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Author: Mr. Xiaodao Li
The University of Hong Kong, China, lixiaodaolaw@163.com

Prof. Yun Zhao
The University of Hong Kong, China, zhaoy@hku.hk

DEVELOP LEGITIMACY AND EFFECTIVENESS OF SECTION 11 OF THE ARTEMIS ACCORDS:
A SHIFT FROM SAFETY ZONES TO SAFETY OBLIGATIONS**Abstract**

Section 11 of the Artemis Accords states that signatories can establish safety zones to protect personnel, equipment, and operations in outer space from harmful interference. The safety zone is often seen as the core legal issue of Section 11. Still, this paper argues that it is necessary to shift the focus from safety zones to safety obligations. It is because the latter is more conducive to enhancing the legitimacy and effectiveness of Section 11. As to effectiveness, safety zones would undermine optimal effectiveness and policy effectiveness of Section 11. Safety zones cannot prevent three types of harmful interference: long-distance harmful interference occurring outside the zones, long-term harmful interference occurring before the mission begins, and any harmful interference affecting personnel or devices leaving from the zones. In extreme cases, the unilateral establishment of safety zones may cause harmful interference to other actors. In terms of legitimacy, safety zones negatively impact the normative and sociological legitimacy of Section 11, for Article IX quoted by Section 11 cannot provide a sufficient legal basis for creating safety zones. The above problems can be well addressed if signatories establish effective and legitimate safety obligations to avoid harmful interference. Safety obligations would better enhance the effectiveness of Section 11 than safety zones. Safety zones are essentially temporary areas where space actors should comply with safety obligations. Thus, safety zones limit the scope and duration of safety obligations. If safety obligations are reasonably established and generally observed, signatories can avoid harmful interference even without establishing safety zones. In terms of legitimacy, there is more legal basis for establishing safety obligations than for establishing safety zones. Therefore, if Section 11 shifts the focus from safety zones to safety obligations, controversy over legitimacy will be significantly reduced. The paper further put forward three suggestions to facilitate the legitimacy and effectiveness of Section 11 by improving the institutional arrangement of safety obligations. First, besides Article IX, three more provisions of the Outer Space Treaty should be used to justify signatories' rights to set up safety obligations. Second, the paper proposes a "unilateral notification and joint determination" mechanism during the process of establishing safety obligations to balance different states' interests. Third, safety obligations should be divided into four types, each differing in the scope or duration of binding force. This arrangement helps reduce the spatiotemporal constraints imposed by safety zones and thus better avoid different types of harmful interference.