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**THE ISSUE OF FRAGMENTATION IN  
EU SPACE GOVERNANCE**

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## Introduction

With the advent of the so-called “space race” era during the Cold War, states started giving major consideration to developing their space capabilities, having realised the many advantages they could bring. Indeed, military operations in space primarily concern satellite-based surveillance, communications, and intelligence operations, thus allowing states to benefit from them as space-related development can, among many things, extend the range and capabilities of communications, improve missile early warning and enhance situational awareness beyond any terrestrial capability. Realising the various advantages brought by space policies led to proliferation as space capabilities are now increasing across a growing list of nations. Nevertheless, competition has also risen, as states aspire to improve their space capabilities to have a significant advantage over their counterparts. In this context, the European Union has acknowledged the risks that competition and proliferation can bring and has started working on a common Space Policy and Strategy; such action could better protect space systems and services, while maximising the potential use of these systems for security and defence purposes, thus reinforcing the role of the EU as a global space power (EEAS, 2023.) However, fragmentation challenges current European space policy governance.

## The Fragmented Landscape

Space policy in Europe is implemented by the European Union through the Commission, the External Action Service (EEAS), the European Union Agency for the Space Programme (EUSPA), European intergovernmental organisations like the European Space Agency (ESA) and some key member states with national space agencies. Such European organisations include different member states and follow different procedures for decision-making or budget implementation compared to the EU.

This diversity benefits the member states, as it provides them with a certain degree of flexibility in choosing whether to implement their space programmes at a national level, through the ESA’s or EU’s space programmes, or in collaboration with other states depending on their interests and budgets. On the one hand, this dynamic has led to the involvement of more and more EU member states in the space sector and the development of a robust European space industry. On the other hand, a complex system of governance for the space sector in Europe has emerged, resulting in great difficulties in adopting key documents proposed (EPRS, 2017).

Space competencies and capabilities at European level are thus divided into several different layers of governance, not all of which are fully controlled by the EU, negatively impacting the EU's capacity to pursue strategic autonomy in this domain.

Fragmentation is also a key issue for European representation in space matters at international level. Depending on the international institution, Europe is represented either by its individual states, by the EU and/or by ESA (EPRS, 2017).

The following graph outlines the roles of the different actors in European space policy:

Activities	EU	ESA	EUMETSAT	GSA	Member States	National space agencies	Industry
Define space policy	•	•			•		
Define and fund space programmes	•	•	•		•		•
Develop and implement programmes		•				•	•
Operates space programmes		•	•	•		•	•
Fund space R&D activities	•	•			•		•
Perform space R&D activities		•				•	•
Conduct space exploration programmes		•				•	
Regulate the space sector	•				•		

Source: EPRS. • The private sector is beginning to enter these activities (Newspace)

### Limitations to European Space Governance: the EU/ESA Relationship

In recent decades, the European Commission (EC) and ESA have worked together to improve European space policy cooperation. ESA, although created with the aim of formulating a common European space policy, has developed outside the process of European integration, since not all EU member states are ESA members and vice versa. In 2004 the two institutions signed an agreement formally separating their roles. ESA possesses the technical competency to implement space programmes and oversees the development of European space science and space exploration programmes. The EU's competencies lie in regulation and the financial capacity to invest in large long-term space programmes, while also being able to develop member states' use of EU space infrastructure, services, and data. However, the Commission's competence is not to manage and operate these programmes (EPRS, 2017). A good illustration of the partnership between ESA and the EU and their different roles is Galileo, the European satellite navigation and positioning programme. In this partnership, the EU, needing space facilities, commits to paying for half of the project, and ESA, possessing the expertise and technological capabilities, funds the rest (ESA, n.d. - a).

Nevertheless, the growing importance of European space programmes and the EU's dependence on the ESA's technical expertise have not translated into the evolution of space-policy-related governance at European level. Indeed, different obstacles in EU/ESA relations exist, all contributing to limiting European governance in space cooperation.

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One such obstacle is the different funding regimes and financial rules adopted by the two institutions. ESA programmes are, in most cases, financed by member states' holdings based on their Gross National Product (GNP) and pursue the goal of geographical return, namely, a principle by which the ratio between the share of a country in the weighted value of contracts, and its share in the contribution paid to the Agency, must be x per cent (e.g. 0,98%) by the end of a given period (ESA, n.d. - b). Additionally, ESA programmes receive an annual contribution from the EU. In contrast, EU rules require compliance with the principle of the most economically advantageous tender. These regulatory differences create difficulties and constraints especially when programmes are financed through joint ESA and EU participation, thus exacerbating decision-making processes and causing programmes and their impact to be less effective (Liakopoulos, 2019).

The shared management of programmes such as Galileo between the EU and ESA leads to a multiplication of the expertise needed to define, develop, and operate the programme across the two. The principle behind their agreement is that the Commission has to focus its involvement in space on a number of key issues (such as navigation and Earth observation), whereas the founding elements and scientific responsibilities remain ESA competencies. Nevertheless, ESA's technical nature has adversely affected its policy-making abilities despite the fact it has proven its ability to implement ambitious and successful space programmes. ESA has displayed, over time, difficulties in elaborating a comprehensive and solid space policy. This is due to the fact that, firstly, it is not politically responsive and has no formal political link with European society, and secondly, ESA member states are generally represented by their research ministries rather than strategically minded national policymakers (Mazurelle, Wouters, Thiebaut, 2009). These elements have led to disagreements between the EC and ESA on how to effectively manage their joint programmes. Notable events highlighting this division include: 1) former ESA Director Jan Wörner criticising the planned costs for the Galileo and Copernicus programmes in the EU 2021-2027 Plan for space research. He strongly disapproved of the proposed establishment of an "EU Agency for the Space Programme" (EUSPA) that was successfully launched in 2021 (Science Business, 2018). 2) The Commissioner for Internal Market Thierry Breton openly criticised ESA for using American private firm SpaceX navigation satellites for the Galileo program, stating that if this competency was in the hands of the Commission, it would have not happened (Anastasio, 2023). Interestingly, this last event highlights both ESA and the EU's willingness to cast blame on each other. This is further demonstrated by current ESA director Josef Aschbacher, who declared, in contrast: "[...] Whether or not the launch will be decided to take place with SpaceX is not in our hands. It is a decision of the European Commission". In reality, it seems that the tense situation prompted by the four-year delay of the ESA's rocket, Ariane 6, has exacerbated the division between ESA and the EU. This analysis also unveils, in part, the reasons for this delay (Foust, 2023).

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## The Role of Member States

The origin of fragmentation can be found in the structure of the European Union itself and the Treaties that constitute its foundation. Indeed, given the concerns over national sovereignty and security, the Treaty of the European Union establishes that member states are endowed with the power to create their own domestic industries in the security and defence sector (Barbieux, 2023).

Consequently, this aspect also affects the role of member states as regulators of space-related activities. Art. 189 of the Treaty on the Functioning of the European Union (TFEU) allows “joint initiatives, support [to] research and technological development and coordination of the efforts needed for the exploration and exploitation of space”. Still, the EU cannot harmonize national legislation in the space sector, in turn, leaving member states the power to adopt national legislation *inter alia* in newly emerging areas of space regulation, such as exploitation of space resources or space traffic management. This undermines the efforts for the adoption of a common regulatory approach at EU level (Barbano, 2022).

National space agencies also carry out their own activities within ESA. It is worth mentioning that in 2022, only 28.4% of the ESA budget was based on EU income, while more than 64% of the ESA budget came from individual ESA members, with the three major funders being Italy, Germany, and France, which are also the three member states with the largest independent national space programmes. This further shows that EU cooperation with ESA and the related development of EU space programmes do not preclude member states from pursuing their own national space policy parallel to the EU, provided that the principle of loyal cooperation is complied with (European Papers, 2023).

Another relevant issue is the “trust gap,” as the various initiatives to address European space security have suffered from both a lack of trust between member states and a chronic lack of investment in such security and defence issues, as well as limited and selective cooperation among European countries. This situation stems from the fact that European states have generally held different views on the required level of ambition and action regarding space in the realm of defence (Penent, 2023).

## Conclusion

In March 2023, the joint adoption of the “EU Space Strategy for Security and Defence” by the Commission and the High Representative of the European Union for Foreign Affairs and Security Policy confirmed a convergence of space policy and the goals of the Common Foreign and Security Policy (CFSP). This convergence was pursued *inter alia* through the cooperative action of all institutions involved in the matter in their respective competence domains.

Still, in view of this analysis, the European Union is facing challenges in its space policy governance, especially with regard to the issue of fragmentation.

In an era of strategic competition and transformation, today's unpredictable space environment requires the EU to develop a common understanding of the current problems that it is experiencing, better coordinate its space activities, protect its interests as a Union, and work to close the “trust gap” between member states by continuing to engage with international partners in support of effective multilateralism.

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