UNIVERSITY of VIRGINIA | NATIONAL SECURITY DATA AND POLICY INSTITUTE

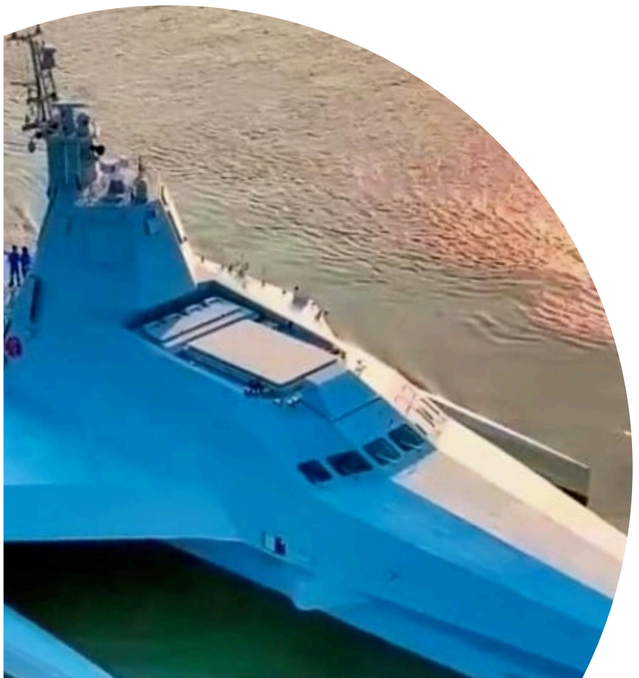
NATIONALSECURITY.VIRGINIA.EDU | NSDPI@VIRGINIA.EDU

Dillon J. Clark

China's Intelligentized Maritime Strategy: Next Generation Technologies and the Future of South China Sea Security

EXECUTIVE SUMMARY

- China is integrating AI, autonomous systems, and advanced sensors across its naval infrastructure to assert persistent presence and compress decision cycles in the South China Sea.
- These developments threaten U.S. maritime domain awareness and challenge regional deterrence by enabling real-time surveillance, swarm coordination, and intelligent C2.
- To maintain decision superiority, the U.S. must accelerate autonomous and AI-enabled capabilities, deepen commercial-military integration, and build a fused allied command network under AUKUS Pillar II.



BACKGROUND

- The South China Sea has become the focal point of strategic rivalry, where overlapping territorial claims and China's efforts to reshape maritime norms directly challenge international law and longstanding U.S. interests in freedom of navigation and regional deterrence.
- China has rapidly expanded and modernized its naval infrastructure to enhance multi-domain awareness, facilitate gray-zone operations, and implement A2/AD.

NEXT-GEN TECHNOLOGY

- Sensors: Through its Underwater Great Wall, China is building an advanced, AI-integrated sensor network that uses quantum and edge technologies to enable continuous undersea surveillance and strategic chokepoint monitoring.
- Autonomous Vehicles: A growing fleet of unmanned surface and underwater systems extends China's maritime reach, supports gray-zone operations, and enables swarm-based tactics.
- Data Fusion and Integrated C2: China is developing an AI-enabled command architecture to integrate multi-domain data, automate targeting, and expedite decision-making across contested environments.

POLICY RECOMMENDATIONS

- Commercial Sector Fusion: The U.S. must accelerate integration of commercial innovation into defense systems to close deployment gaps in AI, autonomy, and edge computing.
- Cybersecurity and Cyberwarfare: Securing command networks and degrading adversarial AI systems will require offensive cyber capabilities and resilient digital infrastructure.
- Allied Integration and C2 Fusion: As the strategic contest shifts toward informational dominance rather than technological parity, the U.S. must lead in building an integrated allied command network—fusing ISR, autonomous systems, and sensor data across nations through frameworks like AUKUS Pillar II and CJADC2—to create an interoperable, real-time battlespace capable of compressing decision timelines and offsetting China's geographic advantage.