

14th ESPI Autumn Conference

The post-2030 European Space Agenda

Session 3: Space, a relevant tool for the changing security landscape

“During the last ESA Ministerial Council in November 2019, a programme dedicated to security was approved by MS for the first time. How does ESA plan to engage with security stakeholders?”

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ESA Council at Ministerial level in November 2020 – Seville

For the first time, the ESA Member States endorsed a general political orientation at programmatic level with the word SECURITY associated with SAFETY:

Programmatic pillar “Safety and Security”

This pillar encompasses 3 dimensions:

- Safety IN Space (Protection of assets in space from threats originating in space or from the ground)
- Security FROM Space (Protection of humanity and assets on Earth from threats originating on Earth through services from space)
- Cyber-resilience (Protection of space assets and critical business processes from threats originating from criminal cyber activities)

This new programmatic pillar raises 2 essential questions:

- What is the meaning of “Security” from the ESA member States perspective?
- From this approved pillar, how to build on and to enlarge the ESA security activities?

The first essential point to consider: [the ESA status](#)

ESA = civilian R & D organisation (Defence and military activities excluded)

ESA Convention art. 2: “for exclusively peaceful purpose” (legal scope ?)

WAY FORWARD at the ESA Ministerial Council in 2022

To understand the security priorities of the “security stakeholders” (first, the ESA Member States security actors)

The current security approach mainly focuses on **MONITORING** to anticipate/prevent threats from becoming a risk (LAW ENFORCEMENT and blue security forces – Police, Justice, Customs)

The possible enlargement will relate to the **RESPONSIVENESS** dimension (near real-time) to face unforeseen and sudden events (e.g. 9/11 terrorist attacks, current pandemic, chemical explosion in Lebanon, environmental crimes and pollutions, crime against humanity, migrants in a critical situation...) to help, to assist, to save lives **SPACE CAN BRING A DECISIVE CONTRIBUTION**

Next Ministerial Council meeting in 2022

Possible enlargement of the security-related activities will strongly depend on:

- Definition of the security notion by the ESA Member States,
- Determination of a common set of MS security priorities,

The role of ESA will be to translate these security priorities into programmatic evolutions

Major security threats identified: migration, terrorism, organised crimes, illegal activities at large, proliferation, crisis areas/regional tensions, under-governed territories, disease transmission, food security...

ESA efforts will focus on:

- Satellite capacities (small/nano) combined with HAPS,
- Sensors on-board: SAR, hyperspectral, thermal IR, video...
- Ground segments and smart storage,
- Dissemination means of data/services to reach end-users in due time,
- Downstream applications (AI, change detection, predictive analytics, 3D simulation, virtual/augmented reality, multi-sources fusion...),
- Autonomous cloud-based computing-processing, in-orbit processing, interactive platforms, visualisation...

To take away

How does ESA plan to engage with security stakeholders?

- Security notion to be specified by ESA Member States,
- Definition of a common set of Member States security priorities,
- Space solutions with non-space assets to meet the security priorities (space segment – ground segment – downstream applications) → END-USER DRIVEN,
- ESA contribution strictly respecting its status/convention as Civil R&D organisation,
- NO DUPLICATION with national and EU security activities (e.g. Copernicus/security),
- Involvement of ESA MS Industry/companies (strengthening competitiveness, benefiting from New Space opportunities),
- Keeping in mind the inherently DUAL-USE nature of space assets,

Enlargement of security and space activities will be possible only with ESA Member States and for the ESA MS.

Thank you for your attention!

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