UNODC
United Nations Office on Drugs and Crime

UNODC Contribution to the Informal Consultative Process on Oceans and the Law of the Sea: Capacity Building and the Transfer of Marine Technology

The UN Office on Drugs and Crime (UNODC) recognizes the importance of innovation and technology in advancing the global fight against maritime crime and ocean governance, which remains a significant challenge to international peace, security, and sustainable development. In alignment with the theme "Capacity building and the transfer of marine technology: New developments, approaches and challenges," UNODC, through its Global Maritime Crime Programme (GMCP), has been at the forefront of integrating cutting-edge technologies to enhance maritime law enforcement capabilities.

Key areas of innovation and technology in maritime law enforcement:

1. **Uncrewed Aerial and Surface Vehicles:** UNODC has spearheaded the deployment of advanced unmanned systems, including Uncrewed Aerial Vehicles (UAVs) and Uncrewed Surface Vessels (USVs), to improve maritime domain awareness (MDA) and surveillance. Notably, the UAV training school established in the Philippines, combined with the donation of a fixed-wing UAV, has strengthened the Philippine Coast Guard's ability to monitor the Sulu Sea, while the USV deployed by the Philippine Coast Guard serves as a key asset for autonomous surveillance and data collection in maritime operations. UNODC also has supported the establishment of the Unmanned Systems' Regional Training Centre for the Caribbean in The Bahamas, initiating structured capacity building and the transfer of technology to support countries in the region in adopting standardized approaches to the application of technology in maritime law enforcement.
2. **Maritime Surveillance Infrastructure:** UNODC has supported the installation of terrestrial-based Automatic Identification System (AIS) receiver stations across the Pacific, enhancing real-time vessel tracking. Additionally, the installation of X-Band Coastal Radar stations in Tuvalu, Kiribati, Nauru, and Vanuatu is providing critical radar coverage to extend the reach of maritime monitoring, supporting both national and regional maritime security efforts.
3. **Forensic Technology for Maritime Law Enforcement:** Through the introduction of maritime device forensic capabilities, UNODC has empowered maritime enforcement agencies in Southeast Asia to analyse digital devices such as Marine GPS units, AIS transponders, and Vessel Monitoring Systems (VMS). This innovative approach enables law enforcement to gather high-quality digital evidence, thereby supporting effective investigations and judicial outcomes in maritime crime cases.
4. **Support for Maritime Operations and Training**: In the Western Indian Ocean region, UNODC has provided short-range drones to support final-stage maritime interdiction operations, facilitating physical intercepts and evidence collection. Additionally, UNODC has equipped and renovated maritime operations centres, providing training on MDA and data analysis platforms. These efforts improve the coordination, integration, and efficiency of maritime law enforcement activities.
5. **Technological Tools for Evidence Management and Case Prosecution:** UNODC has provided electronic case management systems to judicial authorities, enhancing the prosecution of maritime crime cases. By streamlining the management of digital

evidence and case workflows, these systems play a pivotal role in ensuring that maritime crimes are investigated and prosecuted effectively.

6. **Innovative Approaches to Underwater and Environmental Protection:** In cooperation with Egyptian authorities, UNODC has delivered underwater maritime drones for detecting and protecting underwater cultural heritage and supporting search and rescue (SAR) operations in the Mediterranean and Red Sea regions. Additionally, training on the use of artificial intelligence (AI) and satellite imagery to detect illegal activities, such as pollutant dumping and marine resource exploitation in Marine Protected Areas and other Area-Based Management Tools, has been provided across several regions in partnership with the Allen Institute for AI, through its Skylight system.

Through these innovative approaches, UNODC continues to drive technological advancements and capacity-building efforts to combat maritime crime and improve ocean governance. UNODC remains committed to sharing knowledge, expertise, and technology to enhance global maritime security and ensure the sustainable use of marine resources.

Despite significant progress, challenges remain in the effective transfer of marine technology and capacity-building efforts. Resource constraints, particularly in developing states, limit the ability to adopt and sustain advanced technologies. Technological gaps and interoperability issues hinder seamless data sharing and coordination, while the need for specialized training remains critical for ensuring effective use of these tools. Additionally, regulatory and institutional barriers, along with the impacts of climate change on maritime security, complicate the implementation of innovative solutions. UNODC continues to address these challenges through tailored assistance, improved coordination, and sustainable strategies.