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The role of the EU amidst other European actors in the regulation of space debris remediation

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Overview

1. European actors in space debris regulation
2. Mitigation initiatives by European space agencies
3. European involvement in international debris regulation
4. Implementation of international measures
5. Role of the EU



1. European actors

- **Parallel paths**
 - Building upon rules of debris mitigation
 - Drafting new comprehensive set of rules
- **Different actors**
 - National space agencies and coordinating bodies
 - EU and third parties
- **Space agencies**
 - ASI, BNSC, CNES, DLR
 - ESA
 - Space Debris Advisory Group (SDAG)
 - European Network of Centres for Space Debris (SD NoC)
 - European Network of Competences on Space Debris
- **EU**
 - Overlapping membership EU/ESA
 - 2003 EC-ESA Framework Agreement



Cooperation with ESA, MS and EDA in SSA Programme

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2. Debris mitigation by European space agencies

- 1986 Ariane-1 H-10
- 1987 ESA Space Debris Working Group
- 1988 Working Group Report
- 1989 ESA Council Resolution
 - ‘Minimize the creation of space debris to ensure safe access to space and to reduce the risk for manned and unmanned space flight’
- 1999 CNES Standards Collection
- 1999 ESA Space Debris Mitigation Handbook
- 2000 European Space Debris Safety and Mitigation Standard
- 2004 European Code of Conduct for Space Debris Mitigation
 - Based in part on CNES Standards
 - Developed, signed by SD NoC
- 2006 ESA Space Debris Office
- 2008 ESA Requirements on Space Debris Mitigation for Agency Projects
- 2008-2012 SSA Preparatory Program



3. European involvement in international debris mitigation

- IADC
 - Based on common principles of national space agencies
 - European IADC member agencies
 - CNES, ESA standards and handbooks
 - Basis for 2004 European CoC
 - ESA IADC re-entry database
- UN COPUOS
 - STSC Space Debris Working Group
 - European IADC members
 - Based on IADC Guidelines/proposals
 - Annual IADC report
- ISO
 - ODCWG
 - European member agencies
 - ESA participation based on 2008 Requirements
 - ECSS support



4. National implementation of international mitigation measures

- France
 - 2008 Loi relative aux opérations spatiales
 - Entered into force 2010
 - In line with IADC and UN COPUOS Guidelines and ISO standard
 - Legally binding national implementation of non-binding international guidelines
- Germany
 - Product Assurance programme
 - German national space law in compliance with UNCOPUOS Guidelines



5. Role of the EU

- Article 4(3) TFEU
 - In the areas of research, technological development and space, the Union shall have competence to carry out activities, in particular to define and implement programmes; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs
- Article 189 TFEU
 - 1. To promote scientific and technical progress, industrial competitiveness and the implementation of its policies, the Union shall draw up a European space policy. To this end, it may promote joint initiatives, support research and technological development and coordinate the efforts needed for the exploration and exploitation of space.
 - 2. To contribute to attaining the objectives referred to in paragraph 1, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the necessary measures, which may take the form of a European space programme, excluding any harmonisation of the laws and regulations of the Member States.
 - 3. The Union shall establish any appropriate relations with the European Space Agency
- ‘Shared competence’



5. Role of the EU (cont.)

- 2007 European Space Policy
- 2008 Taking forward the European Space Policy
 - ‘... the European Union, ESA and their respective Member States are the three key actors of the European Space Policy ...’
 - ‘... the European Union is taking increased responsibilities for space matters, consistent with those of a global actor and bringing added-value to ESA and Member States while respecting roles and responsibilities of each of them ...’
 - ‘... the European Union, as well as ESA and their respective Member State, are main space actors, and they will develop Europe as a leading space power on the international scene ...’
- 2011 Commission Communication on European Space Strategy
 - ‘The proliferation of protagonists – the Member States via the space agencies, the ESA, EUMETSAT and the EU – is not conducive to effective decision-making or implementation.’



5. Role of the EU (cont.)

- European Space Policy
 - ‘Europe supports the UN COPUOS efforts on the mitigation and prevention of space debris’
 - Link with open access and security
- Code of Conduct for Outer Space Activities
 - Best practices
 - Freedom of access to space; security and integrity of space objects in orbit
 - Article 4: General measures
 - ‘... minimise the possibility of accidents in space, collisions between space objects ...’
 - ‘... unless such action is conducted to reduce the creation of outer space debris ...’
 - ‘... appropriate measures to reduce the risk of collision’
 - Article 5: Measures on space debris control and mitigation
 - ‘... refrain from the intentional destruction of any on-orbit space object or other activities which may generate long-lived space debris’
 - ‘adopt and implement the appropriate policies and procedures or other effective measures in order to implement the Space Debris Mitigation Guidelines of the UN COPUOS ...’



5. Role of the EU (cont.)

- Evolution of the Code of Conduct
 - 2008/2010
 - Working Party on Global Disarmament and Arms Control > PSC > Coreper > Council
 - Article 1.4 CoC
 - ‘Adherence to this Code and to the measures contained in it is voluntary and open to all states’
 - Bilateral consultations with third countries through High Representative
 - Aim of establishing text that is acceptable to the greatest number of countries
 - Ad-hoc diplomatic conference February 2012
- Basis for international code on space debris remediation?
 - General measures vs. focus on mitigation
 - Global ambition vs. references to international law and competent fora
 - ‘... useful complement to international space law ...’
 - ‘... promote the development of guidelines for space operations within the appropriate fora ...’
 - Implementation of UN COPUOS Guidelines



Conclusion

- Limited EU competences do not preclude active EU remediation role
 - Measures evolve through best practices
 - Rules originate with national space agencies and industry
 - Coordination by agencies and industry at international level
 - EU middle-level broker to facilitate voluntary implementation of international measures by its Member States
- European Code of Conduct shows that parallel paths with different European actors will likely continue to be pursued
- General mandate/objectives of ESA, national agencies and EU to reduce risk of collisions and safeguard safe access to space
- Economic reasons dictated focus on mitigation
- No legal bar for remediation measure through existing channels
- Strengthening of existing rules to include remediation once economic and political objections are overruled

