

# Policy Priorities for Addressing Space Sustainability Challenges

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# Space is critical infrastructure for the world



- Poverty mapping
- Disease mapping
- Infrastructure planning
- Protecting cultural heritage sites
- Illegal fishing
- Human rights monitoring
- Democracy and governance



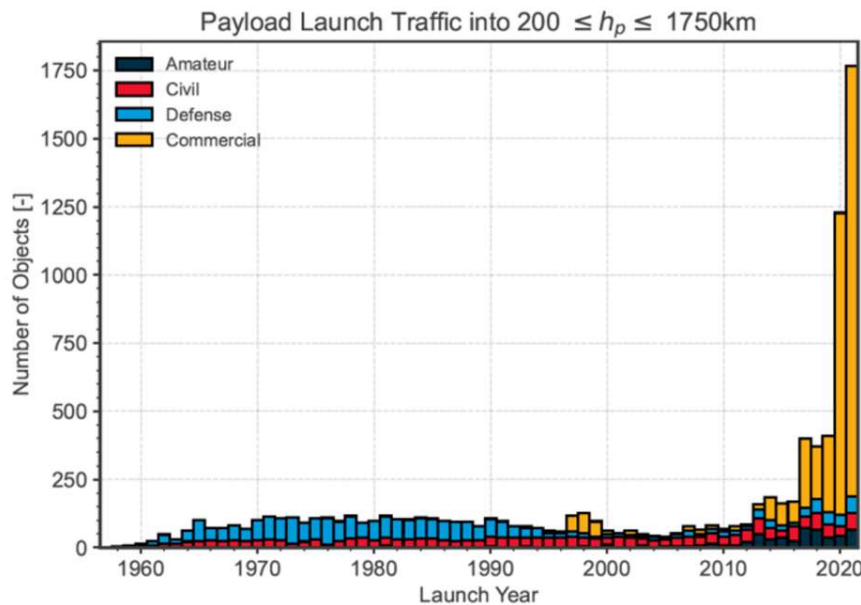
# Space Sustainability Challenges

- Lots more stuff happening in space
  - Growing number & diversity of space actors (governments and commercial companies)
  - Growing number & diversity of space activities
- Negative externalities could have widespread impacts for everyone
- Very few hard “rules” about what is and isn’t allowed

*How can we ensure space is usable for future generations and users??*



# Emergence of large constellations



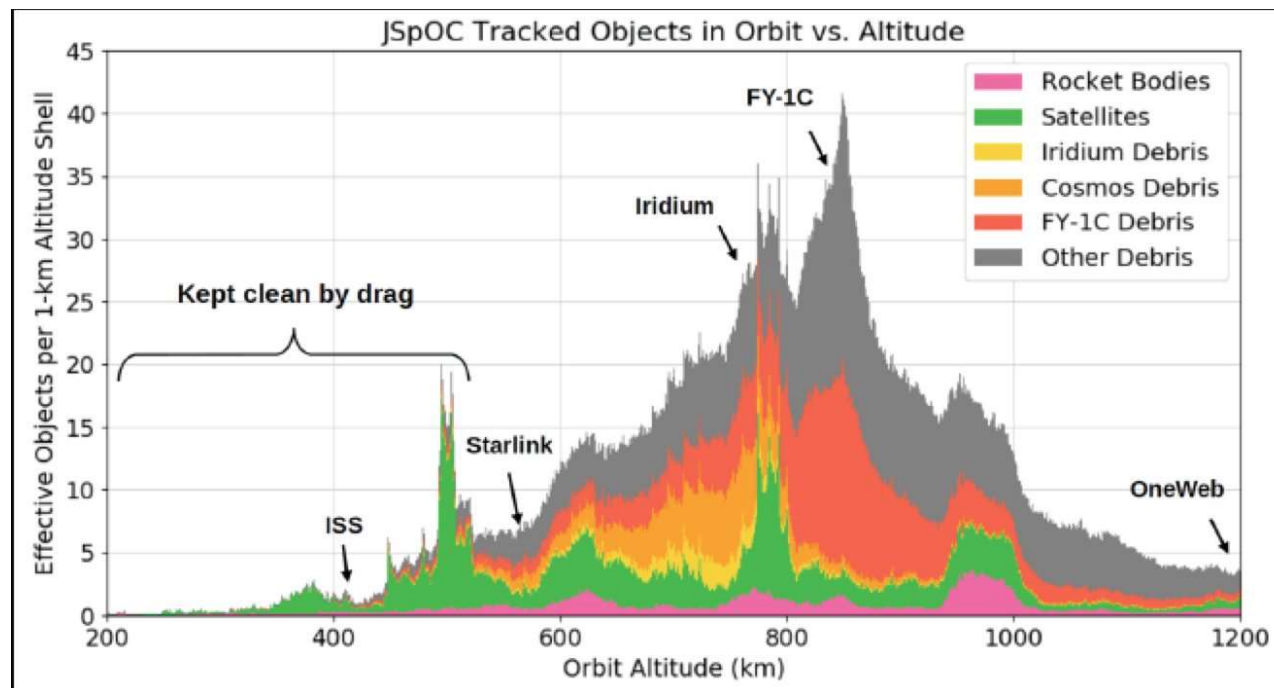
Source: [ESA \(2022\)](#)

Constellation	Total Sats	Altitude (km)	Country
Starlink G1	4,408	550 – 560	US
OneWeb	6,372	1,200	UK
Starlink G2	30,000	340 – 614	US
Kuiper	7,774	590 – 650	US
GW	12,992	590 - 1145	China
Cinnamon	327,320	550 – 630	Rwanda
LightSpeed	1,969	1,015 – 1,325	Canada

Source: [Jonathan McDowell \(2021\)](#)



# Adding to already congested domain



Source: SpaceX FCC Filing

Oct 9, 2022

UNOOSA Webinar "Sustainability in Space"



# Policy Priorities

- Moving from orbital debris mitigation to space environmental management
  - More holistic view of the space environment and all the natural & human activities/factors
  - Is there a limit to the carrying capacity of different orbital regimes?
- Putting orbital debris remediation/removal into practice
  - States need to clean up their historical mess
  - Incentivize creation of suite of capabilities any country or company can leverage to clean up future messes



# Policy Priorities (cont)

- Working towards a global space traffic management regime
  - National level regulations and oversight
  - International coordination on standards
  - Data sharing between governments, satellite operators, and commercial SSA providers
- Developing a governance framework for lunar activities
  - Putting the principles of the Outer Space Treaty into practice
  - Extraction and use of space resources
  - Coordination and deconfliction of activities

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# Thank you!

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