

Law Issues and Public Awareness Related to Space Exploration (11)  
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## LIABILITY FOR GLOBAL NAVIGATION SATELLITE SERVICES: FROM THE PERSPECTIVE OF BEIDOU SYSTEM

### Abstract

The issue of liability for global navigation satellite systems (GNSS) signals and services has long been controversial. The key question in this regard is whether the GNSS owner and operator can be held liable if the service is disrupted or failed. Under current UN outer space treaties, states should be liable for the damages caused by its space objects. Moreover, current GNSS operators worldwide are mainly governments. This may thus involve international liability of states, resulting in increased complexities of this issue.

China's Beidou navigation satellite system has been one of the four core GNSS service providers in the world. Beidou is owned by the Chinese government and operated by the China National Space Administration (CNSA). Due to the potential danger of satellite navigation, there may be liability issues arising in the future for Beidou's operator.

The first question discussed in this paper is that whether the Chinese government, which is the operator of Beidou system, will be liable under current international law for the damages caused by navigation satellite malfunction or defective signals. So far, there has been no specific international legal instrument governing liability for GNSS providers and operators. In this regard, relevant provisions of the Outer Space Treaty and the Liability Convention are of great relevance. Some have argued that the Liability Convention cannot be applied to satellite navigation, as this convention only concerns the damages caused by "space object", which do not include satellite navigation signals. However, there is still argument that the convention should be interpreted as covering liability for satellite navigation damages. This question is thus subject to discussion and analysis.

This paper then analyzed whether the operator of Beidou system is liable for satellite navigation damages under current Chinese legal system. In this regard, relevant Chinese laws and regulations concerning satellite navigation will be examined. Although there have been no specific laws concerning satellite navigation in China, the Regulation on Satellite Navigation of China has been listed on the 2016 legislation plan of the State Council. The government has realized the importance of the liability issue concerning satellite navigation. It has been argued that the Chinese government should declare immunity for satellite navigation damages. Relevant policy instruments in this regard will also be examined, in order to clarify the attitude of the Chinese government and how it is going to cope with this issue.