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**REPORT ON AFRICAN REGIONAL SEMINAR AND  
OUTREACH INITIATIVES FOR THE FACILITATION OF  
THE DEVELOPMENT OF AN INTERNATIONAL CODE OF  
CONDUCT FOR OUTER SPACE ACTIVITIES**

***THE ROLE OF NORMS OF BEHAVIOUR  
IN AFRICAN OUTER SPACE ACTIVITIES***

Facilitating the Process  
for the Development of an  
International Code of Conduct  
for Outer Space Activities



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# Report on African Regional Seminar and Outreach Initiatives for the Facilitation of the Development of an International Code of Conduct for Outer Space Activities:

## “The Role of Norms of Behaviour in African Outer Space Activities”

### Introduction

Over the last few years, Africa has emerged as the region with the fastest growing demand for space benefits.<sup>1</sup> Policymakers across the continent have started to recognize the potential of space-based services, and reliance on those services is growing. Such reliance however, comes at a cost: increased vulnerability to space security threats. These threats pose a real risk to African space activities and, as such, discussion of the role of African states in developing new norms, as well as what those states can contribute to ongoing space security initiatives at the national, regional, and multilateral levels, is critical.

As part of the United Nations Institute for Disarmament Research (UNIDIR) project Facilitating the Process for the Development of an International Code of Conduct for Outer Space Activities, funded by the European Union (EU), UNIDIR conducted a two-day seminar entitled “The Role of Norms of Behaviour for African Space Activities”, in Addis Ababa, Ethiopia, on 7–8 March 2013.

The seminar was organized in order to support dialogue in the African space community on the development of norms of behaviour for outer space activities to mitigate the increased level of space security threats. The seminar provided an opportunity for policymakers and key stakeholders to explore why space resources and space security matter to Africa, especially the potential of space-based services for ongoing African development and the nature of current threats to human activities in outer space.

### Proceedings

The regional seminar was comprised of six panels of experts speaking on various aspects of space activities, space security, and international measures being taken to promote safety, security, and stability in outer space.

### Introductory remarks

The seminar was opened by Mr. Ben Baseley-Walker, Programme Lead of the Emerging Security Threats Programme at UNIDIR, who noted the critical importance of including emerging actors from the African region in international dialogues regarding outer space security. Given the significant rise in use of space-based applications across the region, he suggested that we had reached a point in time for the African space community to engage in dialogue about what they considered to be responsible behaviour in outer space and how they might promote such ideas in the international context.

Mr. Tefera Waluwa, Chair of the Ethiopian Space Science Society, provided an account of present Ethiopian space ambitions. He noted that many policymakers in Ethiopia were of the opinion that space capabilities should, as a policy priority, be secondary to other forms of economic, social, and technological development. However, he was of the opinion that Africans should invest in outer space concurrently with other development initiatives in order to apply the benefits of space-based services in moving towards those same development efforts. He also stressed that space activities should be coordinated among the international community so as to prevent the rendering of orbital resources unusable.

Dr. Hakim Elwaer, Director of Human Resources, Science and Technology of the African Union Commission (AUC), briefed participants on the cooperative efforts being coordinated by the AUC to increase access of African states to space-based services. He stressed that there is a need to harness space benefits for Africa and that the AUC was committed to the building of regional space capabilities. In reference to the EU’s proposal for the development of an ICoC, Elwaer noted that African states had played a minor role in the development of the draft text of an ICoC, but that the proposal was seen as being an important one. He concluded that African states should seek to play a greater role in the next stages of

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1 See “The Role of Norms of Behaviour in African Outer Space Activities”, UNIDIR, 2012, pp. 1–3.

open-ended consultations on an ICoC. Elwaer concluded by noting that Africa had minimally contributed to present space security threats but that, because Africa was shifting from a space user to a space player, it would be important to engage in multilateral efforts to address space security issues.

### **Panel I: African space initiatives: today's tools for tomorrow's challenges**

The first panel was chaired by Mr. Francis Ngantcha, Minister Counsellor of the Permanent Mission of the Republic of Cameroon to the United Nations Office and other international organizations in Geneva. Ngantcha stated that Africa had a great deal to lose if space security issues were neglected and that, while there was presently a small degree of domestic space capacity in Africa, the region's growth of demand for space-based services was among the highest in the world. He considered the seminar to be an important opportunity to express African views on norms of behaviour and "soft law" for outer space activities. Noting that existing efforts to address space security issues within the context of the United Nations had been slow to adapt to existing threats, he considered the EU's proposal for an ICoC to be a useful exercise that might lead to greater security and stability for space activities.

Mr. Daniel Porras, Project Manager of the Emerging Security Threats Programme at UNIDIR, noted that outer space, in a security context, was a reference to those areas where space activities were being carried out, namely those orbits in which satellites were most frequently being placed. He further observed that, while activities such as deep space exploration were of note, the activities of greatest relevance to security discussions are those that underpin economic and social infrastructure, such as telecommunications and Earth observation.

Next, Dr. Godstime James, Head of Division of the Hazards and Environmental Management Division of the Nigerian National Space Research and Development Agency, noted that there is a significant technological divide between Africa and other regions in terms of capabilities to carry out activities in space. Despite this, however, a number of African states have recognized the need to utilize space-based technology for long-term development within the region. James stated that the impacts of space technology on African development had already been seen in the application of Earth observation and telecommunications technology to areas such as media, healthcare, and commerce. Noting the benefits that Africa was already reaping from space-based services, James felt that further investment by state and private actors in outer space capacities was necessary in order to close technological gaps and facilitate further socioeconomic development.

Finally, Dr. Sias Mostert, Managing Director of Space Commercial Services of South Africa, made a presentation on capacity-building in Africa. He outlined the work of his company in contributing to capacity development in South Africa, as well as in other states in the region. He noted that Africa must be able to have access to space-based services and possess the expertise to be able to safeguard its interests in the space domain. He added that the global economy is becoming knowledge-based rather than resource-based, and that developing space capacity comes with significant benefits for national economies. Mostert concluded that knowledge of information technology is increasingly important and that human capital development was required to nurture Africa's ongoing development.

### **Panel II: Space security: what is it and what does it mean for Africa?**

The next panel was chaired by Mr. Baseley-Walker, who observed that space security issues are becoming more widely discussed as new states become space actors and realize the importance of safeguarding their newly acquired space services. As Africa is increasing its own efforts to invest in outer space capabilities, he felt that it is now appropriate to hold discussions on the impact of space security threats in order to put the importance of outer space into an African context.

Ms. Charlotte Mathieu, from the EU Relations Office of the European Space Agency (ESA), spoke about the growing threat of space debris. She noted that there is already a large amount of space debris in orbit, with larger bodies having been catalogued and tracked. However, there is also a considerable amount of debris that is too small to be tracked, creating a significant risk of collision with operational space assets. Mathieu stressed that the consequences of debris creation, whether created by accident or on purpose, could be catastrophic and that there was a growing need to tackle this threat at the multilateral level. She noted that the United Nations Space Debris Mitigation Guidelines represented one process that had served to mitigate the proliferation of debris. However, she felt that there is still a need for discussion on debris remediation at the policymaking level, that is, how to engage in the active removal of debris from space without creating further complications for space security. Mathieu noted that currently one of ESA's major projects is a space situational awareness programme that will help mitigate the dangers of space debris in the future.

Next, Ms. Jana Robinson, Resident Fellow at the European Space Policy Institute, made a presentation on security tensions and the impact of security incidents in outer space. She drew attention to a number of threats in space, such as natural environmental threats, over-crowding, competition for limited frequency bands and manmade threats to space assets. She noted that success in advancing a collaborative approach to space security depended on leadership and political will, with particular emphasis on shared interests, realistic milestones, and improved mechanisms for information-sharing. Robinson proposed that states should explore those options to improve safety, security, and stability in outer space

through transparency and confidence-building measures (TCBMs). To this end, she suggested that the work being done at the multilateral level to develop TCBMs, in particular an ICoC, would be useful for helping to ensure stability in space.

Finally, Prof. Babatunde Rabi, Director of the Center for Atmospheric Research of the Nigerian National Space Research Development Agency, presented an assessment of how insecurity in outer space might impact Africa and its goals for development. He observed that instability in space could lead to the unavailability of a wide range of important, or even critical, services including satellite navigation and information and communications technologies. He stressed that this had the potential to lead to loss of life and property through the breakdown of civil services, such as emergency response, and could be classified as a disaster. For this reason, Rabi stated that African policymakers were beginning to regard space-based services as a strategic resource that should be maintained. To this end, he noted that the acquisition of appropriate skills and technology for tracking space debris and for space weather monitoring would be of the highest importance and that international cooperation would play an important role in resolving space security issues.

### **Panel III: Assessing existing frameworks for outer space activities**

The next panel was chaired by Dr. Abderrahmane Touzani, Director of the African Regional Centre for Space Science and Technology Education – in French Language (CRASTE- FL). Touzani acknowledged the growing importance of outer space for Africa. He stressed the importance of international cooperation in developing options to ensure the long-term sustainability of human activities in outer space. He also noted the importance of establishing frameworks to regulate human activities in outer space that were capable of commanding widespread support and adherence.

The first speaker, Dr. Tare Brisibe, Chair of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), addressed the law and regulation of outer space activities. He discussed the existing body of international law that is enshrined in the five outer space treaties, with varying levels of acceptance by United Nations Member States. He also noted that there were United Nations General Assembly resolutions and principles that sought to give additional guidance for responsible behaviour in space. Acknowledging that there are still many questions regarding whether existing legal frameworks adequately cover emerging space activities, Brisibe stressed that international law also applies to outer space and that the same standards that apply on Earth could also be applied in outer space.

Next, Prof. Li Juqian of the China University of Political Science and Law discussed what he sees as gaps in the existing regulatory frameworks for outer space activities. In particular, he noted that technology was outpacing policymaking and that many new activities in space are not directly addressed by existing legal frameworks for space activities. In the absence of any guidance, he observed that the long-term sustainability of space activities might be compromised and that some rules should be laid down to mitigate this possibility. He proposed that, given the difficulties that have been encountered in the development of legally binding instruments, there is clear value in looking into the development of political tools and frameworks as they can be easier to negotiate due to their voluntary nature.

Finally, Dr. Rajeswari Rajagopalan, Senior Fellow of the Observer Research Foundation, discussed TCBMs and their utility in today's geopolitical environment. She recalled the political difficulties that have prevented the development of any updates to the existing space security regime. Rajagopalan noted that TCBMs are a means to strengthen national dialogue and interactions on space security issues while simultaneously encouraging more openness, transparency, and information-sharing. She also noted that while TCBMs are voluntary in nature, they are useful tools for promoting better understanding among states and potentially reducing distrust, competition, and rivalry. In this context, she noted that the proposal for an ICoC, while having shortcomings in respect to the manner in which it was developed and presented to the international community, is, nevertheless, an important initiative that could serve as a useful tool for enhancing space security.

### **Panel IV: Assessing African participation in ongoing multilateral processes**

The final panel of the first day was chaired by Dr. Solomon Tessema, Director of the Ethiopian Entoto Space Science Research Centre. Acknowledging the importance of outer space in African development, Tessema indicated that it is crucial for African states to participate in multilateral efforts in order to ensure the representation of African interests. These interests were seen as distinct from those of traditional space actors and, therefore, they needed to be voiced by African participants.

Mr. Baseley-Walker spoke on the work being carried out by the United Nations Group of Governmental Experts (GGE) on TCBMs in outer space activities. He recalled that "the final objective of confidence-building measures is to strengthen international peace and security and to contribute to the development of confidence, better understanding, and more stable relations between nations, thus creating and improving the conditions for fruitful international cooperation". He mentioned that TCBMs are useful stepping stones towards improved safety, security, and predictability in outer space, despite not being legally binding measures. Baseley-Walker recalled the mandate of the GGE, whose goal is to produce a consensus report on recommendations for the development of TCBMs. The GGE is a group supporting the Secretary-General comprised of 15 governmental experts, nominated by 15 United Nations Member States (the P5 plus 10 other

states selected on the basis of geographical representation). It should be noted that the GGE has also invited input from other states and stakeholders regarding TCBCMs.

Next, Dr. Peter Martinez, Chair of the United Nations Working Group on the Long-Term Sustainability of Outer Space Activities (LTSSA)—a working group of the Scientific and Technical Subcommittee COPUOS—reported on the progress made by the group. He reported on the work accomplished by the four expert groups of the LTSSA, dealing with:

- sustainable space utilization supporting sustainable development on Earth;
- space debris, space operations, and tools to support space situational awareness-sharing;
- space weather; and
- regulatory regimes and guidance for new actors in the space arena.

Noting the various initiatives that are presently being carried out to develop frameworks for the regulation of space activities, Martinez discussed the manner in which each initiative—with unique legal, political, and technical aspects—was a part of a comprehensive approach to creating guidelines for civilian space activities. He noted that, within COPUOS and its subcommittees, the level of African participation in discussions had been minimal and that it was important to promote participation at the multilateral level. He observed that the proposal for the development of an ICoC represented a good opportunity for African states to participate in international dialogue.

Finally, Mr. Adebayo Babajide, Policy Officer for the Security Policy Division of the European External Action Service, reported on the progress of the EU's proposal for the development of an ICoC. Babajide stated that this proposal emerged from a need to address space security issues in a timely manner and to lay down a comprehensive framework for space activities. The proposed ICoC is based on three principles, namely, freedom for all to use outer space for peaceful purposes, preservation of the security and integrity of space objects in orbit, and due consideration for the legitimate security and defence needs of states. Babajide announced that open-ended consultations would be held in Kyiv, Ukraine, on 16–17 May 2013, with representatives from as wide a range of states as possible being invited to participate. He welcomed comments on the existing draft text for an ICoC and stressed that the EU's proposal was to develop an instrument that would address the needs of all states.

#### **Special Presentation: The EU rationale for engagement on space security in an African context**

At a special reception held by the EU and UNIDIR, Ms. Joelle Jenny, Director for Security Policy and Conflict Prevention of the European External Action Service, noted that the EU acknowledges as a principal tenet that “exploration and use of outer space should be carried on for the benefit of all peoples irrespective of the degree of their economic or scientific development”. She acknowledged the global nature of space security issues and stated that the EU is prepared to take the lead in establishing the foundations for the establishment of norms of behaviour to promote security and transparency in outer space. Jenny stated that the EU's proposal for the development of an ICoC is not intended to be an alternative to the other multilateral processes aimed at promoting space security, such as the work being done by the GGE and the LTSSA, but that it is seen as being complimentary. She announced that as wide a range of states as possible would be invited to attend the open-ended consultations, stressed the importance of widespread international participation in the development of an ICoC.

#### **Panel V: Norms of behaviour: an alternative approach to mitigating space security issues**

The second day of the seminar began with a panel chaired by Dr. Joseph Akinyede, Director of the African Regional Centre for Space Science and Technology Education – in English Language (ARCSSTE-E). He emphasized the role that outer space is playing in African development and that it will be important for Africa to increase its visibility in multilateral initiatives in order to adequately promote its interests at the international level.

Mr. Oliver Barton, Nuclear Deterrence, Disarmament, and Space Desk Officer in the Security Policy Department of the United Kingdom Foreign and Commonwealth Office, recalled the growing dependence of people on space-based services and the growing need to address space security issues as a matter of strategic importance. In particular, he noted the threat posed by space debris and the need to establish a framework to mitigate this threat. Acknowledging the technical and political challenges to establishing verifiable arms control in outer space, Barton pointed out that over the past 30 years, policymakers have resorted to the implementation of voluntary, non-legally binding measures, such as norms of behaviour, to address state conduct in a security context. Norms are political tools that use social and political pressure rather than legal obligations to define acceptable parameters of behaviour. He noted that the proposal for an ICoC represents a high-level, wide-ranging political agreement on what constitutes irresponsible behaviour in outer space and the means to address it through pressure from the international community.

Next, Mr. Baseley-Walker discussed norms of behaviour and the role they play as stepping stones towards addressing space security issues. In particular, he noted that it is the flexibility of international norms, whether they are bilateral or

multilateral, that makes them particularly attractive tools for the development of solutions to security issues that are complicated by political and diplomatic obstacles. He stated that the usefulness of opening dialogue on the development of norms also lies in the creation of foundations for future work, which may or may not include taking further steps towards more formal instruments.

Next, Dr. Rajagopalan discussed the essential elements of a potential code of conduct for outer space activities. She recalled that the objective of maintaining order in outer space is to ensure freedom of activity in outer space while not creating adverse or harmful effects for the space domain. She attributed the lack of consensus among major space powers as a contributing factor to a lack of progress on the development of new effective space regulations. She felt that norms of behaviour could play a useful role provided they are able to express clear boundaries for acceptable activities. Referring back to the development of an ICoC, she argued that it will be important to bring as many members of the international community as possible into the discussions on development of the code in order to increase the sense of ownership of the final product. This would, in her opinion, greatly increase the ICoC's ability to command widespread support.

#### **Panel VI: African cooperative initiatives: a look at regional and international partnerships**

The final panel was chaired by Ms. Thouraya Sahli Chahed, Head of Space Activities Development of the Tunisian National Centre for Mapping and Remote Sensing. She noted that Tunisia, like many other states, was greatly benefiting from space-based services but that most of the population still has limited access to space-based services. She urged African states to cooperate and develop their own space capabilities.

Ms. Margaret Maimba, Chief Science Secretary of the National Council for Science and Technology of the Kenyan Ministry of Higher Education, Science and Technology and Secretariat for the Fourth African Leadership Conference on Space Science and Technology for Sustainable Development, reported that Kenya is presently involved in numerous space activities as well as regional cooperative efforts to promote access to space-based services. She discussed Kenya's chairmanship of the African Leadership Conference—a regional platform created to improve cooperation among African space professionals—in which a unanimous declaration was made regarding the need for national and regional leadership in Africa to adopt space technology as a key tool for development. She also acknowledged that while Kenya has been active in multilateral initiatives to regulate space activities, African activities remain uncoordinated at the international level, which has led to under-representation of African interests in multilateral forums.

Next, Dr. Mahama Ouedraogo, Head of the Science and Technology Division of the AUC, presented on the African Union's activities for improving regional access to space. He stated that the AUC is committed to the peaceful use of space for socioeconomic development. He stated that the AUC is currently working on its 2014–2017 strategic plan in which space will play a critical role. In particular, he stressed that most of the action items in this plan could benefit from space services and that African cooperation will play a significant role in harnessing the potential of space technology for long-term development. He noted that if Africa is to increase its profile as a global player in space activities, it should actively participate in all multilateral forums. He praised the various cooperative efforts that have facilitated African access to space-based services and, in particular, drew attention to the EU–Africa partnership which, under the Lisbon Joint Strategy of 2007, set the objective of providing long-term capabilities for Africa to benefit from the development of space-based services.

Finally, Amb. Gary Quince, Head of the EU Delegation to the African Union, reported on the EU–Africa partnership and the eight thematic partnerships aimed at African development, with Partnership 8 including outer space. He mentioned that space applications had a role in many, if not most, of the categories of development under the partnership, including peace and security. As an example of the potential for space-based services in Africa, Quince noted that there are over 100 disputed borders in Africa, many of which are being monitored using satellite imagery provided by the EU. He stated that the EU is investing €3.7 billion to improve its own space imaging capabilities and that it planned to use these resources to facilitate the work that might be carried out under any future African space policy or under a potential African Space Agency.

#### **Breakout sessions**

The purpose of the UNIDIR seminar was to provide a forum for key African actors and stakeholders to explore the reasoning behind the development of norms of behaviour and to engage with regional partners on how such initiatives might be approached at the national, regional, and multilateral level. To this end, participants of the seminar broke up into smaller groups to discuss how they saw their own state's domestic space aspirations fitting into regional and international cooperative initiatives, the impact of space security issues on plans to achieve those aspirations, and the different options available to them for increased participation in space security initiatives. The Chairs of these groups reported on the findings to other participants of the seminar.

**Group A:** The first group was asked to elaborate on the expectations and concerns of African states for ongoing multilateral processes, notably in respect of the development of an ICoC. The Chair reported that the Group believed that non-space actors must be involved in the development process of an ICoC and noted that there is a particular risk that non-space actors might think this process was not relevant to them and would, therefore, not participate. He indicated that it should be clearly stated that future aims of states in outer space will not be affected in any way if they supported an ICoC. The Group recommended that the EU should work closely with the AUC in addition to working with individual states. Finally, he said that all members of the group agreed that an ICoC might not be accepted by all states, but that this should not preclude work on developing a code that could be accepted by most.

**Group B:** The second group was asked how they saw norms of behaviour fitting into national space programmes of African states and how they felt that the interests of these states could be promoted or safeguarded in multilateral processes for the development of norms, particularly in the development of an ICoC. The Chair of this group said that members were very optimistic about the development of an ICoC and that they considered an ICoC to be capable of commanding the broadest support possible. He stated that an ICoC should be considered as a reference document as states draft national legislation, notably as they develop policies for the granting of national licenses to space actors. He added that African states should protect their own national interests and that, at the national level, key stakeholders should raise awareness among policymakers by engaging in discussions on space issues and heightening awareness of the importance of space. He stated that the group would like to see appropriate representation and active participation of African states at the multilateral level. He concluded that African states should draw up a roadmap for their own regional outer space activities.

**Group C:** The third group was asked how African regional organizations could promote or facilitate the engagement of African states in current ongoing initiatives to develop norms of behaviour and what mechanisms might be used to encourage and coordinate African participation in their development. The Chair reported that, in order for African states to support existing multilateral initiatives such as an ICoC, there was a clear need to raise awareness among delegates and policymakers on space security issues. To do this, African states should take advantage of existing institutions, such as the United Nations Regional Centres for Space Science and Technology Education in Morocco and Nigeria, and utilize them as focal points for the exchange of information. It was suggested that a database of experts could be developed that would perform various consultancy functions for African states. The Group noted that there were some institutions, both national and regional, that could better represent African positions and views in various multilateral forums. He concluded that there are very few African states “leading the charge” in the space context, particularly at the multilateral level, but that those states that are building significant space capacity and expertise should seek to bring other African states into collaborative initiatives.

## Conclusions

The purpose of the seminar was to provide a forum for participants to discuss the relevance of space security issues to Africa and to explore options for engaging in the multilateral initiatives underway to address these. Many participants concluded that African participation in multilateral forums had been relatively low for reasons such as lack of expertise, low levels of awareness among policymakers, and limited diplomatic resources. However, there was consensus that space had and would continue to play a key role in African development and that states of the region should endeavour to become more involved in the development of norms of behaviour, as such tools and frameworks will have a significant impact on future African space activities and their derived socioeconomic benefits.







**Facilitating the Process for the Development of an  
International Code of Conduct for Outer Space Activities**  
CFSP/2012/05/COC-UNIDIR, carried out with funding by the European Union