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Innovations to consider in overflight training for On-Site Inspections

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The effective implementation of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) requires meticulous planning and execution of on-site inspections (OSI), essential for verifying compliance with the CTBT. A crucial component of an OSI is inspection via overflight, which provides comprehensive data much needed to narrow down the search area and support ground operations. Innovative training methodologies designed to enhance the overall readiness of inspectors and thus the outcome of overflight missions are reviewed. Integration of advanced simulation technologies, including virtual reality and artificial intelligence, to create immersive training environments for inspectors is suggested. These technologies offer realistic scenarios enabling inspectors to develop critical decision making skills in a controlled setting, which complement existing training methodologies. Additionally, the use of unmanned aerial platforms in training will be analysed for their potential to offer safe, cost-effective, and versatile practice opportunities. Through these cutting-edge approaches, the CTBTO can ensure that its inspection teams are equipped with the skills and knowledge needed to conduct successful overflight operations, ultimately strengthening the integrity of the CTBT verification regime.

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