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Assuring a Safe, Secure and Sustainable Space Environment for Space Activities (4)

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THE APPLICATION OF TCBM TO ASSURE A SAFE, SECURE AND SUSTAINABLE SPACE
ENVIRONMENT FOR SPACE ACTIVITIES

Abstract

The wide-ranging applications including telecommunications, Earth observation, satellite navigation, and weather forecasting makes the world increasingly dependent on space-based services and the space domain. On the other hand, the space environment is becoming increasingly congested, contested and competitive. There is a growing concern, that threats to vital space capabilities may increase during the next decade both from natural and manmade hazards, and the possible development of disruptive and destructive counterspace capabilities, which might cause possible worsening of weaponization in outer space. As such, preventing an arms race in outer space (PAROS) and space debris governance (mitigation and remediation), as two critical elements of space security issues, are in the interest of maintaining international peace and security and are essential conditions for the promotion and strengthening of international cooperation in the exploration and use of outer space for peaceful purposes. However in respect of space security governance and management, there are less consensus or process achieved in PAROS than those in space debris mitigation domain. By comparison, the main challenges to space debris management might come from technical side, but to PAROS, they are more from political and legal side. The paper identifies the opportunities, challenges to space safety, security, sustainability global governance. The opportunities include the well-recognition of the significance of space safety and security, consistent needs for new space normative and rule of law. The challenges are addressed as lack of uniform implications of "space security", controversial views on applicability or legal basis of certain rights or activities relating to space security, such as space debris, in particular with active debris removal (ADR) and small satellite issues, self-defence issues, cyber security in space. The paper proposes some recommendations, in particular with the application of TCBM contained in the final report in 2013 (65/68), which is produced by the GGE on TCBMs in Outer Space Activities in 2012. The Report consists of a substantive consensual possible measures. The paper focuses on two crucial elements of the application of TCBM. One is to establish information exchange mechanism, the other is to foster cooperation and dialogue mechanism. In this respect, the paper analyzes the interaction of TCBM report, the relevant process in UNCOPUOS and ICOC proposed by the EU. The paper is in-depth discussions on the necessities and the challenges involved in coming to understandings on TCBM related to the safety and security of outer space activities.