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Agenzia Spaziale Italiana

Highlighting the Relevance of Space Law for Developing Space Ecosystems in Africa

WEBINAR REPORT

20th April 2022

Prepared by:
OSL Team Sapienza

Speakers:
Charles MWANGI
Nicoletta BINI
Sergio MARCHISIO
Munzer JAHJAH
Isaac RUTENBERG
Marco FERRAZZANI
Joan CHESONI

OSL PROJECT OVERVIEW

The Webinar *Highlighting the Relevance of Space Law for Developing Space Ecosystems in Africa* is part of the research project *OSL - Outer Space Law for International Cooperation and Sustainable Development* carried out by the Department of Political Sciences (DSP) of the Sapienza University of Rome, in collaboration with the Italian Space Agency (ASI) and the Kenya Space Agency (KSA), under the scientific coordination of Prof. Sergio Marchisio.

The OSL Project origins in the cooperation among DSP and ASI developed under the Agreement of Scientific Cooperation concluded by the Parties in 2019 to implement the 2015 Framework Agreement between ASI and Sapienza. It is a Project on legal research, covering three main areas: a) legal instruments of international cooperation for space activities, especially those between Italy and Kenya; b) legal and institutional aspects related to the governance of space activities in Italy and Kenya; c) the legal regime of new space activities, including small satellites, also making reference to the lessons learned from the 1KUNS-KenyaSat programme. The Project represents an important tool for consolidating the relations between ASI, Sapienza University of Rome and KSA in order to engage in a collaboration in the field of legal sciences, complementing the existing projects in the engineering sector. In this context, exchanging ideas among the Parties on the elaboration of national legal frameworks on space activities, both in Italy and in Kenya, represents a core issue. The Project envisages two paths of activities: from the one side, capacity-building and education; on the other side, research and dissemination.

PURPOSES OF THE WEBINAR

As part of the OSL Project, the main purpose of the Webinar was to highlight the relevance of space law for developing space ecosystems in Africa. To this end, the first objective was to exchange views among participants and enlighten the audience on the existing legal frameworks and the need for space legislation and regulation for nascent space faring countries, such as Kenya. The meeting was also held in view of the joint involvement of the two teams, Sapienza and KSA, to *the Global Conference on Space for Emerging Countries (GLEC 2022)*, organised by the International Astronautical Federation (IAF) in May in Quito.



SUMMARY

The Webinar focused on the importance of cooperation between Kenya and Italy in the development of space programmes, as well as on the compliance with rules and principles of law in carrying out space activities.

The event provided a comprehensive picture of space activities carried out in Kenya, also recalling the long-lasting cooperation between the African country and Italy in space activities. Panelists also mentioned the notable cooperation between the European Space Agency (ESA) and African countries, especially in the area of Earth observation, underlining the existence of an ESA policy offering access to space-derived data free of charge. Furthermore, the notions of innovation, intellectual property and the use of space-derived data were discussed as they are particularly relevant for Kenya and for the African continent for development purposes.

Then, the importance of international space law, policies and national space legislation was highlighted for the development of space ecosystems in Africa. In particular, norms and other measures that can be adopted in order to enable safe access to, and use of, outer space for emerging countries. It was especially noted that such measures do not hinder the access of nations with emerging space capabilities. Furthermore, Panelists referred to the opportunity to identify country's needs and end-users' requirements in order to set up appropriate legal frameworks.

Overall, the Webinar outlined the space law and policy elements considered for the development of space activities in Kenya. Furthermore, it gave insights of the benefits that space programmes and activities can provide for Kenya and the importance of cooperation between space agencies, namely KSA, ASI and ESA.

AGENDA OF THE MEETING



The word cloud features various terms related to space law and international cooperation, including 'International Cooperation Areas', 'Sapienza University Rome', 'Outer Space Law', 'Italian Space Agency', 'Webinar', 'Research', 'Africa', 'Kenya', 'Space Agency', 'Legal', 'Under', 'Expected', 'Centre', 'Relevant', 'Need', 'Agreement', 'Italy NPOC ECSL Context', 'Carried Suitable Support', 'History', 'Legislation', 'Both Regulatory Training', 'Cubest SUS', 'Applicable African', 'Virtual Participants', 'One Only Provide', 'Field Relations Sector', 'These', 'Nascent', 'Launch', 'Step Sciences', 'Main', 'Key', 'Asi', 'Country', 'OSL Project', 'Born', 'Long', 'Date', 'Consolidate', 'Courses', 'Nairobi', 'Support', 'Department', 'Training', 'Cubest SUS', 'Legislation', 'Both Regulatory Training', 'Cubest SUS', 'Agreement', 'Italy NPOC ECSL Context', 'Carried Suitable Support', 'History', 'Legislation', 'Both Regulatory Training', 'Cubest SUS', 'Applicable African', 'Virtual Participants', 'One Only Provide', 'Field Relations Sector', 'These', 'Nascent', 'Launch', 'Step Sciences', 'Main', 'Key', 'Asi', 'Country', 'OSL Project', 'Born', 'Long', 'Date', 'Consolidate', 'Courses', 'Nairobi', 'Support', 'Department', 'Training', 'Cubest SUS', 'Legislation', 'Both Regulatory Training', 'Cubest SUS', 'Agreement', 'Italy NPOC ECSL Context', 'Carried Suitable Support', 'History', 'Legislation', 'Both Regulatory Training', 'Cubest SUS'.

ASI
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Highlighting the Relevance of Space Law for Developing Space Ecosystems in Africa

This webinar is part of the ASI-Sapienza-KSA Project OSL *Outer Space Law for International Cooperation and Sustainable Development*

<https://web.uniroma1.it/disp/en/disp/events/osl-outer-space-law-international-cooperation-and-sustainable-development>

Wednesday 20 April 2022
1 pm (CEST); 2 pm (EAT)

Zoom Platform
[Register here](#) to receive the link

Program

h. 1 pm
Welcome Address
Hillary Kipkosgey
Ag DG Kenya Space Agency

h. 1.05 pm
Moderator
Nicoletta Bini
Legal Office, Italian Space Agency

h. 1.10 pm
Discussants
Sergio Marchisio
Senior Lead OSL Project, Sapienza University

Munzer Jahjah
Broglio Space Center, Italian Space Agency

Isaac Rutenberg
Associate Professor and Former Director CIPIT, Strathmore University

Marco Ferrazzani
Legal Department, European Space Agency

Joan Chesoni
Attorney General, State Counsel Office

h. 1.45 pm
Q&A

h. 2.05 pm
Closing Remarks

SUMMARY OF THE INTERVENTIONS

WELCOME ADDRESS

Charles Mwangi

Director Space Sector and Technology Development, KSA

Mr. Charles Mwangi opened the Webinar by thanking the Italian Space Agency (ASI) and Sapienza University of Rome for having organised the Webinar, which Mwangi considers a valuable opportunity to learn more on how the partners of the OSL Project can collaborate on space law and learn about the legislative frameworks they need to have in this. Mwangi then focused on the major steps Kenya undertook in developing space activities, starting from the 60s, when Italy and Kenya concluded the intergovernmental agreement for the establishment of the San Marco Project Space Centre. He followed by mentioning the adoption of the first legislative guidance for space activities in Kenya in 1993, the subsequent establishment of the National Space Secretariat in 2009, precursor of the Kenya Space Agency, established in 2017. The launch of the first object into space by Kenya, namely the 1KUNS-KenyaSat announced the entry of Kenya among the space-faring countries. Another milestone mentioned by Mwangi is the adoption of the KSA Strategic Plan in October 2020. Mwangi concluded the Welcome Address by underlining that the discussions during the Webinar would be functional to guide Kenya to understand the path the Country needs to follow, also as a developing country, and that would be an

opportunity for the participants from other developing countries to learn from the experience.

MODERATOR

Nicoletta Bini

Legal Officer, ASI

Ms. Nicoletta Bini introduced the Webinar, underlying that it is part of the ASI-Sapienza OSL Project. Bini's intervention focused on the fundamental benefits space technologies and applications bring to our daily lives by contributing to the scientific, social and economic development of all countries. Bini especially referred to Space Agenda 2030, mentioning the crucial role space applications play for sustainable development and their highly relevance to achieve the global development agenda as both enablers and drivers. Bini stressed that in recent years the growing number of actors involved, along with the diversification of space activities, has brought new challenges that may affect the possibilities to preserve the safe utilisation of outer space. A key element to allow the continued safe use of space by all countries outlined by Bini is the respect of the rule of law and the strengthening of the global governance of space activities. In this respect, Bini noted that space legislation can play a special role.

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DISCUSSANTS

Sergio Marchisio

Senior Lead OSL Project, Sapienza University

Prof. Sergio Marchisio focused on the OSL Project and the related activities, both underway and ahead, jointly undertaken by Sapienza and KSA in the space law and policy field. Marchisio underlined that the topic of the Webinar is a reference objective of the OSL Project, taking place within the bilateral cooperation between Italy and Kenya on space activities. Marchisio in particular referred to the long-lasting relations between Italy and Kenya, started with the establishment of the Broglio Space Centre (BSC) in Malindi and the Intergovernmental Agreement signed in 2016 and currently in force, through which each Party agreed to use the BSC for the activities identified in the Agreement. Then, Marchisio outlined the specific issues the Project focuses on, such as the identification of the most suitable regulatory framework relevant to specific needs and requirements of the Partners in a comparative mode and the legal framework applicable to small satellites, in particular with reference to the 1KUNS-KenyaSat. Along these lines, Marchisio noted that Kenya adopted several documents applicable to the space sector, which are in line with the African continental development Agenda. Coming back to the OSL Project, Marchisio referred to its beginning in 2019, to the Course organised by ASI, KSA and the

United Nations Office for Outer Space Affairs (UNOOSA) at the BSC in Malindi which dealt, *inter alia*, with space law and policy. Furthermore, Marchisio mentioned the activities ahead, namely the participation of members of the OSL Project from both Sapienza and KSA to the Global Conference on Space for Emerging Countries (GLEC 2022) organised by the International Astronautical Federation (IAF) in May in Quito, Ecuador, on raising awareness of the essential and legislative elements that must be considered in establishing a firm foundation for national and regional space programs. Three further issues have been discussed. The first focused on the benefits of space activities as a global objective and the development of national regulatory frameworks for space activities as a key step for space developed nations as well as for States with emerging space capacity. International space treaties indicate to conduct space activities for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development and whether they carry out space activities or not. The same should apply to other kinds of normative frameworks, of regional or national levels, including non-legally binding instruments.

A second point addressed the need that norms, guidelines, standards or other measures adopted, or to be adopted in the future to face new challenges, do not hinder the access of nations with emerging space capabilities, and this was particularly

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considered in the drafting of the 21 Guidelines on the Long-Term Sustainability of Outer Space Activities. Marchisio underlined how the document contained a balanced perspective to ensure the ability to maintain the future conduct of space activities, realising the principle of equitable access to outer space while not hindering the emerging nations to carry out space activities, with a particular reference to small satellites. Marchisio concluded the intervention by recalling the importance of providing adequate legal and policy frameworks for the development of a firm national space ecosystem, which should materialise in a practical regulatory system for all actors involved, providing at the same time incentives for all stakeholders.

Munzer Jahjah

Head Broglio Space Centre, ASI

Dr. Munzer Jahjah's presentation dealt with the activities and programmes carried out in Kenya within the framework of the ASI-Sapienza Agreement in different areas related to the space sector. Jahjah underlined that in the passage of the management of the BSC in Malindi from Sapienza University to ASI in 2004, the two Parties concluded an Agreement to ensure the most advanced exploitation of research in the space sector through the most forwarded collaboration. The Programmes envisaged by such

collaboration range from high-educational programmes, such as the Master on Mission Design and Management launched in 2017 and the Training Course for African students organised in 2019 by ASI and KSA with the support of the UNOOSA, to the crafting of the mini-satellite 1KUNS-KenyaSat by the University of Nairobi with the support of ASI and Sapienza University in 2017 the satellite 1KUNS-PF launched by JAXA and deployed by the ISS in 2018. Jahjah mentioned other projects, including WildTrackCube-SIMBA satellite, launched in 2021 from Baikonur and RIPAS programmes for the enhancement of space access programmes from Malindi base Luigi Broglio Space Centre. Two ongoing projects encompass the installation of two telescopes in Kenya to implement an equatorial informative observatory for space objects during in-orbit and re-entry phases and a collaboration with the KSA for space weather applications. In concluding his intervention, Jahjah underlined that Sapienza is "presente", not only in the scientific projects but also in the space law field, in particular with the OSL Project.

Isaac Rutenberg

Associate Professor and Former Director CIPIT, Strathmore University

Dr. Isaac Rutenberg's intervention focused on what drives innovation economy in Kenya and in Africa and

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On how some steps in developing space capabilities can be so inspirational for the youth. One of the steps recalled by Rutenberg is the launch of the first Kenyan satellite, 1KUNS-KenyaSat by the University of Nairobi. He underlined how in recent years the lowering in the costs of space manufacturing and launching made space programmes much more available and feasible for countries, especially emerging ones. In this line, the increased possibilities of launching space objects are enabling, or should enable, innovation. At the same time, Rutenberg noted that a drawback in harnessing the benefits of space applications is the lack of data across Africa and the lack of African satellites dedicated to collecting data from space to this date. Finally, he underlined the importance of setting-up a policy which encourages innovation in the space sector. This can be seen as a social investment for students.

Marco Ferrazzani

Legal Department, ESA

Dr. Marco Ferrazzani offered an overview of the ESA space programmes developed in Africa, in particular with Kenya. He first highlighted that the last years witnessed a significant development of space activities in the African continent, stimulating the interest of numerous institutions. The same African Union (AU) provided for the setting-up of a regional space agency,

the African Space Agency (AfSA), which will benefit the Member States of the AU and will provide many possibilities for space cooperation. Ferrazzani then focused on the consolidated ESA programmes for the free access to data from European EO satellites. These programmes in particular provide dataset free of charge and freely available for all African users, which can be used for monitoring the soil, wetlands, lakes and the atmosphere. Among the mentioned programmes there is the ongoing cooperation between ESA and the South Africa Space Agency (SANSА) which encompasses several projects, especially on EO; the ESA Biomass mission to monitor the state of forests around the world and how they are impacted by climate change. Notably, ESA concluded an Agreement with the national space agency of Gabon for calibrating the technology by monitoring the African rain forests. Finally, Ferrazzani stressed the long-standing cooperation with Kenya for the use of the telemetry and tracking station of Malindi.

Joan Chesoni

Attorney General, State Counsel Office

Ms. Joan Chesoni's intervention dealt with internal developments in Kenya with respect to the adoption of a regulatory framework for space activities. First, Chesoni gave an insight

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on the policy and legal documents on space activities adopted in Kenya in recent years and underlined that Kenya is committed to adopting policy and legislative frameworks to make Kenya achieve its objectives in terms of engagement in the space economy. A point she stressed is the need to first identify objectives which can be included in a policy and then develop a national legislation, as the policy founds legislation and there can be no law without policies supporting it. At the same time, it is important to engage the public sector. As Chesoni pointed out, States need to create frameworks that work for the people. A further point underlined is the importance of developing human capacity. In this sense, she recognised the benefits in terms of building capacity, including technical and legal, of Italy-Kenya cooperation. A last point highlighted refers to identifying sources of finance that can support the development of space activities also in the delivery of public sector functions. While historically most of space activities were carried out by States, the commercialisation of space and the entry into space of the private sector, determined a shift that States could harness. An important aspect is to engage the private sector in space activities. In this regard, she mentioned the Space Protocol of the Cape Town Convention. Finally, Ms. Chesoni expressed the view that there is a need to enable space economy to develop in an equitable way.

Q&A SESSION

Moderated by Nicoletta Bini

Participants demonstrated great interest in the Webinar. Questions dealt with legal, policy and financing matters, as well as technical and engineering aspects

Questions concerned space innovation, the KSA initiatives on education, and more specifically the Broglio Space Centre, and the availability of data from tracking stations used for agriculture in order to provide updated mapping.

PARTICIPANTS

148 Participants

From **15** countries

64 people via Zoom

84 people via Facebook

Algeria, Austria, Brazil, France, Germany, Greece, India, Italy, Kenya, Netherlands, Pakistan, Switzerland, Tanzania, Turkey and United States

The link to the Live on Facebook is available [here](#).



Dipartimento di Scienze politiche - Sapienza
Università di Roma was live.

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The webinar is jointly organized by the Department of Political Sciences of Sapienza University and the Kenya Space Agency (KSA), with the further support of the Italian Space Agency (ASI). Participants will discuss the need for space legislation and regulation for emerging space faring countries such as Kenya, with the aim to initiate discussion on the international norms that Kenya could consider for ratification and/or domestication to guide and support the growth of the nascent space industry. This webinar is part of the ASI-Sapienza-KSA Project OSL - Outer Space Law for International Cooperation and Sustainable Development.





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