type of cooperation, even in the absence of consensus decisions (see figure 2). In the long term, the partners may need to explore the possibility of qualified majority voting for a limited subset of MTCR decisions.

## **RECOMMENDATIONS**

The partners need to strengthen the MTCR and reform certain of its organizational and operational rules and practices to improve its ability to address current and future challenges. This includes developing a clear strategy for the future of MTCR membership and adherence, improving transparency of the regime's work, strengthening its legitimacy, improving its ability to deal with emerging technologies, and managing the impact of geopolitics on the functioning of the regime.

## **A vision for membership and adherence**

The MTCR should develop a consistent approach to MTCR membership and adherence in the future and strengthen the implementation of the guidelines and annex by partners, adherents and non-partners.

- The partners should determine the objectives that membership and adherence to the MTCR should serve, and they should develop a clear strategy for the future of MTCR membership and adherence.
- The partners should strengthen the adherent category by establishing a programme of more consistent engagement and by actively promoting and expanding the benefits offered to adherents.
- The partners should also develop a strategy for targeted engagement and outreach with possible future adherents. This would act as a means to build capacity in export controls globally and as a vision of how a future MTCR with a large group of adherents could use more inclusive processes.

## **Improving transparency of the MTCR**

Steps can be taken to improve the transparency of the work of the MTCR and facilitate adoption of the MTCR guidelines and annex.

- The MTCR should develop additional guidance and good practice materials.
- The MTCR should share its existing and future guidance and good practice materials with adherents and should consider making them publicly available for the benefit of all non-partners.



- The partners should consider the production of targeted guidance materials on sector-specific internal compliance programmes and conducting effective outreach to aerospace companies and the NewSpace industry.
- The MTCR should develop a strategy for its outward communication that prioritizes activities that help it to reach its goal and shape its public image.
- The MTCR should also ensure consistency of the information communicated through its website and Twitter account.
- The MTCR chair and the subgroup chairs should produce a regular newsletter that provides further insights on specific technical or export control topics under discussion in the regime.
- The MTCR should more consistently report on its meetings and outreach activities and more clearly outline the objectives pursued through these activities.

### **Strengthening MTCR legitimacy**

The legitimacy of the MTCR can be strengthened in several ways.

- In the UN General Assembly, in UN Security Council Resolution 1540 activities, in missile-related forums (including the Hague Code of Conduct against Ballistic Missile Proliferation), and in export control outreach and capacity-building activities, the partners should coordinate their messaging, engagement and promotion of the underlying norm supported by the MTCR's work, guidelines and annex.
- The MTCR should promote the guidelines and annex and possible future public guidance and good practice materials as public goods that it provides in order to strengthen missile non-proliferation and the export controls of all states.
- The partners should support renewed efforts through the United Nations to establish a multilateral agreement on missile proliferation, potentially emphasizing the non-proliferation norm specific to those missiles capable of delivering chemical, biological or nuclear weapons.

### **Strengthening regime procedures to better address emerging technologies**

The ability of the MTCR to address the risks posed by emerging technologies can be improved.

- The subgroup chairs and co-chairs should encourage the partners to continue to provide technical presentations and submit non-papers since these improve awareness and expertise across the partners and inform the effective implementation of catch-all controls and outreach to industry.
- The partners should create, where appropriate, ad hoc technical working groups on specific emerging technologies of concern to enable a more continuous and focused engagement among technical experts.
- The partners should consider, where appropriate, setting up more frequent intersessional





TEM meetings if circumstances lead to persistently high volume of papers, presentations and proposals submitted.

- The partners should share experiences and case studies on the effective use of catch-all controls as a means to impose licensing requirements on transfers of uncontrolled emerging technologies.
- The partners should also identify possible topics and prepare for future inter-regime dialogue and coordination activities with the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-use Goods and Technologies. In the short term, informal engagement among smaller groups of states will be likely to be the most practical solution.

### **Managing geopolitics and conflict between MTCR partners**

In the face of geopolitical tensions and armed conflict between partners, the MTCR must ensure its continued functioning.

- The partners should continue technical and thematic work and the sharing of good

practices through the MTCR's subgroups.

- The MTCR should preserve the unique forums that the TEM, LEEM and IEM provide and thus their value for the effectiveness of states' export controls.
- The partners should also continue genuine efforts to demonstrate the value for partners and adherents of multilateral cooperation through the MTCR and the normative role of the MTCR's objectives.
- The partners should explore if they could adopt limited use of qualified majority voting for a subset of MTCR decisions and introduce non-binding decisions on certain temporary measures that allow for reservations.

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