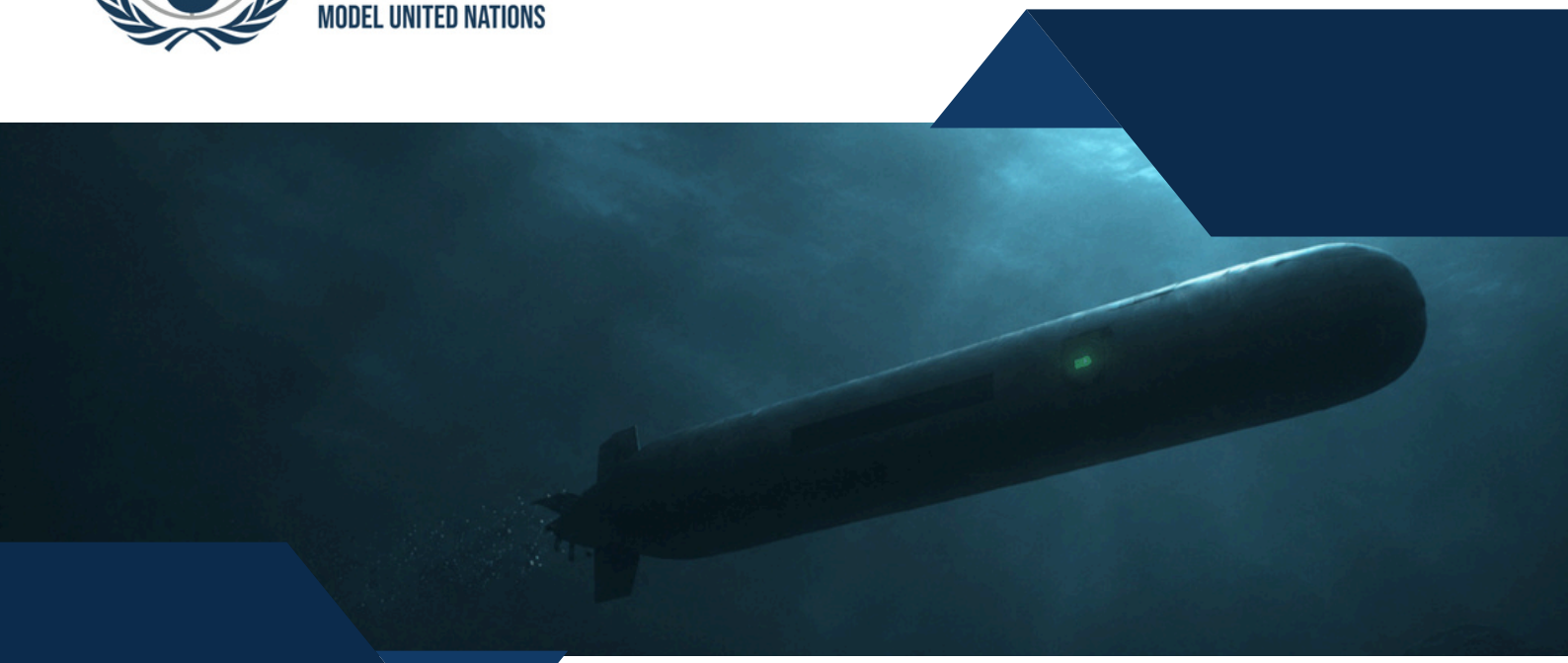
SEZMUN
THE SEZİN SCHOOL
MODEL UNITED NATIONS



GENERAL ASSEMBLY 1

SEZMUN III. HRD SYMPOSIUM

ISSUE OF: ENSURING INTERNATIONAL SECURITY AND ACCOUNTABILITY IN THE ERA OF AUTONOMOUS UNDERWATER WARFARE

CHAIR:
EFE KINCI

CO-CHAIR:
AYTÜL SÖYLEMEZ

Dear Delegates,

Welcome to GA1 of SEZMUN 25. We are very excited and honoured to welcome you to our conference. We, Efe Kıncı and Aytül Söylemez, prepared this chair report as guidance for our topic.

Our main topic will be Ensuring International Security and Accountability in the Era of Autonomous Underwater Military Systems. As technology advances rapidly, countries are entering a new era of underwater military capabilities and autonomous naval systems. While these technologies offer significant advantages in surveillance, reconnaissance, and maritime security, they also raise important legal, ethical, and security concerns. How can we ensure that the development and use of autonomous underwater systems do not threaten international peace and stability?

Throughout this conference, you delegates will be encouraged to consider the implications of autonomous underwater military systems from various viewpoints, such as legal, political, environmental, and ethical. We hope this debate will not only deepen your understanding of international cooperation in maritime security but also inspire practical and sustainable solutions to upcoming challenges. We expect you, delegates, to come well prepared, and we encourage you to research thoroughly so that our debate can go smoothly. We hope you have a fun time while learning and sharing this experience with your peers. We are hoping to see you all very soon.

Best Regards.

Efe Kıncı, Aytül Söylemez

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Topic Introduction

As modern warfare techniques evolve rapidly, autonomous underwater military systems have become one of the most critical agenda items in international security. Unmanned underwater vehicles (UUVs) and autonomous submarines are designed to operate underwater with limited human intervention or entirely without human presence. The growing investment by nations in advanced naval technologies has accelerated the use of these systems for military purposes, including surveillance, reconnaissance, maritime security, and the protection of underwater infrastructure.

However, this rapid and intense development of autonomous underwater technologies brings with it serious concerns regarding global security, accountability, and international cooperation. While existing international frameworks, such as the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and international humanitarian law,provide a foundation for regulating maritime activities, they are not fully equipped to specifically address the entire range of challenges posed by autonomous military systems. Issues such as human oversight, state responsibility, and the potential escalation of underwater military competition remain critical problems that the international community must resolve.

In this context, ensuring international security and accountability in the development and deployment of autonomous underwater military systems is of critical importance. Given that underwater environments and infrastructures are shared by multiple nations, the responsible regulation of these technologies must become a common international concern. This report aims to highlight the growing significance of autonomous underwater military systems and to provide a comprehensive examination of their implications for international security, accountability, and global stability.

Key Terms

- **Autonomous Underwater Military Systems:** Unmanned underwater technologies designed to conduct military operations with limited or no direct human control. Such systems are increasingly being developed for surveillance, reconnaissance, and other maritime operations, and their implications for international security are a cause for concern.

- **Unmanned Underwater Vehicles- UUVs:** These are underwater vehicles that operate without a human crew on board. They can be controlled remotely by operators or programmed to perform specific tasks autonomously. Their military applications include monitoring maritime areas and gathering intelligence.

- **Human Oversight:** This refers to human operators' involvement in monitoring and controlling autonomous underwater military systems. As these technologies become more advanced, maintaining human oversight is of great importance to prevent unintended actions and ensure that military decisions remain accountable.

- **Underwater Infrastructure:** The seabed houses vital infrastructure, including communication cables, internet networks, and energy pipelines. These structures play a significant role in global communication and the maintenance of economic stability; consequently, as underwater military technologies advance, their protection has become a critical priority.

Key Issues

- **Lack of a Clear Regulatory Framework:** Although existing international laws regulate maritime activities and military operations, they do not specifically address all the challenges created by autonomous underwater military systems. The absence of detailed regulations regarding their development, deployment, and use may lead to disagreements between nations and difficulties in determining responsibility.

- **Risk of Military Escalation and International Conflict:** The increasing development of autonomous underwater military technologies may encourage countries to expand their naval capabilities and compete for underwater strategic advantages. Misinterpretations, technical failures, or unexpected actions by these systems could increase tensions between states and potentially lead to military escalation.

- **Threats to Underwater Infrastructure:** Submarine communication cables, internet networks, and energy pipelines are essential for global communication and economic stability. The growing use of underwater military systems creates concerns about the potential surveillance, disruption, or targeting of these critical structures, threatening the security of multiple nations.

- **Lack of Human Oversight and Accountability:** As autonomous systems become capable of performing military tasks with limited human involvement, determining responsibility for their actions becomes increasingly difficult. If an autonomous underwater system causes damage or violates international rules, questions arise regarding whether the responsibility belongs to the state, the manufacturer, or the operator.

- **Environmental and Ethical Concerns:** The deployment and operation of military technologies in underwater environments may disturb marine ecosystems and threaten biodiversity. Furthermore, the use of autonomous systems in military operations raises ethical questions about allowing machines to perform tasks that may have serious consequences for human life and international security.

Historical Background

The development of unmanned underwater technologies dates back to the 1950s, when advances in ocean exploration and military research encouraged the creation of vehicles capable of operating beneath the sea without a human crew. One of the early examples was the Self-Propelled Underwater Research Vehicle (SPURV), developed in 1957 by the University of Washington for underwater research and data collection.

During the Cold War, growing military competition increased interest in underwater technologies for naval surveillance, reconnaissance, and mine detection. As navigation, sensor, and computer technologies improved throughout the following decades, unmanned underwater vehicles became capable of performing increasingly complex military tasks. Their operational use was demonstrated during the 2003 Iraq War, when REMUS underwater vehicles were used for mine-clearance operations around the port of Umm Qasr.

In recent years, these technologies have become increasingly advanced. In December 2023, the United States Navy accepted delivery of its first Orca Extra Large Unmanned Undersea Vehicle (XLUUV), developed by Boeing. Designed to operate autonomously for extended periods, Orca demonstrated the growing military potential of large unmanned underwater systems.

In July 2025, the Royal Navy conducted trials under Project Scylla, demonstrating the launch and recovery of autonomous underwater vehicles from a submarine. More recently, on 30 September 2026, the Royal Navy announced a successful torpedo trial involving its uncrewed submarine, XV Excalibur. The trial used an inert and recoverable test version, highlighting the expanding military capabilities of uncrewed underwater systems.

These developments demonstrate the transformation of underwater vehicles from primarily scientific research tools into increasingly sophisticated military technologies. As countries continue to invest in these systems, concerns regarding international security, human oversight, accountability, and the risk of military escalation have become increasingly significant.

Possible Solutions

- Establish an International Regulatory Framework: Develop international guidelines specifically addressing the development and use of autonomous underwater military systems. These guidelines should clarify the responsibilities of states, establish standards for military applications, and ensure that existing international laws are appropriately applied to emerging technologies.

- Mandatory Transparency and Information Sharing: Encourage states to share information about their autonomous underwater military activities, including major testing programs and the general purposes of their systems. Greater transparency could reduce misunderstandings between nations, strengthen mutual trust, and prevent unnecessary military tensions.

- Ensure Meaningful Human Oversight: Establish international standards requiring appropriate human supervision over autonomous military systems, particularly when their operations may involve the use of force. Human involvement in critical military decisions could help prevent unintended actions and ensure that important decisions rem

Main Parties Involved

United Kingdom: The United Kingdom has been actively developing autonomous underwater capabilities through the Royal Navy. Projects such as Project Scylla and trials involving the uncrewed submarine XV Excalibur demonstrate its efforts to integrate autonomous underwater vehicles into existing naval operations. Furthermore, its cooperation with the United States and Australia through the AUKUS partnership has strengthened its involvement in developing emerging maritime technologies. The United Kingdom's recent advancements make it a key participant in discussions regarding the future operational use and international regulation of these systems.

Australia: Australia plays a vital role in the development of autonomous maritime technologies through its participation in AUKUS. Under the partnership's second pillar (Pillar II), Australia, the United Kingdom, and the United States cooperate on advanced capabilities, including autonomous underwater systems. Australia has also hosted joint maritime exercises involving autonomous and networked technologies. These developments reflect Australia's commitment to strengthening regional maritime security and maintaining close technological cooperation with its allies.

USA: The United States is one of the leading nations in the development and deployment of autonomous underwater military systems. Through the U.S. Navy, it has heavily invested in unmanned underwater technologies, including the Orca Extra Large Unmanned Undersea Vehicle (XLUUV), developed by Boeing and delivered in December 2023. Alongside its cooperation with the United Kingdom and Australia within the AUKUS framework, the U.S. actively shapes discussions on international maritime security, freedom of navigation, and the governance of autonomous underwater systems.

Main Parties Involved

People's Republic of China: China is an increasingly prominent actor in the development of unmanned maritime technologies. Its military and research institutions have been actively expanding the use of autonomous underwater systems for maritime surveillance, seabed mapping, and naval operations. In diplomatic forums, China emphasizes the importance of peaceful maritime technology, international cooperation, and inclusive participation in global maritime governance. Its position is particularly relevant to debates on transparency, international regulations, and balancing technological advancement with regional maritime security.

Russian Federation: Russia is another significant actor in underwater military technology and maritime security. The country has publicly announced the development of advanced autonomous underwater systems as part of its broader naval modernization and strategic deterrence efforts. Russia also places strong emphasis on protecting its critical maritime infrastructure and national security interests. Its involvement is central to international

Related Organisations

United Nations Office for Disarmament Affairs (UNODA): UNODA works to promote international peace and security through disarmament and arms control. It supports international discussions concerning emerging military technologies, including autonomous weapon systems. Its work is relevant to this topic because it provides a platform for states to discuss the risks of autonomous military technologies and the importance of maintaining human control over their use.

International Maritime Organization (IMO): The IMO is a specialized agency of the United Nations responsible for improving the safety and security of international shipping and preventing marine pollution. Although its regulations primarily concern civilian maritime activities rather than military submarines, its work on maritime safety and autonomous shipping provides useful experience for discussions about emerging underwater technologies.

International Hydrographic Organization (IHO): The IHO promotes international cooperation in hydrography, which involves measuring and describing the physical features of oceans and seas. It develops international standards for nautical charts and maritime information. Its work is relevant to underwater navigation, maritime safety, and the responsible sharing of information about ocean environments.

United Nations Environment Programme (UNEP): UNEP works to protect and preserve the global environment, including marine and coastal ecosystems. It promotes international cooperation to address environmental threats and encourages sustainable practices. Its involvement is relevant because the testing and operation of underwater military technologies may create environmental concerns for marine ecosystems and biodiversity.

International Telecommunication Union (ITU): The ITU is a specialized agency of the United Nations responsible for international telecommunications and information technologies. It plays an important role in improving the resilience and protection of global communication networks, including submarine communication cables. Its work is particularly relevant to discussions about protecting critical underwater infrastructure and maintaining international connectivity.

Summary

As highlighted throughout this report, the rapid advancement of autonomous underwater military systems introduces unprecedented opportunities and complex challenges for international security. While uncrewed underwater vehicles (UUVs) and autonomous submarines enhance maritime surveillance, reconnaissance, and the protection of naval assets, they simultaneously raise critical concerns regarding regulatory gaps, potential military escalation, threats to vital underwater infrastructure, and a lack of clear human accountability.

Throughout the SEZMUN conference, delegates in General Assembly 1 are tasked with addressing these multi-dimensional issues by balancing technological progress with global stability. By fostering international cooperation, establishing clear legal frameworks, ensuring meaningful human oversight, and promoting transparency, the committee aims to pave the way for sustainable and secure maritime governance. The decisions and resolutions formulated during this session will play a crucial role in shaping the future regulation of autonomous naval technologies and preventing potential conflicts in the world's shared oceans.

Resources

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- https://www.icrc.org/en/doc/assets/files/publications/icrc-002-0173.pdf
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