INTERNATIONAL ASTRONAUTICAL FEDERATION

FINAL REPORT

IAF Global Space Leaders Summit

Organized by the International Astronautical Federation (IAF)

"Space Capabilities for Sustainability on Earth"

Inaugural Session, 15 October 2024, Milan – Italy

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Non-profit organisation established under the French Law of 1 July 1901

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1. THE INAUGURAL IAF GLOBAL SPACE LEADERS SUMMIT

The **International Astronautical Federation** made history by organizing for the first time ever the **IAF Global Space Leaders Summit**, gathering the largest group of space leaders represented by **60 heads of space agencies and offices** from all over the world. The inaugural session of the IAF Global Space Leaders Summit took place on **15 October 2024 in Milan, Italy**, during the **75th International Astronautical Congress (IAC 2024)**.

This landmark event provided a unique opportunity for global space leaders from established space nations and emerging space countries to unite and discuss critical issues on neutral grounds and in a cooperative spirit.

The theme of this summit - *"Space Capabilities for Sustainability on Earth"* – focused on the critical role space technology plays in safeguarding our planet for future generations. Through the lens of space, we gained new insights into protecting our environment, mitigating and adapting to climate change, and fostering sustainable practices.

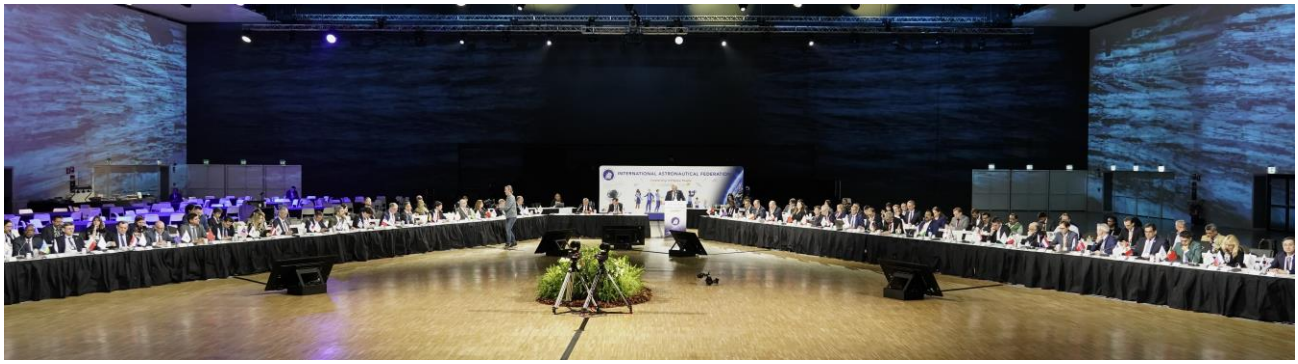
In recognition of the leadership demonstrated by the participants, the International Astronautical Federation presented the unique **IAF Global Space Leader's Pin** specially designed for this event. This pin, featuring a moonstone, symbolizes excellence in leadership and is engraved with a unique serial number to honour the leader's esteemed role in the space sector.

This inaugural event initiates a series of the Global Space Leaders Summits with a next edition planned during the 76th International Astronautical Congress (IAC 2025) in Sydney, Australia, on 30 September 2025.

2. THE ACKNOWLEDGEMENTS

On behalf of the International Astronautical Federation (IAF), we would like to thank all distinguished global space leaders for their participation in the Inaugural IAF Global Space Leaders Summit.

We express our gratitude to the **Italian Space Agency (ASI)** and its President, **Prof. Teodoro Valente** for their unwavering support in hosting this pivotal event.



3. PARTICIPATING SPACE AGENCIES & OFFICES / COUNTRIES

African Union	African Space Agency (AfSA)		AFRICAN UNION
ALGERIAN SPACE AGENCY	Algerian Space Agency (ASAL)		ALGERIA
GGPEN	Angolan Space Management Office		ANGOLA
CONAE	Argentina National Space Activities Commission (CONAE)		ARGENTINA
Australian Space Agency	Australian Space Agency		AUSTRALIA
FFG Promoting Innovation.	Austrian Research Promotion Agency (FFG)		AUSTRIA
azercosmos	Space Agency of Republic of Azerbaijan (Azercosmos)		AZERBAIJAN
NSSA	National Space Sciences Agency (NSSA)		BAHRAIN
belspo	Belgian Science Policy Office (BELSPO)		BELGIUM
AEB AGÊNCIA ESPACIAL BRASILEIRA	Brazilian Space Agency (AEB)		BRAZIL
CANADIAN SPACE AGENCY AGENCE SPATIALE CANADIENNE	Canadian Space Agency (CSA)		CANADA
CNSA	China National Space Administration (CNSA)		CHINA

Czech Republic Ministry of Transport	Ministry of Transport, Czech Republic		CZECH REPUBLIC
Ministry of Higher Education and Science — Danish Agency for Science and Higher Education	Danish Space Division		DENMARK
INSTITUTO GEOGRÁFICO MILITAR	Ecuadoran Military Geographic Institute (IGM)		ECUADOR
EgSA Egyptian Space Agency	Egyptian Space Agency (EgSA)		EGYPT
estonian space office	Estonian Space Office Embassy of Estonia in Italy		ESTONIA
esa	European Space Agency (ESA)	esa	EUROPE
cnes CENTRE NATIONAL D'ETUDES SPATIALES	Centre National d'Etudes Spatiales (CNES)		FRANCE
DLR Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center	German Space Agency (DLR)		GERMANY
ΕΑΚΕΑ HSC	Hellenic Space Agency		GREECE
इसरो isro	Indian Space Research Organisation (ISRO)		INDIA
ISA Israel Space Agency סוכנות החלל הישראלית	Israel Space Agency (ISA)		ISRAEL

Italian Space Agency (ASI)		ITALY
Cote d'Ivoire Geographic and Digital Information Centre (CIGN)		IVORY COAST
Japan Aerospace Exploration Agency (JAXA)		JAPAN
Kenya Space Agency (KSA)		KENYA
Latin American and Caribbean Space Agency (ALCE)		
Ministry of Economics, Latvia		LATVIA
Luxembourg Space Agency (LSA) Ministry of the Economy, Luxembourg		LUXEMBOURG
Malaysia Space Agency (MYSA)		MALAYSIA
Mexican Space Agency (AEM)		MEXICO
Royal Center for Space Remote Sensing (CRTS)		MOROCCO
New Zealand Space Agency		NEW ZEALAND
Norwegian Space Agency (NOSA)		NORWAY

	Paraguayan Space Agency (AEP)		PARAGUAY
	Peruvian Space Agency (CONIDA)		PERÙ
	Polish Space Agency (POLSA)		POLAND
	Portugal Space Agency		PORTUGAL
	Romanian Space Agency (ROSA)		ROMANIA
	Rwanda Space Agency		RWANDA
	Ministry of Economy, Slovenia		SLOVENIA
	South African National Space Agency (SANSA)		SOUTH AFRICA
	Korea AeroSpace Agency (KASA)		SOUTH KOREA
	Spanish Space Agency (AEE)		SPAIN
	Swedish National Space Agency (SNSA)		SWEDEN
	Swiss Space Office		SWITZERLAND
	Geo-Informatics and Space Technology Development Agency (GISTDA)		THAILAND

Netherlands Space Office	Netherlands Space Office (NSO) Ministry of Economic Affairs, The Netherlands		THE NETHERLANDS
Tunisia Space National Commission	Tunisian National Commission for Outer Space Affairs / Ministry of Higher Education and Scientific Research		TUNISIA
TUA	Turkish Space Agency (TUA)		TÜRKIYE
UAE SPACE AGENCY	UAE Space Agency (UAE SA)		UNITED ARAB EMIRATES
UK SPACE AGENCY	UK Space Agency (UK SA)		UNITED KINGDOM
UNITED NATIONS Office for Outer Space Affairs	United Nations Office for Outer Space Affairs (UNOOSA)		UNITED NATIONS
NASA	National Aeronautics and Space Administration (NASA)		UNITED STATES
	Uruguayan Air Force (FAU)		URUGUAY
ZBEKOSMOS	Uzbekspace Agency		UZBEKISTAN
VNSC	Vietnam National Space Center (VNSC)		VIETNAM
ZINGSA	Zimbabwe National Geospatial and Space Agency (ZINGSA)		ZIMBABWE

Observer:

SIAA	Space Industry Association of Australia (SIAA)

4. THE SYNOPSIS OF 60 STATEMENTS

The **International Astronautical Federation (IAF)** is proud to have launched a forum where leaders from both established space nations and emerging space countries can come together, each having the equal opportunity to address the global space leaders' community. This inclusive approach of the **IAF Global Space Leaders Summit** underscores the importance of global collaboration in advancing the space sector.

Delegates and experts exchanged views, shared experiences and visions, and delivered statements in which they presented a wide range of invaluable insights and perspectives.

Key topics and challenges concerning all participants globally were presented with a focus on sustainability:

I. EARTH OBSERVATION SATELLITE SYSTEMS – INDISPENSABLE TOOLS FOR SUSTAINABLE DEVELOMENT

Earth observation was mentioned as a key priority for many nations, actively participating in global satellite observation systems and advancing groundbreaking missions and instruments in collaboration with international partners.

Programmes like *Earth Explorer missions*, *Copernicus Sentinel*, and the *CO2 monitoring mission* contribute essential data for climate science and operational use. Copernicus, the world's largest Earth observation programmes, offers free, daily access to 350 TB of data while fostering international collaboration, particularly with Africa and Latin America. Space-based data play a critical role in addressing climate change, biodiversity loss, pollution, and extreme weather, providing real-time information on deforestation, urbanization, and natural disasters to drive sustainability. Initiatives like *smartEarth funding* and the *Aqualunar Challenge* aim to develop innovative solutions for sustainable development, while projects leveraging geoinformation tools such as *GNSS* and satellite imagery improve urban development, resource management, and environmental preservation.

Investments in space infrastructure, including Earth observation and communication satellites, support resource management, economic growth, and innovation, especially in remote regions like oceans, where satellite data aid in combating illegal activities such as fisheries crimes. Sharing satellite imagery of tropical rainforests exemplifies how data accessibility enhances sustainable land use and deforestation detection, with contributions from global organizations and partnerships. This strategy emphasizes fostering public-private partnerships, supporting startups to leverage satellite data, and advancing solutions for optimizing agriculture, green urban development, and greenhouse gas emissions monitoring. With initiatives like *space-based renewable energy and capacity-building programmes*, Earth observation technologies ensure resilience and sustainability, safeguarding ecosystems and creating a prosperous future for all.

II. CLIMATE CHANGE – A CRITICAL CONCERN FOR THE 60 GLOBAL SPACE LEADERS

The problem of climate change concerns all nations globally, making climate change monitoring a central topic for all 60 global space leaders at the Summit. Many participants emphasized this critical challenge in their statements, highlighting initiatives their countries are implementing to combat, control and adapt to climate change.

Initiatives like *Climate Report* deliver essential information on droughts, snow cover reach, sea levels, and methane concentrations, supporting regional resilience and sustainable development. Efforts in the Arctic, where climate impacts are felt worldwide, show how Earth observation technologies help manage resources, monitor agriculture, and support sustainable practices.

A key trend in climate monitoring is the deployment of small-satellite constellations equipped with Earth observation sensors. These satellites provide data for critical areas such as agriculture, urban planning, and disaster management. Complementing this, programmes like the *Space Data Center* supply real-time information on environmental factors, including desertification, air quality, and water resources, aiding regions severely affected by climate change.

AI-driven technologies are increasingly integrated into climate response strategies, enhancing the processing of geospatial data for initiatives such as digital mapping tools, water management, and agricultural support.

Public outreach, STEM education, and private-sector partnerships are also essential to tackling global challenges on climate change. Programmes like the *Geo-Spatial Analytics Platform* and the *Space Analytics and Solutions Programmes* focus on improving air quality, food security, and environmental monitoring.

III. SPACE – A DRIVER FOR SOCIO-ECONOMIC DEVELOPMENT

Delegates mentioned their national Earth observation projects dedicated to optimizing land use, efficiently managing water resources, and improving crop yields. International collaborations have strengthened initiatives for drought management, agricultural productivity, and maritime surveillance, highlighting the value of Earth observation technologies for precision agriculture and responsible fisheries. Notable advancements include soil moisture mapping, inland water quality monitoring, and enhanced environmental surveillance.

On the African continent, Earth observation capabilities are essential for agriculture, environmental monitoring, disaster response, and addressing issues like deforestation, border surveillance, and artisanal mining. Across other regions, national space development plans integrate space research to support sustainable initiatives in territorial planning, agricultural development, reforestation, and environmental protection.

The use of advanced imaging technologies, including nanosatellites with instruments for monitoring cloud dynamics, water vapor interactions, and lightning activity, contributes to precision agriculture

and environmental monitoring. Ongoing projects, like *Venus*, further support efforts in sustainable practices.

Projects for Satellite communication provide broadband connectivity and enable services like e-commerce and telemedicine, especially in underserved regions. By effectively leveraging space technologies and infrastructures, the global community can ensure sustainable resource management and build resilience in agricultural practices across continents.

IV. SATELLITE DATA – A PREREQUISITE FOR DISASTER MANAGEMENT

Another global topic concerned disaster management, where space technologies are indispensable, providing tools for predicting, monitoring, and responding to natural cataclysms. Satellites offer real-time Earth observation data that is vital for predicting severe weather events, and enhancing preparedness for disasters like hurricanes, floods, and wildfires. This information is key for minimizing the impact of these events on affected populations. For instance, the recent severe flooding in Central Europe demonstrated the importance of space data in providing early warnings for rainfall and enabling timely disaster response.

The development of domestically-produced communications satellites, hybrid propulsion systems for emission reduction, and regional positioning systems enhanced by AI exemplifies how space technology is advancing disaster management capabilities. These innovations not only support environmental monitoring and disaster response but also foster economic resilience by improving the ability to manage natural disasters and support long-term recovery efforts.

Participants highlighted continued collaboration and investment in space technologies to enhancing global disaster preparedness and response. Emerging space nations have launched national space monitoring programmes that utilize remote sensing and GIS applications and have made significant progress with small-scale satellites, contributing to national and global sustainability goals.

V. INNOVATIVE TECHNOLOGIES – A KEY DRIVER FOR SUSTAINABLE DEVELOPMENT

At the IAF Global Space Leaders Summit, space agencies highlighted their efforts to advance innovative platforms designed to tackle global challenges and drive sustainable development. These platforms leverage cutting-edge technologies such as *Digital Earth* and *Digital Twin Earth*, which integrate vast datasets from satellites to offer real-time insights into environmental changes, resource management, and urban planning.

Speakers also showcased their commitment to fostering digitalization and innovation through Research, Technology, Development, and Innovation (RTDI+D). These efforts focus on enhancing capabilities in fields such as AI, satellite communication, and cybersecurity, which are critical for the safe and efficient use of space technologies. For example, some agencies are developing *autonomous space robotics* to improve satellite operations and safety in orbit. In addition, countries are investing in

national platforms like the *Geospatial Hub*, which enables the exploration and visualization of location-based data.

VI. SPACE DEBRIS - THE GLOBALLY RECOGNIZED THREAT TO A SUSTAINABLE SPACE ENVIRONMENT

The Summit could not avoid the pressing topic of space debris, a growing concern as more countries are bound by commitments to work together towards removing space debris and ensuring the sustainability of space operations.

With the increasing number of satellites in orbit, coupled with thousands of defunct ones, the risk posed by space debris to both crewed and uncrewed missions has become a critical issue that demands urgent action.

Countries have acknowledged the need for collaboration, and many have already pledged to mitigate space debris through various global frameworks and initiatives. *The Artemis Accords, the Space2030 Agenda, the UN Committee on the Peaceful Uses of Outer Space (COPUOS), the Zero Debris Charter and the Statement for a Responsible Space Sector* are platforms where international cooperation is driving efforts to manage space traffic, develop debris removal technologies, and implement mitigation strategies.

Active debris removal (ADR) technologies, which involve partnerships between public and private sectors, are already in development to tackle this pressing issue. Moreover, space agencies are working to strengthen governance frameworks and legal regulations to ensure that the space environment remains secure for future generations. The participants of the IAF Global Space Leaders Summit highlighted the importance of these collaborative efforts and reinforced the need for global cooperation to mitigate space debris, thereby ensuring the long-term sustainability of space exploration and utilization.

In line with these presentations, space agencies and organizations emphasized that a coordinated, international approach will be crucial for managing space debris effectively.

VII. IAF – THE PLATFORM FOR INTERNATIONAL COOPERATION WHERE EACH VOICE CAN BE HEARD

Fostering international collaboration stands as the foremost priority highlighted by all participants at the summit. This collective commitment is essential for addressing the world's most pressing challenges, including climate change, resource management, and sustainable development. By working together across borders, nations can ensure that space continues to serve humanity as a powerful tool for the greater good.

Collaboration in satellite development and partnerships between public, private, and academic sectors have already resulted in a synergistic ecosystem, allowing for the effective sharing of data and technological innovations. Initiatives like the UN's *"Space2030 Agenda"* and the growing emphasis on

green technologies underscore the importance of building capacity, sharing knowledge, and fostering collective action to ensure a sustainable future.

International cooperation has proven vital in advancing space-based technologies, enabling countries to better respond to climate impacts, enhance data-sharing capabilities, and drive forward sustainability goals. Through continued engagement between space agencies and offices, the IAF Space Leaders Summit has united the global space community that is equipped to tackle complex challenges and innovate for a better future. Moreover, inclusivity in space cooperation - especially with emerging nations - is key, ensuring that all nations have access to the benefits of space technologies.

OUTLOOK TO THE FUTURE

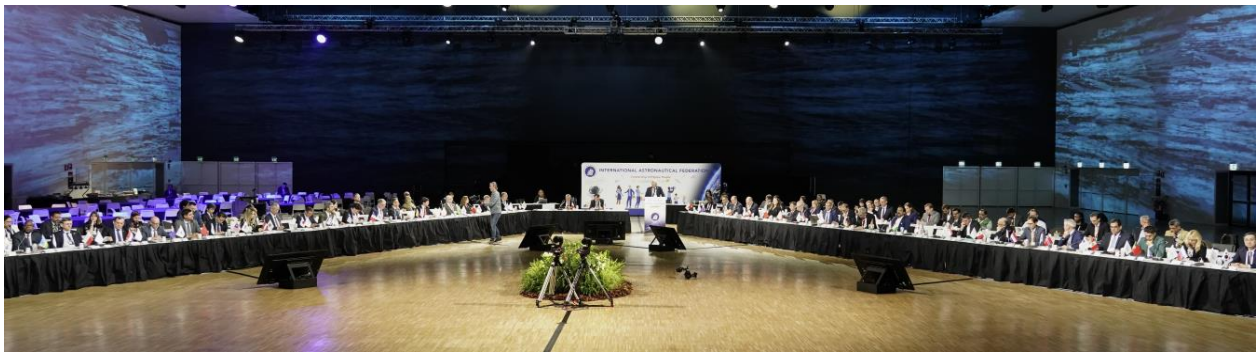
By sharing satellite data and developing new technologies together, nations can ensure that space remains a platform for innovative solutions and a beacon of hope for a sustainable tomorrow. Through these joint efforts, we will continue to build a future where space exploration and sustainability go hand in hand, guiding us towards a better, more resilient world for generations to come.

The FINAL REPORT of the IAF Global Space Leaders Summit offering a synopsis of the 60 statements of the global space leaders is published on the IAF website documenting the legacy of this historic event.

Recognizing the crucial need for such a platform for collaboration, and following the success of the inaugural session, the **next edition of the IAF Global Space Leaders Summit** has already been announced. It will take place on **30 September 2025 in Sydney, Australia**, in conjunction with the **76th International Astronautical Congress (IAC 2025).**

Connecting @ll Space People
for a sustainable future

5. THE PHOTO GALLERY

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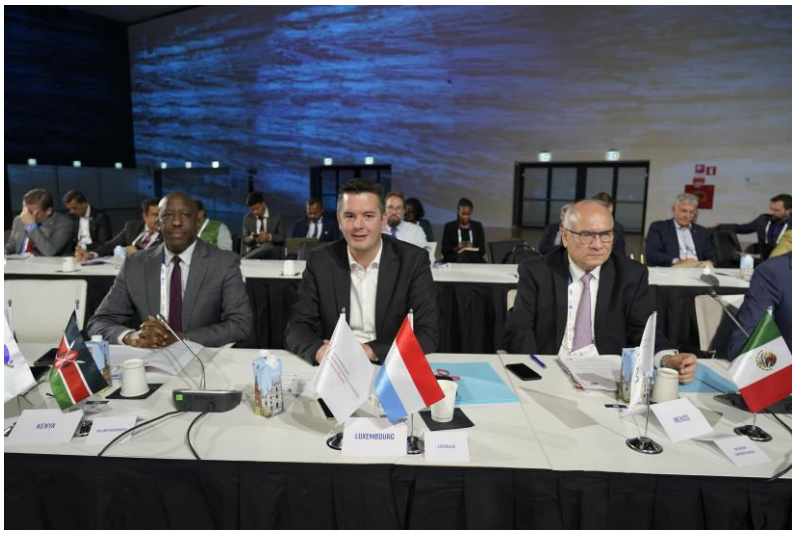
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INTERNATIONAL ASTRONAUTICAL FEDERATION
Awarded to
Global Space Leader

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