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# Impact of Space Security Policies on the Wider International Security Environment

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# 1 Positive dynamics of the international discussion on space TCBMs and the stability of space activities: Why now?

- 2005 UNGA Res 60/66 TCBMs in outer space activities proposed by Russia
- 2007 EU announced its plan to make a Code of Conduct for Outer Space Activities
- 2008 PPWT proposed by Russia and China in the CD
- 2008, 2010 EU Code of Conduct (CoC)
- 2010 agenda item “long-term sustainability for outer space activities” started in the STSC of the COPUOS

2012

- January US announced to develop an International CoC for Outer Space Activities
- April, May G8 supported three initiatives (COPUOS, CoC, GGE/TCBM)
- July the first session of GGE/TCBM

2013

- April the second session of GGE/TCB

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# Annex to the G8 Foreign Ministers Meeting

## Chairman's Statement (12 April 2012)

The G8 supports the work of the UN Committee on the Peaceful Uses of Outer Space (COPUOS) towards ensuring the long-term sustainability of outer space activities. We also support the implementation of space-related transparency and confidence-building measures for responsible behavior in space, and related activity of the UN Group of Governmental Experts on Transparency and Confidence Building Measures (TCBM) in Outer Space Activities. The G8 acknowledges the initiative taken by the European Union to develop an International Code of Conduct for Outer Space Activities. We reiterate our commitment to carry on activities in the exploration and use of outer space in accordance with applicable international law, including the Charter of the United Nations.

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# G8 Nonproliferation and Disarmament

## (19 May 2012)

15. Growing dependence on outer space capabilities  
→consideration of factors and phenomena affecting space security needed.
16. Particular attention to the long term stable and sustainable development of outer space activities should be given.
- \* COPUOS
  - \* Code of Conduct for Outer Space Activities
  - \* (upcoming) GGE on TCBMs in Outer Space Activities

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## G8 Declaration on Nonproliferation and Disarmament (11 April 2013)

39. significant role of outer space→commitment of peaceful uses and PAROS→need to take collaborative, practical and pragmatic steps designed to enhance the **long-term safety, security, sustainability and stability of the space environment.**
40. G8 support the efforts:
- \* COPUOS to mitigate orbital debris
  - \* GGE to develop concrete proposals on TCBMs
  - \* ongoing efforts to develop a Code of Conduct

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# Why Now? Why Space?

\*space assets critical to safety, well-being, and security of humanity as a whole

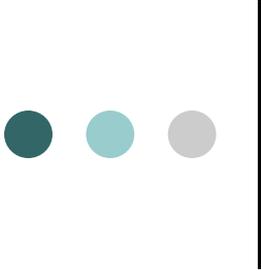
## Challenges:

- \* ever-increasing space debris
- \* increased actors→ the coordination of space operations needed to avoid collisions and other accidents
- \* security threats (increasingly “contested” area)

## 2 Assessment of the CoC, LTSSA and TCBM/GGE:

To assess the impact of current space security initiatives towards the wider international security environment, the following should be clarified:

- goals, purposes and objectives;
- process (forum, consensus or not)
- measures to be taken in the expected outcome; and
- remaining challenges

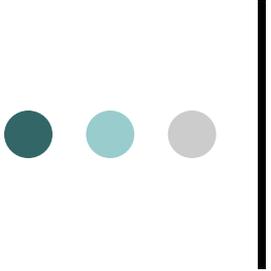


# EU Code of Conduct as a TCBM measures

2006 A/61/75 para.1 invites all Member States to submit the SG concrete proposals on international **outer space TCBM**s

2007 A/62/114/Add.1

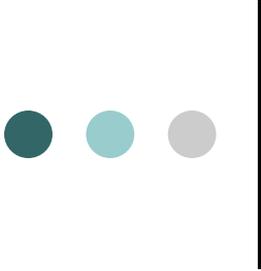
para. 8 EU would like to propose,---a comprehensive code of conduct on space objects and space activities. Such a code of conduct would respond to the provisions of GA resolution 61/75.



# General principles of the Code of Conduct

Para.9 commitment and recognition:

- (a) adherence and full implementation of the existing laws and norms;
- (b) to prevent space from becoming an area of conflict;
- (c) essential for national security and strategic stability;
- (d) peaceful resolution of any conflict in space, taking account of States' inherent right to self-defense



# Scope of code of conduct (2007)

(paras.10-11)

Action needed:

Avoidance of any maneuver or action that could collide with or damage other space objects and create space debris

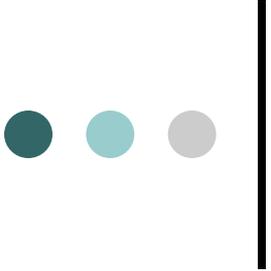


to create peaceful, safe and secure outer space environment

Concrete measures

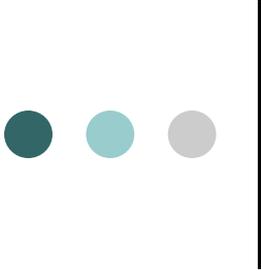
- \* information provision  
comprehensive information on space policy and planned activity
- \* timely notification including prior notification of space activity
- \* consultation mechanism

**Categorized in TCBMs**



## **STSC would elaborate technically-based guidelines to implement the CoC (2007)**

12. The European Union recommends that the **technical aspects** of the proposals be addressed in further detail by the Committee where relevant and within the mandate of the **Scientific and Technical Subcommittee under the agenda item on the preservation of the space environment**, and in due time submitted to the Committee on Disarmament for consideration as transparency and confidence-building measures in the context of the prevention of an arms race in outer space.



# Future role of the COPUOS

working paper submitted by the chairman

(A/AC.105/L.268 (10 May 2007))

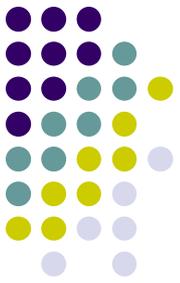
## II Activities of the Committee in the future

### D. Long-term sustainability of space activities (LTSSA)

#### Paras.26-29

Suggested decision includes the analysis of the concept of “**rules of the road**” for future space operations as a new agenda item of the STSC, and recommended that the STSC set up a WG to examine the possible approaches to LTSSA.

# Draft CoC (June 2012)



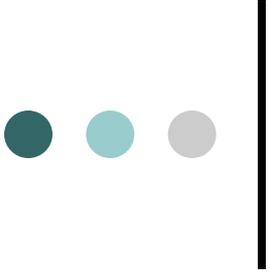
Essentially, action needed remains the same albeit its elaboration

This Code is:

- 1.1 to enhance **the security, safety and sustainability**
- 1.3 --in endorsing best practices, **contributes to TCBMs** and a complementary to the normative framework
- 1.4 not legally binding. --voluntary.

Concrete measures

6. Notification in a timely manner including pre-notification
  - \* to potentially affected States including non-Subscribing States where appropriate
8. information sharing (annually and timely)
9. consultation mechanism
10. meeting of Subscribing States
  
12. Outer Space Activities Database



## Draft CoC (5 June 2012)

### II. Safety, Security and Sustainability of Outer Space Activities

5. The Subscribing States commit to promote the development of **guidelines** for outer space operations within the appropriate international fora, such as the **CD and the UNCOPUOS**, for the purpose of protecting the **safety and security** of outer space operations and the **long-term sustainability** of outer space activities.

## (2) STSC of the COPUOS

### long-term sustainability of outer space activities( LTSSA)

2009 new agenda adopted

2010 general exchange of views; WG on LTSSA established

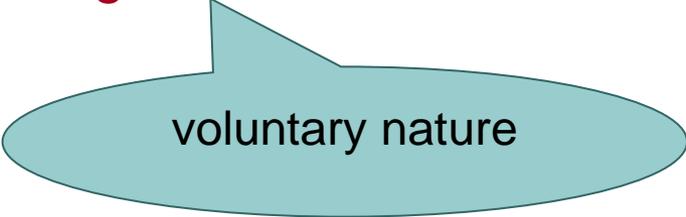
2011 Mandate of the WG is decided.

Mandate: to examine LTSSA in the wider context of sustainable development on Earth

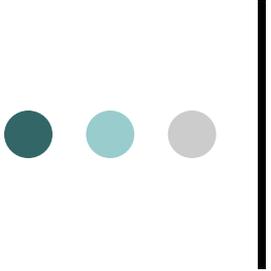
Objective: (1) **identify** area of concern; (2) **examine** and **propose** measures that could enhance sustainability

**legal framework is decided: UN treaties and principles** governing the peaceful exploration and use of space

Goal: 2014 propose **best-practice guidelines** → STSC will adopt it



voluntary nature



# Experts groups A-D established (2011)

expert groups A-D established

A: sustainable space utilization supporting sustainable development on Earth

B: space debris, space operations and tools to support collaborative space situational awareness

C: space weather

D: regulatory regimes and guidance for actors in the space arena

prepare a report containing a consolidated set of current practices and operating procedures, technical standards and policies associated with LTSSA →WG

# Compilation of proposed draft guidelines of expert groups (A/AC.105/1041 (26 March 2013))

## Expert group B

- 1 Share space debris monitoring information
- 2 Ensure space debris mitigation measures are implemented
- 3 Limit the risk to people and property from controlled spacecraft and launch vehicle orbital stage re-entries
- 4 Investigate increasing the accuracy of orbital knowledge
- 5 Perform conjunction assessment during all phases of flight
- 6 Perform conjunction assessment prior to changes in trajectory
- 7 Provide other States with contact information for spacecraft operations and conjunction-assessment entities
- 8 Use standard formats when sharing orbital information on space objects
- 9 Provide navigation information to assist in the identification of space objects

In sum, study, monitoring, information provision (including ensuring conjunction assessment), notification, adopting national mechanisms and implementation of debris mitigation and SSA

# Expert Group D regulatory regimes and guidance

involves various stakeholders

- 1 promote and facilitate int'l cooperation
- 2 sharing experience and expertise relating to LTSSA
- 3 adopt procedures to facilitate information dissemination
- 4 targeted outreach and education
- 5 promote the role of the non-governmental entities for LTSSA
- 6 consider LTSSA when adopting or implementing national regulatory frameworks
- 7 take measures to address space debris mitigation practices
- 8 communicate among competent authorities to facilitate efficient and effective LTSSA
- 9 encourage advisory input from affected national stakeholders in the development of national regulatory frameworks
- 10 factors to consider in developing regulatory measures for LTSSA and consider the potential benefits of using existing int'l technical standards
- 11 adopt regulatory frameworks suitable for national space activities
- 12 address risk for people, property, public health and the environment in space activities

national implementation of best practices

Adjustment to int'l standards

# (3) UN GGE/TCBM

**Goal:** to produce a consensus report which outlines recommendations on TCBMs

**History:** (1) A/45/55 (1990) → GGE to study confidence-building measures in outer space → A/48/305 144 page report

CBM include: satellite monitoring (PAXSAT A, ISMA, etc. ); strengthened registration of space objects; keep-out zones; launch inspection, etc.

(2) UNGA Res 63/85 (2008) and 65/68 (2010) → GGE established in 2011 by the SG

**Members:** 15 experts from P5 + Brazil, Chile, Italy, Kazakhstan, Nigeria, Republic of Korea, Romania, South Africa, Sri Lanka and Ukraine

# Outputs

Possible coordination especially  
with STSC and CD

- Inputs from experts from Member States, int'l organizations and civil society are encouraged.
- GGE encourages its Chair and members to “**liaise and engage** as appropriate with other bodies and initiatives” such as **UN first Comm., CD, COPUOS** and meetings organized by civil society and research institutes.

### 3 How present initiatives would affect on the wider international security environment?

	CoC	STSC/COPUOS	GGE
Period	2007-?	2010-14?	2012-13?
Membership	open	74 States	15 States
output	legally nonbinding code (voluntary)	Best practice guidelines (voluntary)	Report (TCBMs) to the SG (voluntary)
Relationship with other fora	Guidelines will be made in the CD and COPUOS	Inputs from other UN bodies, member states and private entities through member states	Inputs from UN 1st Comm, CD, COPUOS

## (2)

	COC	STSC/COPUOS	GGE
Scope of activities	All activities	Civil	All activities
Challenges and characters	Outreach needed Ongoing & dynamic institution (Norm-creating? )	Technically-based guidelines legal framework is fixed (non norm creating)	How to translate into an implementation pave the way towards legally-binding agreement?

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# What is the impact in the (near) future?

## Question

What is the impact of the current initiatives on the wider international security environment?

## My tentative conclusion

The combination of CoC, TCBMs and COPUOS best practices guidelines may change the importance of the legally non-binding instruments in the international security

A regime of “safety, security, and sustainability of space” may emerge

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(2)

1 Both CoC and GGE/TCBM contain the factors to aim at norm-creating

2 How to translate non-binding rules into implementation



3 COPUOS best practice guidelines will be a bridge between rules and action



CoC and TCMB instrument may make a regime of space safety, security and sustainability as a dynamic process