Issue #6 December 2025

# NEWSLETTER

## OVERVIEW



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# INSIGHTS FROM THE CHAIR: THE URUGUAYAN VISION FOR THE HCOC

*Amb. Alejandro Garofali has held the Chairmanship of the Hague Code of Conduct from June 2025 until 2026 on behalf of Uruguay. He reflects on the role of the Code in the current environment and its possible evolutions going forward.*

## WHY IS UNIVERSALISATION OF THE HCOC ESSENTIAL, AND WHAT LEVERS DOES THE CHAIR HAVE TO ENCOURAGE NEW STATES TO JOIN THE CODE?

The universalisation of the HCoC is essential, as it is the only global instrument curbing WMD-capable ballistic missiles. While 145 states have subscribed, bringing in the remaining nations is crucial to strengthen global norms and close security gaps. To achieve this, the Chair (Uruguay) is actively promoting the Code in underrepresented regions, emphasising that subscription is free, non-binding, and improves air and space safety. Furthermore, the Chair is using initiatives like the upcoming mid-term technical meeting to foster consensus and ensure the Code remains relevant and attractive to non-members.

## MISSILE TECHNOLOGIES ARE SPREADING, WITH NEW STATES SEEKING TO ACQUIRE THIS WEAPONS SYSTEM. SHOULD THE HCOC ADAPT TO THESE DEVELOPMENTS?

Yes, the HCoC must evolve to remain relevant. While its core principles stand, the Code must address challenges like hypersonic glide vehicles, which require updated reporting practices to prevent miscalculation. Additionally, the Code should act as a forum for regional dialogue on restraint in response to spreading missile capabilities. Finally, engaging with the "New Space" sector is vital, as the rise of private launchers reinforces the need for transparency and vigilance to ensure safety in air and space activities.

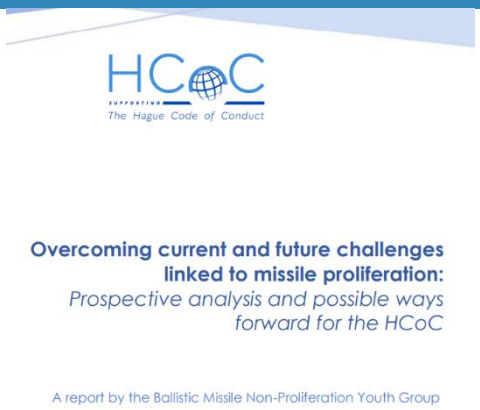
## HOW IMPORTANT IS THE CODE FOR URUGUAY?

For Uruguay, the HCoC is a strategic platform to advance multilateralism and the peaceful use of outer space. The 2025-2026 Chairmanship underscores Uruguay's principled role in non-proliferation, allowing it to reinforce its standing as a trusted, neutral actor while promoting transparency and South-South cooperation. Viewing diplomacy as a work of 'constant sedimentation,' Uruguay is committed to building upon the achievements of predecessors to further the universalisation and implementation of the Code’s norms.

# WORKSHOP ON THE HCOC IN DJIBOUTI

On 11 September 2025, the FRS, in collaboration with the Government of Djibouti, convened a working group at the Institute of Diplomatic Studies in Djibouti. This event, which brought together approximately twenty governmental representatives from Djiboutian institutions, national security forces, and distinguished international experts, addressed the pressing security challenges posed by ballistic missile proliferation in the Horn of Africa. Structured on four substantive sessions, the workshop examined the global non-proliferation and disarmament architecture with specific focus on Djibouti's policies, analysed current trends in ballistic missile proliferation as sources of regional destabilisation, provided comprehensive briefings on the HCoC as a confidence-building measure, and explored the critical nexus between regulating missiles and space launchers while simultaneously promoting peaceful space applications. Sessions featured technical presentations from Alexandre Houdayer & Emmanuelle Maitre (FRS), Eva Nour Repussard (BASIC), senior officials from Djibouti's ministries of Foreign Affairs and Defence, and international experts including Alejandro Garofali (Uruguay, HCoC Chair) and George Wilhelm Gallhofer (Austria, HCoC Executive Secretariat). This workshop represents a significant step forward in regional non-proliferation dialogue, particularly given that while ballistic missile programmes remain limited across Africa, the continent faces emerging proliferation risks through illicit maritime trafficking and unauthorised cross-border transfers, challenges that the HCoC's framework of transparency measures, annual declarations, and pre-launch notifications can effectively address while simultaneously enabling African states to pursue legitimate space development goals.

# PUBLICATION OF THE FINAL REPORT OF THE YOUTH GROUP




In July 2025, the Ballistic Missile Non-Proliferation Youth Group published a report examining how the HCoC can adapt to contemporary missile proliferation challenges across the Middle East, East Asia, and South Asia, whilst addressing emerging technological threats including hypersonic systems and space-based capabilities. The report proposes strategic recommendations to strengthen the HCoC's transparency mechanisms and enforcement capacity through enhanced regional integration and improved coordination with complementary non-proliferation regimes, particularly concerning transfers to non-state actors and dual-use space technologies.

# REGIONAL SEMINAR IN PRETORIA

Held in Pretoria on 25-26 November 2025, this regional seminar was a collaborative effort by the FRS, the European Union, VERTIC, and South Africa's Department of International Relations & Cooperation (DIRCO). The event addressed missile proliferation and the strategic role of the HCoC. Delegates from 12 Southern African Development Community (SADC) nations, including Angola, DRC, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Namibia, South Africa, Zambia, Zimbabwe as well as Kenya attended, representing various regional perspectives. The event opened with a visit at the South African Air Force Museum to view the dismantled RSA-3 missile, which was produced by South Africa during the 1980s and retired in 1994. This visit established a historical context for the region's commitment to disarmament. Discussions explored how the global non-proliferation architecture interacts with African realities, emphasising that while the region actively rejects ballistic militarisation, it must navigate the complexities of dual-use technologies to protect its growing interest in peaceful space development.

A central theme was the "dual-use" dilemma (the fine line between ballistic missiles and space launch vehicles) and how transparency can bridge this gap. Presentations highlighted the critical need for confidence-building measures to prevent escalation amid rising global tensions. South Africa served as a primary case study, detailing the successful conversion of former missile infrastructure, such as the Overberg Test Range, into facilities for alternative activities under strict export controls. This reinforced the seminar's core message: adherence to the HCoC allows African states to pursue technological advancement and space ambitions without diminishing regional security. The seminar incorporated breakout sessions and an interactive "missile crisis simulation" to test diplomatic responses to a fictional unidentified space debris fall scenario. These exercises underscored the urgent need for better regional coordination. The event concluded that the HCoC is an essential instrument for Southern Africa, offering a low-cost, high-impact framework that enhances regional stability while facilitating international cooperation for the continent's emerging space industries.

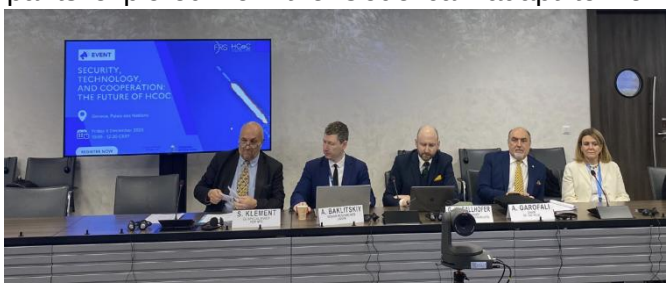
# THE SWORD AND THE SHIELD: REPORT AND WEBINAR

On 3 December 2025, an online webinar took place to discuss the dynamics between missile defence systems and global proliferation. This was anchored in the findings of the HCoC Research Paper N°15, *'The Shield and the Sword'* released by the FRS. Drawing on recent operational lessons from the Middle East and Ukraine, as well as new initiatives such as the 'Golden Dome', the discussion highlighted a critical paradox: while missile defence systems are attractive for protecting populations and assets, they simultaneously create incentives for adversaries to expand and sophisticate their arsenals to overcome these defensive architectures. The session also addressed the resulting risks of space militarisation and the necessity of confidence-building measures to mitigate these spirals.The session was moderated by Etienne Marcuz (FRS) and featured insights from Emmanuelle Maitre (FRS), Prof. Sitki Egeli (Izmir University of Economics), and Zuzanna Gwadera (IISS).



# SECURITY, TECHNOLOGY AND COOPERATION: THE FUTURE OF THE HCOC

Held in Geneva on 5 December 2025, this seminar successfully convened international experts and diplomats to address the evolving relevance of the HCoC after more than two decades of existence. The event navigated the complex intersection of rising geopolitical tensions and rapid technological advancements in missile and launcher capabilities. Through high-level panels featuring key figures such as HCoC Chair Amb. Alejandro Garofali and EU Special Envoy Amb. Stefan Klement, alongside technical experts from FRS and UNIDIR, participants explored how the Code can adapt to new security realities, ultimately reinforcing its critical status as a flexible yet essential instrument for transparency and restraint in an era of global uncertainty.



# NEW MISSILES DISPLAYED DURING CHINESE PARADE

China's 3 September 2025 military parade has shown the display of new ballistic systems. In particular, it officialised Beijing's operation of a nuclear triad through the unveiling of the JL-1 air-launched ballistic missile (ALBM). The JL-1 represents a departure from the subsonic cruise missiles employed by American and Russian strategic bombers, instead featuring a two-stage ballistic system with a manoeuvrable re-entry vehicle. With an estimated operational range of between 3,000 and 8,000 kilometres, the missile could strike the United States or military installations of US allies throughout the Indo-Pacific, including significant portions of Australian territory and Alaska. In addition to the airborne component, the parade featured the JL-3 submarine-launched ballistic missile (SLBM), which equips Type-094 and Type-094A nuclear-powered ballistic missile submarines and represents the successor to the JL-2 SLBM. The JL-3, first flight-tested in June 2019, reportedly achieves a range approaching 10,000 kilometres compared to the JL-2's approximately 7,200 kilometres. American's Department of Defence assessments indicate that the JL-3's successor will incorporate multiple independently targetable re-entry vehicles, implying the current system carries a single warhead.

The land-based component unveiled at the parade underscores China's commitment to modernising its strategic arsenal across multiple generations of systems. The DF-61, a mobile ICBM whose display was expected since March 2024 and was referred to under the alternative designations DF-45 or DF-51, made its official debut and appears intended to replace the aging DF-31 family. Also, the DF-31BJ, the silo-based variant of the mobile DF-31A with an 11,200-kilometer range, could occupy three recently constructed silo fields at Hami, Yumen, and Yulin totalling 320 silos, though strategic ambiguity remains regarding whether each silo will be filled with an active missile or if some will remain empty to complicate adversary targeting. The parade also featured the DF-5C, the latest iteration of the liquid-fuelled DF-5 ICBM originating in the 1960s, distinguished from the earlier DF-5B model by its conical nosecone consistent with a single high-yield warhead of several megatons rather than a MIRVed configuration. State commentary claiming the DF-5C can reach targets "anywhere on the globe" suggests potential fractional orbital bombardment system capability enabling South Pole trajectories to circumvent adversary defences. The parade demonstrated Beijing's strategic determination to construct a diversified deterrent capable of ensuring second-strike survivability while maintaining deliberate ambiguity regarding deployment numbers and operational doctrine.

# MISSILE PARADE IN THE DPRK

North Korea's military parade, commemorating the 80th anniversary of the Workers' Party of Korea on 10 October 2025, showcased the new Hwasong-20 intercontinental ballistic missile. It is described by state media as the 'most powerful nuclear strategic weapon system' in North Korea's arsenal and represents a next-generation solid-fuel ICBM expected to be tested before the end of this year. The system appeared mounted on an 11-axle transporter-erector-launcher (TEL) derived from the earlier Hwasong-19 TEL. It also displayed features critical design modifications, including a blunter-nosed launch canister. It notably lacks the two side-mounted hydraulic actuators used to raise the canister. Expert analysis indicates the canister displayed may have been empty during the parade, though the system had been briefly displayed at a defence exhibition one week earlier. The reuse of the 11-axle chassis raises questions about North Korea's intentions for the larger 12-axle TEL displayed in September 2024, suggesting possible development of an even larger missile system.

The parade also prominently featured the Hwasong-11E, the latest iteration in North Korea's solid-fuel short-range ballistic missile family, which is equipped with what appears to be a hypersonic glide vehicle recognisable to its distinctive wedge-shaped design. This system represents a technological leap seems designed to defeat air and missile defence systems deployed by South Korea and the United States, providing North Korea with improved capability to strike high-value, well-defended targets throughout the Korean Peninsula while complicating adversary detection and interception efforts. The Hwasong-11E is apparently fired from a 10-wheeled TEL capable of carrying two missiles simultaneously and appears based on the enlarged Hwasong-11Da/Hwasong-11C variant designed to carry both conventional high-explosive warheads and nuclear ones. While North Korea claims to have flight-tested multiple hypersonic weapons, questions persist regarding actual operational capabilities, though potential international technical assistance may have accelerated development. The parade overall underscored the central role of nuclear systems in Kim Jong Un's defence strategy and likely represented the culminating showcase of North Korea's five-year military modernisation campaign, demonstrating a missile arsenal expanding in scale, scope, and technological sophistication.

# SELECTED MISSILE TESTS

**Australia's first launch of PrSM**:

- 25 July 2025

Australia conducted its first test of the PrSM from a HIMARS launcher. The missile has a maximum range exceeding 500 km and was co-developed with the United States. Both countries signed a Memorandum of Understanding for PrSM production and sustainment.

**Agni-P**:

- 24 September 2025

Tested for the first time from a modified boxcar integrated into India's railway network, this MRBM has a range of 1,000 to 2,000 km and is equipped with containerised launch capability and communication systems.

**Tayfun**:

- 25 October 2025

The Tayfun missile struck a maritime target over 500 km away in the Black Sea. The system was manufactured by Roketsan and launched from a mobile platform at Sinop.

# SELECTED SLV LAUNCHES

**Eris-1:**

- 30 July 2025

The test launch of Gilmour Space's hybrid-engine rocket failed 14 seconds after liftoff from Queensland, crashing back onto the launch pad. It was the first orbital rocket entirely manufactured in Australia.

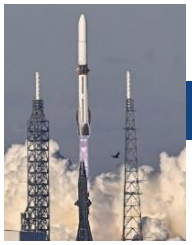
**H-3-24L**:

- 26 October 2025

The rocket launched the HTV-X1 resupply spacecraft to the International Space Station from Tanegashima Space Center. On its maiden flight, the spacecraft, carrying up to 5,820 kg of supplies, separated successfully approximately 14 minutes after liftoff.

**New Glenn**:

- 13 November 2025



The Blue Origin's rocket completed its second flight, successfully deploying NASA's ESCAPADE Mars spacecraft and a Viasat communication test payload. The successful vertical landing of the reusable booster on a sea platform in the Atlantic Ocean turned the company into the second entity to achieve this feat with an orbital-class booster.

# SELECTED PUBLICATIONS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# INFORMATION AND CONTACT

- Organisation website: Fondation pour la Recherche Stratégique
- Further information on the project implementation available here.
- Project website: Supporting the Hague Code of Conduct.

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