Space Debris Mitigation
The hierarchy of Space Debris Mitigation Instruments

- **UN guidelines**
- **International practice/standards** (e.g. IADC, ISO)
- **State/Space Agency policies** (e.g. US Gov, NASA, ESA)
- **National space legislation** (e.g. US FAA/Noaa, FR, NL)

- Blue = International level
- Red = Space Agency or National level
International Space Debris Mitigation Instruments


ITU Recommendation - ITU-R S.1003-2 Environmental protection of the geostationary-satellite orbit, 2010

ISO 24113:2011 Space Systems - Space Debris Mitigation Requirements

IADC Space Debris Mitigation Guidelines, 2002

Support to the IADC Space Debris Mitigation Guidelines, 2014

voluntarily

voluntarily

voluntarily

voluntarily
Regional Organizations instruments

ESA Space Debris Mitigation for Agency Projects, 2014

European Code of Conduct for Space Debris Mitigation, 2004

voluntarily

voluntarily
Debris mitigation main milestones
(from first national policy to current international standards)

<table>
<thead>
<tr>
<th>Early days and internationalization</th>
<th>Current international principles</th>
<th>Current international practice/standards</th>
<th>Next</th>
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<tbody>
<tr>
<td>NASA debris policy</td>
<td>IADC mitigation guidelines</td>
<td>UN mitigation guidelines</td>
<td>ITU-R S-1003-2 (geo) ISO 24113 + (low tiers) IADC Support document</td>
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<tr>
<td>First policy</td>
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<td>ISO under review consolidation</td>
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First policy

ISO under review consolidation
National Space Debris Mitigations Instruments

U.S.A.  Japan  France  Austria  U.K.
Belgium  Australia  Canada  Ukraine  Germany
Finland  Denmark
Nations Various Approaches on Regulating Space Debris

Approaches

Requirement for License

Part of internal space policies and principles

Special debris legislation

Examples of States

Austria, Canada, U.K, Denmark

Australia, Germany, Japan

Ukraine, U.S.A
Nations Path on Regulating Space Debris

Voluntary:
- Finland
- Belgium
- Australia
- Japan
- USA

Mandatory:
- France
- Austria
- UK
- Germany
- Denmark
- Canada
- Ukraine
- USA NASA

General Rules
Specific Rules
Summary of implementation of space debris mitigation measures through national space legislation per each of the “seven” UN guidelines/principles, by State

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
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In practice, not relevant for non-governmental entities (e.g. commercial satellite operators, university)

G = guidelines/principles (UN guidelines)  
P/S = practices/standards (e.g. IADC, ISO, national)  
M = Mandatory  
V = Voluntary  
BE = Best effort  
(-) = unclear applicable practice/standard
UAE Space Debris Mitigation Guidelines

- Voluntary
- Authorization Requirements
- Space Debris Mitigation Plan.
- Reports.
- Notifications.
UAE Space Debris Mitigation Guidelines

- Risk Assessments
- Implementation Plan
- Recommendations for setting up the Space Debris Mitigation Plan
Space Debris Mitigation