



EU wants to create sustainable measures in space

September 16, 2019

Sean Louis Salazar

The European Union is moving on a space sustainability protocol that means to find effective measures to regulate orbital debris, deployment, and de-orbit procedures.

The EU Space Task Force for the European External Action Service is taking the lead on the new space sustainability measure, which the agency calls the Safety, Security, and Sustainability of Outer Space or 3SOS.

Carine Claeys, special envoy for space and head of the Space Task Force for the European External Action Service, told the news during a panel discussion at Euroconsult's World Satellite Business Week last September 13. She said that the public diplomacy initiative will promote "ethical conduct" in space amid concerns about orbital debris.

The acronym, she noted, has a second meaning. "It is also three times SOS," she said, "to create the case and a sense of urgency."

The 3SOS follows near encounter between a SpaceX Starlink satellite nearly colliding with the European Space Agency's Aeolus satellite. Although both parties have settled that a miscommunication and technical difficulties was the reason, it opened the conversation about the trash that's accumulating around Earth's orbit.

The ESA has been talking about regulating orbital satellites for quite some time now too. They have been arguing that as we develop better and more advanced technologies where it allows us to send more spacecraft into space, we then have to also consider the trash that comes along with it.

In particular, 3SOS is an effort to mitigate the belief that low Earth orbits, in particular, are becoming increasingly crowded with satellites and debris, a situation that will be exacerbated by the deployment of mega-constellations.

There are now well over an estimated million pieces of space debris larger than 1 centimeter in orbit around the Earth. Each one has the potential to collide with and destroy another satellite, creating hundreds of thousands of more pieces of space debris.

Collisions between satellites are not completely out of the ordinary. As more and more satellites are sent out to space, the higher the chance that a collision is bound to happen.

"Is this all sustainable and responsible?" Claeys said. "I'm afraid not, without safeguards."

Based on what the ESA has indicated, so far, they intend to regulate satellites and the respective companies that deployed them to have a de-orbit measure when it has reached the end of their life span. In the instance that they cannot perform it themselves, a different company dedicated to removing debris will do it for them.

The ESA notes that this opens up a new market in space commercialization, which makes them believe that their proposal is feasible. They hope to set this up while the rules about this are loose to motivate people to start operations.

However, the EU's Space Task Force for the European External Action Service 3SOS details remains vague although we know that it is meant to be a "call for responsible behavior" in space.

So far, Claeys called for some degree of space traffic management to avoid collisions, including placing transponders of some kind on satellites to better locate and identify them. That effort could include sharing of space situational awareness data and an "obligation" for satellites to deorbit themselves at the end of their lives.

"I hope that we will be able to reach a common understanding of all space actors in all parts of the world on responsible and sustainable behavior," she said. "This would then allow traditional diplomats to progress."

For now, 3SOS will focus on discussions, including with industry, space agencies and think tanks, to build a common understanding of the issue and potential solutions. That includes a workshop on the issue in Brussels in December.

"I think that is the way forward for building that common understanding of reasonable behavior," she said.

That effort, though, doesn't include imposing new regulations on satellite operators based in EU nations, out of concerns that such rules could put those companies at a competitive disadvantage.

"There are things that can be done at the European level, but I don't think that the best way to go forward is to have compulsory measures at a national or supranational level," she said. "I think that good behavior and common understanding, to be applied at the world level, is the only way to preserve a level playing field for competition."

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