I. Executive Summary:

The Global Commons (in defense and security terms understood to be the arenas of international air, space, maritime, and cyberspace) are crucial to NATO in both operational and security terms. All NATO members rely on the Global Commons for trade, commerce, and communication. Normal life in the modern western world would grind to a halt without unfettered access and use of the Commons. Similarly, NATO is militarily and politically reliant on the Global Commons for a wide range of military and commercial uses.

Modern adversaries will largely avoid the use of conventional military power in openly confronting the nations of the Alliance. Rather, future enemies are likely to confront the Alliance through both direct and indirect asymmetric methods. They will most likely focus on areas where military power is not always best suited to protect and secure.

The process of globalization is peculiar to the contemporary world, is fueled by technological developments that cost less and will become increasingly available, making it more likely that opponents will make decisions to deny, disrupt, and deter access to the global commons. The commons is in essence the inter-connective tissue that enables nations to connect and prosper: the high seas, international air, space and cyberspace. Securing freedom and assured access to the global commons is therefore fundamental to safeguarding the global system.

Is there a role of NATO to assure access to the Global Commons? Is NATO able to respond? Can NATO capabilities fit into this challenge? Is militarization of civilian elements of society rational in order to be responsible for them? This workshop examined these issues and the key emerging themes were as follows:

- Adversaries will use and attempt to negate NATO’s use of the Commons.
- Nationally, defence agreements and policies that establish rules normalize use of the commons and need to be agreed in advance.
- Internationally recognized rules for use of the commons must be developed and ratified; without rules there are no rule-breakers.
- As NATO nations continue to set their own policies for the commons, (due to a lack of international agreements), the problem for NATO is that agreement, e.g., land locked versus maritime states, will become more difficult as interests will tend to diverge not converge.
- NATO has left the space domain largely to individual nations to control and it relies on these nations to offer services as required. As space becomes more congested coordination will become increasingly important.
- Access to space systems is a key military enabler for NATO, yet NATO has no Space policy.

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1 International Air was not covered at this workshop, but will be covered in depth in October in Kalkar Germany at the JAPPC Conference which will focus on Air and Space.
2 For the purposes of this paper, the modern western world is defined as North America and Europe from 1974 to present.
• More focus must be placed on resilience of cyber systems and capabilities that attribute action will be an important element in promoting cyber security.

The consensus of the workshop participants was that NATO has a role to play in protecting access to the Global Commons (as does the EU). Moreover, NATO should not be seen to lead the initiative as agreements will need to be internationally accepted when viewed as an inclusive framework (civil, industry, military).

II. Detailed findings:

1. Overview

Termed the “connective tissue” of international security, the global commons, i.e., high seas, international airspace, outer space and cyberspace, constitute a global public good that serves as a crucial enabler of international security and trade. Yet, because different nations have different norms, standards, and capabilities - agreeing to a common definition is difficult. Agreeing to international guidelines or even designating an institution to address the issue of commons – to some is and always will be near impossible.

Introduction to the workshop posed the following overarching questions to guide conference discussion:

• What constitutes the global commons?
• What framework is best for the global commons?
• Is NATO the institution for the job?
• Specifically, what should NATO do to address cyber, space and maritime issues?
• What constitutes a threat to the global commons?

2. Political and Military Challenges, Dynamics and Roadblocks

NATO has a long and successful history of maritime engagement and in recent years has launched limited cyber security policies. When analysts consider NATO as a forum for discussing the global commons and providing a framework, several attributes make NATO a viable choice.

• A global forum with a proven record of results, ranging from peacekeeping operations in Kosovo to promoting efficiency in defense procurement.
• Involvement in both the U.S. and Europe; its transatlantic ties foster cooperation between key nations with a vested interest in ensuring continued access to the global commons.
• Nations with likeminded values and interests.

Though NATO provides a forum for consultation, Nations must take several steps to enable a global consensus. The current approach by the United States to the global commons originates primarily in the Pentagon, which creates a skew toward military considerations rather than a holistic civil-military appraisal. In addition to civil and military gaps, the components of the global commons are often regarded as mutually exclusive, stove-piped issues rather than interconnected pieces of a whole global security system. Formulating consensus will require a stitching of the pieces, necessitating interdepartmental efforts to overcome constraints that are bureaucratic in nature, i.e., organizations that don’t talk and share information.
European allies face similar obstacles. Though they might be willing to use NATO as a forum to address the global commons, they also must determine their views regarding the commons prior to accepting a role for NATO. In doing so, they face the same challenge of unifying their compartmentalized national agencies that oversee cyber, maritime and space issues. For many, an additional consideration is the role that the EU should play in the global commons. Given the EU’s expanding civil expertise, some European nations are more inclined to envision the global commons as primarily a civil issue and might prefer a prominent EU role in the global commons.

Forming national-level consensus on the global commons enables Nations to create a platform from which NATO allies can negotiate and coordinate with external partners. Akin to the ongoing discussion on Comprehensive Approach, several analysts view the majority of the challenge to be ensuring open cooperation with actors outside of NATO. Formulation of an alliance-wide consensus will facilitate a working relationship with outside partners, who will be necessary in moving to a global solution.

Envisioning what role NATO will play in the global commons will be important as the Alliance prepares for how it will conduct business in the decades to come. For example, in the coming months NATO will deliver a new Strategic Concept (NSC) that defines its strategic outlook for the next decade. The Group of Experts (GoE) report, an effort led by a team of international experts to focus and inform NATO’s Strategic Concept drafting process, however, made no mention of the global commons. While the report did assert that cyber-attacks constituted a threat that could invoke Article V, there was little discussion regarding the importance of knitting together a concept to protect access to the commons should it come under attack. The 2009 cyber-attacks against Estonia demonstrated this ambiguity; experts outlined appropriate countermeasures, but ultimately, little was done in the wake to provide definitional clarity, in terms of what constitutes an attack. Addressing that same question across the global commons will be even more difficult and highlights the challenges the Alliance will face in prompting dialogue and creating a framework to deal with these issues. Framing the global commons as an issue logically compatible with historic areas of Alliance operations, e.g., Kosovo and Afghanistan, rather than an emerging challenge, might be helpful in prompting NATO to pursue a role in securing access to the global commons.

3. Challenges and Opportunities in the Domains of the Global Commons

a) NATO’s Role in Space

Though the Alliance is wholly reliant on space for social, economic and military needs, NATO itself has no space policy or force structure to sustain alliance activity in space. Given the lack of norms guiding the increasing use of space, the situation becomes more problematic; however, within NATO member states, different perspectives emerge on how to best address the issue. Some experts argue that the political capital necessary to spur a NATO space posture will not coalesce without a crisis. Yet, within NATO, ISAF’s Afghanistan operations have informed a sharply divergent conclusion. Difficulty with space based systems in Afghanistan has strongly underscored the urgency of formulating a space policy that brings together the space capabilities of nations so that the problems of coordinating different systems do not constrain NATO’s ability to execute out-of-area operations in support of strategic interests.

To formulate a credible space policy, analysts recommend that NATO should:
• Recruit/maintain space experts to bring NATO up to speed on space operations; its current use of commercial systems is difficult to coordinate effectively.
• Including non-U.S. members will raise awareness among NATO members, as well as generate much needed thought about a program that many NATO members perceive as of secondary importance.
• Discuss joint systems architecture. Coordinating governmental and commercial space efforts is important to effectively leverage member states National capabilities, even down to planning orbits together.
• Set up a common operations center inside NATO. The NATO space system is currently located inside the NATO C3 Agency, a scientific support and acquisition provider that is unable to fully address NATO’s role in space. The agency should either be expanded with a specific mandate to address space issues, or the NATO space program should be relocated to civilian or military structures within Alliance. This should be addressed in the ongoing discussions on NATO command structure.

Several obstacles will pose difficulties to moving forward with a viable NATO space policy. Building transparency and confidence between the EU and the US will be necessary to address the perception that European and US space programs are competitive rather than cooperative. Secondly, expanding NATO’s role in space by creating an agency and procuring space operations equipment will be difficult for many European nations in light of widespread tightening of individual defense budgets. Furthermore, finding value-added data sharing opportunities to shore up Allied Ground Surveillance (AGS) to enable ISAF expeditionary operations in the short term will be necessary and many nations may view the requirement as an either/or. Despite these short-term problems, in the long-term, crafting a space policy that unifies NATO’s shared interests will go a long way to ensuring better capability and interoperability in the future.

b) NATO’s Role in the Maritime Domain

Over the past twenty years, decision makers both within NATO and alliance partner nations have approached maritime security with a policy of benign neglect. NATO’s role in helping maritime nations transform forces to better prepare for maritime operations:
• Influence policy on individual, national and organization levels. ACT can influence the defense planning process as nations make important procurement decisions as well as advocate on a national level urging defense ministers to prioritize, procure and develop interoperable maritime capabilities.
• ACT can encourage modularity for in naval programs. For instance, Denmark’s decision to move away from a national submarine program, may serve as a model of a difficult decision that enhanced overall European maritime security as one nation deferred a national ship building program that was duplicative in order to shift funding to another area. By coordinating role specialization, ACT ensures that the collective pooling of maritime resources maximizes capabilities.
• Utilize national, maritime experience – ACT applies best practices and lessons learned in defense planning that enables individual states to better focus their maritime capabilities.
• Emphasize access to the high North – If NATO opts to pursue an economic or military agenda in the area, ACT can play a role in reconfiguring naval capabilities to assure access.
• Prepare for non-traditional threats – investing in maritime situational awareness (MSA) capabilities that diversifies maritime capabilities to include the ability to address piracy and terrorism, e.g., broadening the scope of MSA. Maritime Patrol Aircraft (MPA), UAVs, satellites and dirigibles are several examples of maritime SA capabilities the Alliance should leverage.
• Foster Anti-Submarine Warfare (ASW) Partnerships - ACT must ensure the Alliance remains vigilant with respect to ASW capability and training.

While NATO’s maritime forces are highly interoperable, space and maritime components are less coordinated. Space architecture is critical for complete maritime surveillance, tracking, and assessment. The coordinated use of assets in space will be critical to maintaining a maritime picture.

c) NATO’s role in cyberspace

Cyberspace presents distinctive challenges to sovereignty, regulation, and security. Of all the components of the global commons, cyberspace is the least governable, and the most difficult to secure. It enables threats and in many ways defies jurisdictional categorization. As such, it is best defined as an ecosystem, formed of components that are distinct, but combine to form a complex whole. Because of its deregulation and potential to enable threats, experts argue that several security objectives must be addressed to better manage cyberspace.
• Norms- Develop norms around not inflicting negative externalities on a system that all nations use and have a stake in maintaining.
• Dialogue – Focus on instituting the right norms, and how to respond to a cyber-attack when these norms are violated.
• Regimes – Positive efforts to control cyberspace, will correspondingly deter malicious activity.
• Leadership – The U.S. clearly wants to continue in its leadership role in cyber; however, a co-approach between the US and European is needed.

NATO can be a fertile ground for engaging European nations in developing procedures and capabilities to help improve, the cyber ecosystem, and deal with cyber-criminal activity that impacts the Alliance. Cyber-attacks cannot be allowed to bring ambiguity to Article V - compelling NATO to decide what level of cyber-attacks will demand response. While it is recognized that overreaction is problematic and could potentially weaken Article V, it is important to note that capacity-building within nations is crucial in helping to address cyber-attacks at their sources. Today and in the future, NATO must plan to operate under cyber-attack; investing in cyber resilience, and attribution and deterrence capabilities will help ensure interoperability in the most difficult of circumstances.

4. Outside Perspectives of the Global Commons

The global commons are also known as the contested commons. Both Russia and China, nations with a vital interest in the global commons, have their own security policies and priorities
that shape their perspective on global domains and desire for global recognition and status. They are not necessarily interested in allowing assured access to the global commons as this may conflict with national interests.

Russia’s desire for global power is balanced by structural weakness, economic uncertainty, and technical deficiencies. Its forays into the Arctic underscore the necessity, especially from NATO member states, of cooperating openly with participating nations in maritime safety, search and rescue, and crisis management situations. Engaging Russia in the Arctic and in cyberspace through existing NATO forums, such as the NATO-Russia Council, may pay dividends in securing consensus from non-aligned nations who have a large stake in the global commons.

Similar to Russia in its importance to the global commons, China’s ambitions of extending its power projection capabilities, its ability to operate from space, and control of network communications make it a partner whose importance merits engagement. Just as NATO member states recognize the importance of global public space in importing and exporting, China also views preserving access as vital to its continued economic growth. From a military perspective, however, Beijing may view cyber as a space that is open to attack (not assuring access) as an acceptable way to counter western strength in command and control of its forces.

III. Conclusions

Assured Access to the global commons should be the goal of the Alliance. Resiliency and attribution across all domains should be emphasized in concert with defense and offensive efforts. As the Alliance moves forward it should advocate norms and standards through exemplary behavior and through its denunciation of those actions that fall short of those standards. Attribution of transgressions in the global commons will be key as the Alliance works to create rules and norms that form the backbone of a credible policy of deterrence; without rules, there are no rule breakers.

Collective action is necessary to establish an effective international regime to govern the global commons. While the issues at stake when taken individually are not cause for immediate concern – curtailing use of the commons, when viewed as an enabling system for a globalized economy, does present significant risk to the prosperity of the Alliance. In an era of austerity and defense cuts, now more than ever, ACT needs to take a lead role in helping NATO develop an understanding of the complexity and necessity of protecting the global commons. To do so, NATO will need to develop the necessary infrastructure with indigenous capabilities that span both military and civilian realms. For example, NATO needs to craft a credible space policy; rejuvenate its maritime agreements; and strengthen its cyber responses.

To facilitate these tangible improvements, NATO should advocate the need for international rules and standards governing the assured access of the global commons at the upcoming summit in Lisbon. By using NATO to help define norms, nations and their global partners can avoid a compartmentalized approach to the global commons and begin to define and establish mutually beneficial regimes in maritime, space and cyber realms of international security.