



How Indonesia is losing strategic satellite orbital slot

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If by November of this year Indonesia fails to launch a new satellite, the country will lose its 123 Longitude East satellite orbital slot. Located in geostationary orbit, it remains positioned above the island of Sulawesi. Such strategic orbital slots are so limited that only a handful of countries can obtain them.

The 123 Longitude East orbital slot is allocated for L-band satellites. Operating at 1-2 GHz frequency, L-band satellites are essential for mobile communication, telecommunication, navigation and surveillance. This type of high technology mobile satellite can trace small moving objects in all kinds of weather, making it vital for, among other things, defense purposes. The one controlling the satellite is able to keep an eye on the archipelago 24/7, all year round.

The polemic regarding Indonesia's satellite slot started when the Garuda-1 satellite was de-orbited after malfunctioning in 2015. Avanti Communications Group was contracted by the Indonesian government to move the Artemis satellite into the 123 Longitude East orbital slot, replacing the Garuda-1. In doing so, the Artemis satellite had to be moved from Central Africa to Sulawesi — a very high-risk mission, considering that according to the Liability Convention of 1972, the Artemis state registry would be liable for damage caused to other satellites as a result of the Artemis' movement.

However, the mission only lasted from December 2016 to November 2017. The new satel-

lite's launch was cancelled due to a dispute between the Indonesian government and Avanti Communications Group at the London Court of International Arbitration over delay of payment.

The International Telecommunication Union rule stipulates that a country is obliged to replace its satellite within three years in order to preserve the slot. The three-year period starts after the slot becomes vacant, and it does not refer to when the contract ends or the estimated life span of the satellite had it not malfunctioned or been de-orbited.

This provision leaves no room for other interpretation, setting November 2020 as a firm deadline for Indonesia to find a satellite replacement.

Failure to launch a replacement satellite means other countries on the orbital slot waiting list are free to step in afterward. Considering the importance of the 123 Longitude East orbital slot, in the worst-case scenario, Indonesia will most likely lose this slot forever. Indonesia could still "own" the slot through a service agreement. However, it would be very costly, and put our military defense at risk.

Taxpayer money would be wasted due to the bad policy. The state budget would be drained at the expense of the development

of other sectors, including the autonomy and control of satellite technology.

Back in 2015, Indonesia had a strategic plan to fill the 123 Longitude East orbital slot with a new mobile military satellite worth US\$850 million under the SatKomHan L-band project. Unfortunately, the project was shelved for unclear reasons.

In 2017, the Development Finance Comptroller (BPKP) released an assessment stating that the feasibility study of the Artemis satellite leasing was inadequate. This led to the postponement of the satellite rent-payment by the Finance Ministry to Avanti Communications Group. It would be unfortunate if a feasibility study was based only on numbers or commercial perspective. On the other hand, it is reasonable for the state to avoid financial losses for fear of the Corruption Eradication Commission.

However, a satellite does not only concern figures. It also determines a country's geopolitical power. In the context of the Natuna maritime dispute between Indonesia and several other ASEAN countries and China, without control over the L-band satellite, Indonesia will lose its position and bargaining power.

All movements of our fishing ships and naval vessels will be detected by the satellite.

There should be a special assessment to determine a satellite's strategic value over numbers. Lessons have been learned from the Artemis case, and the same mistakes should not be repeated in the future — either by the BPKP or other supervisory institutions.

Two of the most distressing factors regarding this plan are the Palapa Ring Program — famously known as Tol Langit (sky toll) connecting the Indonesian archipelago through fiber optics announced a year ago and the dissolution of the Indonesian National Aviation and Outer Space Council (Depanri). Since December 2014, there has been no other medium to disseminate the national space vision through the ministries, including the importance of the 123 Longitude East orbital slot. In the Artemis and SatKomHan L-band projects, no medium could bridge and resolve the different views between the Defense Ministry and Finance Ministry.

The 123 Longitude East orbital slot has been empty for two years now. Building a new satellite from scratch will take years and we definitely do not have enough time to do that. Re-launching the SatKomHan L-band project, therefore, must be seriously considered.

Time is ticking, with less than 11 months to go until November. It is a very short period, but if the government is aware of the slot's importance, we could still save it with alternative plans, including collaboration with the private sector for profits.