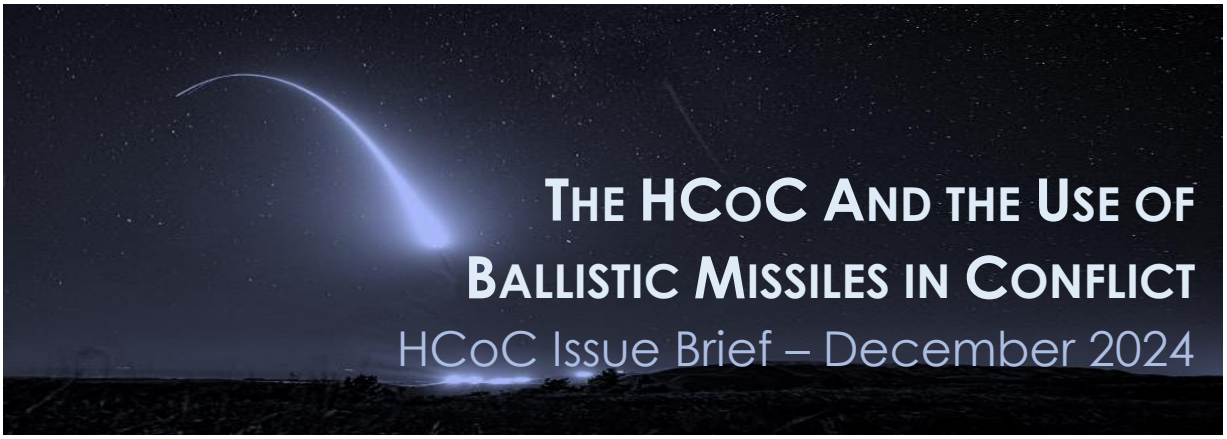

The HCoC And the Use of Ballistic Missiles in Conflict

HCoC Issue Brief – December 2024

In brief

As other tools designed to address the proliferation of missiles, The Hague Code of Conduct (HCoC) is focused on **ballistic missiles that can carry weapons of mass destruction** (WMDs).

It includes **confidence-building measures** such as missile test notifications, whose implementation is being challenged by the **widespread use of ballistic missiles in conflict** observed in the past five years.

Indeed, hundreds of ballistic missiles have been fired in recent conflicts, in particular in **Ukraine** and in the **Middle East.**

The generalisation of ballistic missiles as conventional weapons, used regularly as an alternative to air strikes, cruise missiles or even drones, conducts to a **new reflection on the role of the Code** in the current environment.

This document has been produced with the financial assistance of the European Union. The contents of this document are the sole responsibility of the Fondation pour la Recherche Stratégique and can under no circumstances be regarded as reflecting the position of the European Union.

Traditional missions of ballistic missiles

For their first decades of existence, ballistic missiles were developed in priority as **means of delivery for weapons of mass destruction** (WMD). Able to reach great range at high speed, they were also rather inaccurate, which meant that only a warhead able to achieve major destruction could be considered as serving a military purpose. In consequence, ballistic missiles have been **used scarcely in the 20th century**. Noticeably, Iraq and Iran employed SS-1c / Scud-Bs and derivatives to target highly populated areas in the so-called 'war of cities', as well as the Republic of Afghanistan against Mujahideen groups between 1989 and 1992. This strategy, however, aimed more at creating **psychological damage** than at bringing military advantage. In other conflicts of the end of the Cold War or immediate post-Cold War, ballistic missiles were used sporadically, including in inter-state conflicts. By the time of the first Gulf War, this situation changed with the **introduction in the United States of a precise short-range quasi-ballistic system designed for conventional strike**, the MGM-140 ATACMS, which was used in particular in Iraq in 1991 and 2003. Unlike its adversaries, the United States used this new weapon extensively for specific precision strike missions (32 missiles fired during Operation Desert Storm in 1991 and 414 during Iraqi Freedom in 2003).[i]

Rise of ballistic strikes in recent years

In recent conflicts, the use of ballistic missiles for conventional strikes has risen sharply, in complement to other strike systems. Different situations can be observed. Some countries, such as Iran, have **invested heavily in the constitution of a ballistic arsenal** and have used it for **long-range strikes**, often aiming at demonstrating capacities or in retaliation strategy. Iranian non-state allies such as the Houthis, in Yemen, have also developed a strong ballistic arsenal (with the assistance of Tehran) and have employed it massively to aim at in-depth strategic targets, in

HCoC SUPPORTING The Hague Code of Conduct

Author: Emmanuelle Maitre
Website: nonproliferation.eu/hcoc

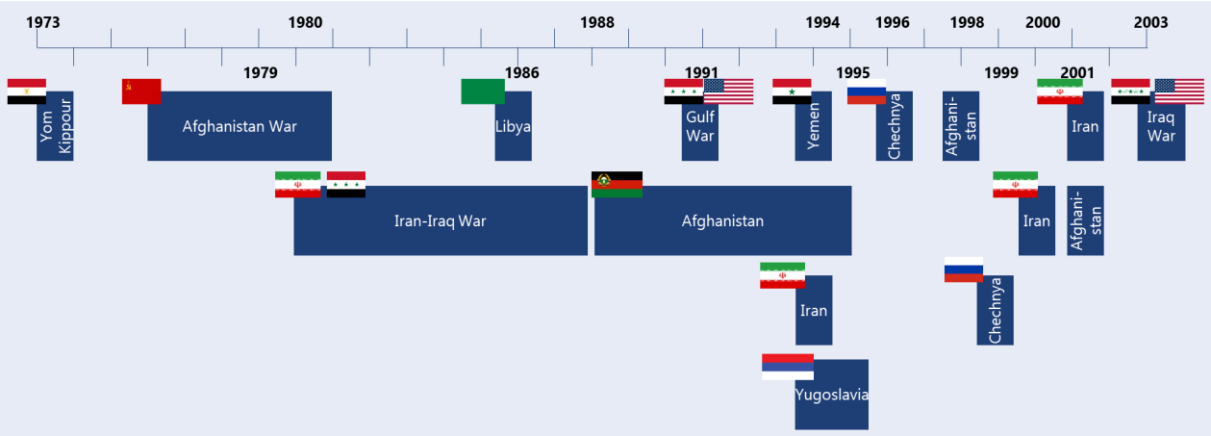

Figure 1. Conflicts during which ballistic missiles were used from 1973 to 2003 and countries that used ballistic missiles for strikes. Credits: FRS

Yemen, in Saudi Arabia, or in the United Arab Emirates. Since 2023, the Houthis have started to aim at ships navigating the Gulf of Aden and the Red Sea with **anti-ship ballistic missiles**.[ii]

Conversely, some other countries have acquired and employed **short-range precision systems** for some very specific missions (for instance the destruction of a critical infrastructure or a bridge), the high price of the systems leading them to scarce use. This has been the case of Azerbaijan against Armenia, Russia against Georgia, Türkiye against Syria, and Israel against Iran.

The war in Ukraine has seen new practices with regard to ballistic missiles. Russia has launched more than 500 SS-26 Iskander-M, Kinzhal and North Korea-procured KN-23 over Ukraine since the beginning of the conflict.[iii] These missiles target **military and civilian infrastructures such as fuel depots, but also civilian populations** with several strikes impacting populated neighbourhoods. With the acquisition of ATACMS from the United States, Ukraine has also started to conduct ballistic strikes, at a more limited scale so far.

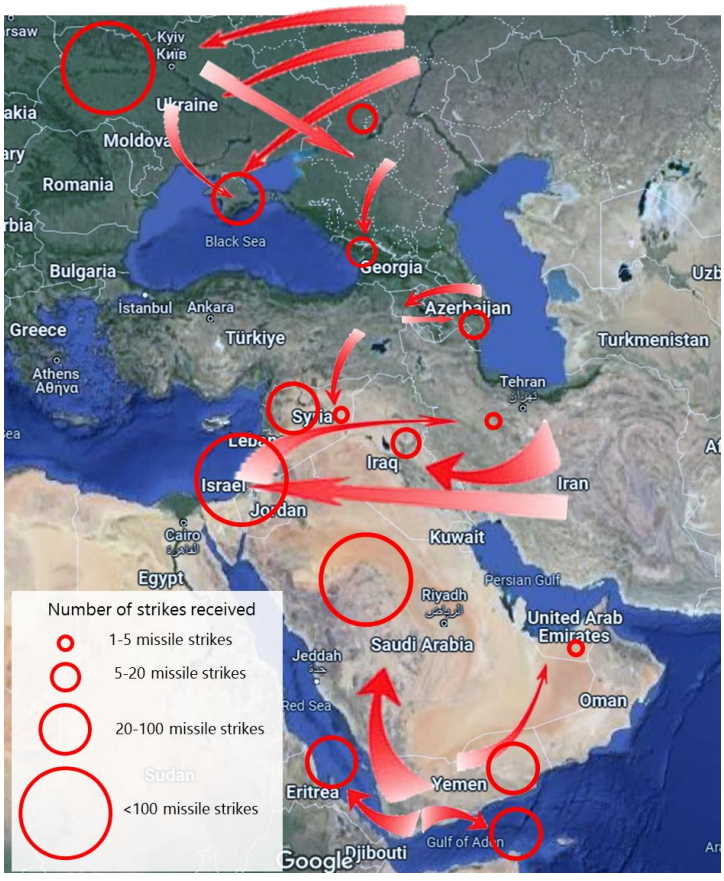

Figure 2. Use of ballistic missiles in conflict since 2017

Perspectives on ballistic missile use in conflicts

The accumulation of missile attacks in the past five years has highlighted several features of ballistic missiles as theatre strike systems. Admittedly, some of these systems **can be intercepted with a high rate of success**, as demonstrated by Israel during the 13 April 2024 attack. This however requires massive investment in

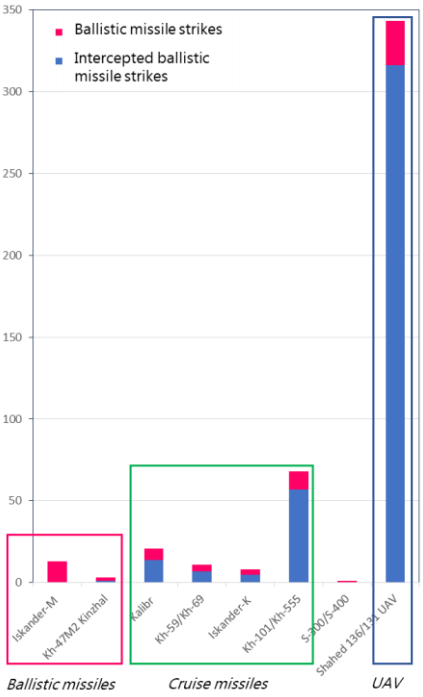

Figure 3. Missiles launched by Russia in Ukraine in June 2024 (Source: Ukrainian Air Force)

an adequate **antimissile architecture** and strike scenarios where short range systems are used with few penetration aids. As a consequence, many states have conveyed their interest in strengthening their defensive capacities. However, whereas Israel and the United States are mostly successful in intercepting threatening Iranian or Houthi systems, most Russian ballistic strikes in Ukraine have reached their targets. This is due to the **lack of Ukrainian defensive systems able to tackle quasi ballistic missiles** optimised for penetration, and the exhaustion of interceptors and resources necessary for interception through massive unmanned vehicles (UAV) and cruise missiles attacks.

The **tactical utility of ballistic missiles** is looked at with great interest, and Ukraine in particular has stated that the acquisition of MGM-140 ATACMS is a key asset to target Russian military objectives.[iv] However, military and political effects of ballistic strikes remain dependent on missile stocks, the nature of the defence facing them, and the quality of the weapon system in itself. Indeed, some systems, such as the KN-23, have been described as unreliable.[v] As was pointed out regarding the civil war in Yemen, ballistic missiles may have the ability to **prolong the war and distress civilian populations who are living under the constant threat of missile alerts**, but may not prove a decisive capacity in a protracted conflict.

Despite these limitations, the ability to destroy accurately targets located deep into the enemy's territory means that short-range and even middle-range missiles are attractive capacities for states facing a range of threats, and **many new countries are in the process of developing or acquiring these weapons**. Thus, countries such as Morocco, Lithuania, Latvia or Australia have turned last year to the United States in order to purchase the ATACMS, while Poland, Canada, the United Kingdom, Australia and Greece might be interested in the new PrSM, whose range is alleged to go beyond 500 km.[vi]

Impact on the Hague Code of Conduct

As the Code was not designed to deal with the use of missiles on the battlefield, these developments have raised a number of questions on its role.

First, the Code includes a notification regime which aims at **informing other subscribing states of ballistic missile tests** to prevent their confusion with actual strikes. It logically does not require from states that they notify in advance their missile strikes.

Second, the conventional use of ballistic missiles, reinforced by the systematic use of guided rockets designed for conventional strike but now defined as ballistic systems, has a strong impact on the **scope of the HCoC**. Indeed, while many systems are strictly designed for a conventional mission and therefore do not fall in the remit of the Code, other missiles are by nature dual, which means that they have the theoretical range and payload that could allow them to carry a WMD. More specifically, Russia has used SS-26 Iskander-M, Kh-47M2 Kinzhal and KN-23 missiles in Ukraine, which are clearly **dual-use systems**.

These developments lead to reconsider the way the Code can better take into account ballistic conventional capabilities.[vii] In particular, HCoC subscribing states may have to consider a possible **extension of the scope of the Code to distinguish nuclear-tipped from conventionally-tipped missiles among dual-use systems.** This important effort could be adopted as a reporting practice by subscribing states in their annual declarations, without a formal modification of the text of the Code.

As it is, despite challenges, the current environment probably makes the Code even more relevant. First, by displaying transparency on their missile arsenals, states can contribute to **limit worst-case assessments and arms race dynamics**. This logic sustains the UN registry on conventional arms, through which states can reduce the risk of erroneous calculations from potential adversaries. Second, as dual-use longer-range systems are being fielded and are used for conventional strikes, it is all the more important to **ensure that missile tests do not lead to the extension or escalation of conflicts**. Third, the Code can be used as an important tool to **distinguish the type of payload** mated with dual-use systems and therefore avoid confusion on the nature of strikes.

About the Hague Code of Conduct

Adopted in 2002, the Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) is a politically binding instrument aiming to limit the proliferation of weapons of mass destruction (WMD) delivery vehicles. Composed of a set of transparency and confidence-building measures, the HCoC is the only existing multilateral instrument to focus on WMD delivery vehicles. The HCoC has reached 145 subscribing states (2024) vs 93 at its inception.

When subscribing to the HCoC, states commit to **abide by a set of UN treaties and international conventions on space security**; to **produce an annual declaration** regarding ballistic missile capacities and national policy on non-proliferation and disarmament treaties and instruments; and to **deliver pre-launch notifications** prior to any missile or space launch. Documents are uploaded onto a dedicated online platform managed by Austria, which acts as the HCoC Immediate Central Contact (Executive Secretariat). Subscription to the HCoC is free of charge.

While subscribing states are asked to exercise 'maximum restraint' in the development of ballistic capacities, they are **proscribed neither from possessing ballistic missiles nor from pursuing space launch activities.** In return, subscribing to the HCoC enables states to **gain access to information** shared by other subscribing states, and to **display their political commitment** to non-proliferation and disarmament.

---

[i] Maj. Carter Rogers, Army Tactical Missile System: Revolutionary Impact on Deep Operations, thesis presented to the Faculty of the US Army and General Staff College, Fort Leavenworth, Kansas, 2004, https://apps.dtic.mil/sti/pdfs/ADA429075.pdf

[ii] Ian Williams and Shaan Shaikh, 'The Missile War in Yemen,' CSIS, 9 June 2020, https://www.csis.org/analysis/missile-war-yemen and Fabian Hinz, 'Houthi anti-ship missile systems: getting better all the time,' *Military Balance Blog*, IISS, 8 January 2024, https://www.iiss.org/online-analysis/military-balance/2024/01/houthi-anti-ship-missile-systems-getting-better-all-the-time/

[iii] Number compiled from various sources, including information from the Ukrainian Air Force.

[iv] Peter Dickinson, 'Ukraine receives potentially game-changing long-range US missiles,' *Atlantic Council*, 17 October 2023, https://www.atlanticcouncil.org/blogs/ukrainealert/ukraine-receives-potentially-game-changing-long-range-us-missiles/

[v] Tom Balmforth and David Gauthier-Villars, 'Ukrainian data casts doubt on precision of N.Korea missiles fired by Russia,' *Reuters*, 16 February 2024, https://www.reuters.com/world/europe/kyiv-says-russia-has-fired-least-24-north-korean-ballistic-missiles-ukraine-2024-02-16/

[vi] Timothy Wright and Zuzanna Gwadera, 'NATO goes back to ballistics,' *Military Balance Blog*, IISS, 1 July 2024, https://www.iiss.org/online-analysis/military-balance/2024/07/analysis-nato-goes-back-to-ballistics/ ; Dan Schere, 'Lockheed awarded $227M contract for ATACMS,' *Inside Defense*, 26 July 2024, https://insidedefense.com/insider/lockheed-awarded-227m-contract-atacms and Max Blenkin, 'Further clarity around Government's missile deals,' *Australian Defence Magazine*, 24 August 2023, https://www.australiandefence.com.au/defence/joint/further-clarity-around-government-s-missile-deals

[vii] Stéphane Delory, 'Ballistic missiles and conventional strike weapons, Adapting the HCoC to address the dissemination of conventional ballistic missiles, *HCoC Research Papers n°6,* FRS, January 2020, https://www.nonproliferation.eu/hcoc/ballistic-missiles-and-conventional-strike-weapons-adapting-the-hcoc-to-address-the-dissemination -of-conventional-ballistic-missiles/

FONDATION pour la RECHERCHE STRATÉGIQUE

This project is implemented by the Foundation for Strategic Research

This project is financed by the European Union