2023



# **Annual Report**

GLOBAL EXPERT GROUP ON SUSTAINABLE LUNAR ACTIVITIES





#### **About GEGSLA**

2020, the Moon Village Association (MVA) took initiative to address critical issues to de-risk future lunar missions and increase global cooperation for lunar exploration and settlement. Therefore, the MVA to promote decided development of a neutral forum for multi-stakeholder discussions on lunar exploration: the Global Expert Group on Sustainable Lunar Activities (GEGSLA). The Group was composed members from Space Agencies, Industry. Government. Organizations, International NGOs, Universities and Research Centers. The public was also involved via a public consultation.

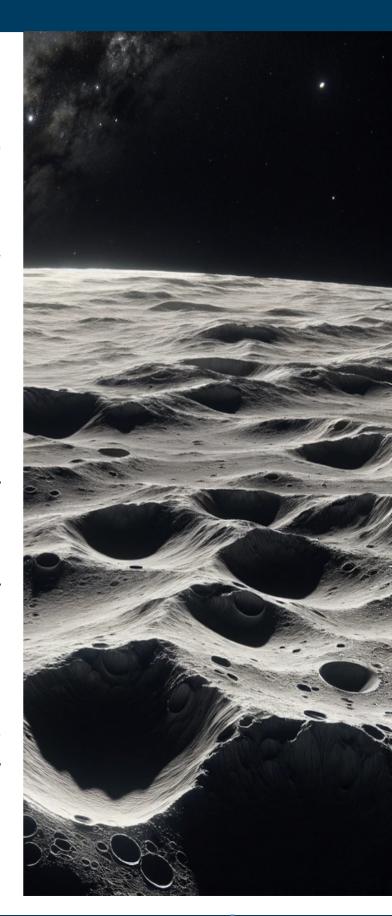


### **GEGSLA Working Groups**

From January 2023, it started the **GEGSLA Operational Phase**.

The goals of this phase are to promote consideration and implementation of the Recommended Framework produced by the Group, with special focus on discussions conducted within the United Nations Committee the on Peaceful Uses of Outer Space (UN COPUOS) as well as exchange information on the ongoing lunar missions. The support to these discussions is possible since MVA has permanent observer status within COPUOS.

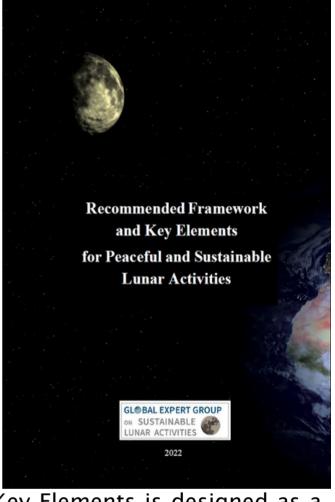
Several Working Groups have been set up to discuss in details aspects related to Environment/Science, Industry and Lunar Coordination Mechanisms



#### **GEGSLA Deliverables**

GEGSLA has continued to progress in its initiatives and outreach. The key update includes the translation and dissemination of the "Recommended Framework and Key Elements for Peaceful and Sustainable Lunar Activities" in Arabic, Chinese, French and English. The translation into French, Chinese and Arabic are to be found here:

<u>GEGSLA</u> <u>Recommended</u> <u>Framework - Moon Village</u> Association.



The Recommended Framework and Key Elements is designed as a guide for well-balanced lunar projects and offers recommendations for how to implement safe and sustainable lunar activities through norm- setting, coordination, and management. It builds on principles established in international space law, relevant UN outer space treaties and soft law documents and can be downloaded here:

https://moonvillageassociation.org/gegsla/documents/gegsla-recommended-framework/.

The two additional annexes, while not an object of consensus within the GEGSLA plenary, can be downloaded at: <a href="https://moonvillageassociation.org/g-egsla/documents/gegsla-annexes/">https://moonvillageassociation.org/g-egsla/documents/gegsla-annexes/</a>.

### **GEGSLA Secretariat**



**Dumitru-Dorin Prunariu** GEGSLA Chairman, Space Agency/Government



**Alice Gorman**GEGSLA Vice-Chair, Academia



Rajeswari Pillai Rajagoplan GEGSLA Vice-Chair, Civil Society



Timothy Cichan GEGSLA Vice-Chair, Industry



Giuseppe Reibaldi MVA President & GEGSLA Executive Secretary



**Ulpia Botezatu**GEGSLA Implementation Support
Officer

#### **GEGSLA Numbers**

#### 200 Participants

REPRESENTING INDUSTRY, GOVERNMENTS, SPACE AGENCIES, ACADEMIA, AND CIVIL SOCIETY

From: Australia, Austria, Bahrein, Brazil, Canada, China, Costa Rica, Cyprus, Egypt, France, Germany, India, Indonesia, Israel, Kenya, Luxembourg, Mexico, Netherlands, Nigeria, Romania, Russian Federation, Saudi Arabia, Türkiye, Ukraine, United Kingdom of Great Britain and Northern Ireland and United States of America.

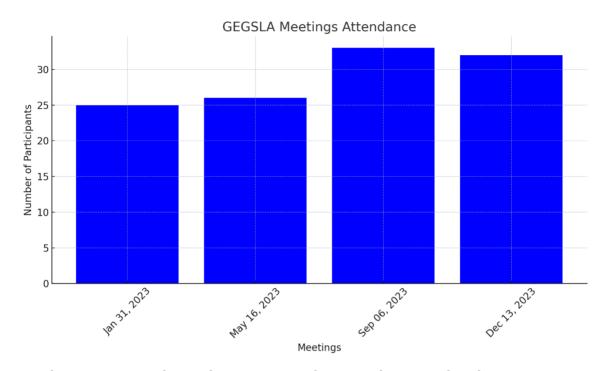
## 3 Subgroups

TO TACKLE MOST THE PRESSING ISSUES

- 1. Lunar Environmental Protection
- 2. Lunar Technical Coordination
- 3. Lunar Multi-stakeholder Coordination



### **GEGSLA Meetings**



The Group has been working through the Operational Phase having four plenary meetings in 2023, as follows:

- The 1<sup>st</sup> Operational meeting on January 31st, 2023, aimed at supporting the implementation of the Recommended Framework and its distribution at the UN COPUOS and other international fora.
- The **2**<sup>nd</sup> **Operational meeting** on May 16, 2023, aimed at further supporting the work of the Group within the UN COPUOS framework.
- The **3**<sup>rd</sup> **Operational meeting** on September 6, 2023, involved the industry.
- The 4<sup>th</sup> Operational meeting on December 13, 2023, was dedicated to academia audience.

# GEGSLA at the UN Science Summit 2023



Held on September 20, this event featured a series of presentations and discussions focusing on the Moon Village Association's work and its Global Expert Group for Sustainable Lunar Activities. These discussions linked GEGSLA's initiatives to broader UN policies, particularly focusing on the future of outer space governance.

The event also included an interactive exchange of ideas and insights between the attendees and the speakers. The session concluded with a summary of key takeaways, encapsulating the importance of sustainable lunar exploration and the potential for future policy development in line with global sustainability goals.

**ANNUAL REPORT 2023** 

COPUOS STSC Side Event, February 2023

#### The Recommended Framework and Key elements for Peaceful and Sustainable Lunar Activities



The side event aimed to delve into the essential components and guidelines necessary for peaceful and sustainable activities on the Moon. responsibly and beneficially for all.

The Moon Village Association, renowned for its efforts in promoting collaboration in lunar exploration, orchestrates this event to facilitate dialogue on the best practices and frameworks needed for future lunar missions. The discussion is expected to contribute significantly to the development of international standards and agreements that align with peaceful and sustainable objectives.

This event is not only a platform for sharing knowledge and ideas but also an initiative to shape the future of lunar exploration in a way that benefits humanity as a whole. Participants and attendees can look forward to an insightful and forward-thinking discussion on one of the most crucial topics in space exploration today.

COPUOS LSC Side Event, March 2023

#### The Recommended Framework and Key elements for Peaceful and Sustainable Lunar Activities

Organized by the Moon Village Association, a leading organization in lunar exploration advocacy, this event brought together experts, policymakers, and stakeholders in the field of space law and lunar activities. It provided a unique platform for exchanging ideas, exploring challenges, and proposing solutions that will shape the future of lunar exploration and development.

This meeting was a crucial step in the advancement of international lunar policy. It aimed to present and discuss a comprehensive framework that outlined the critical elements necessary for ensuring that lunar activities were conducted in a peaceful and sustainable manner. The focus was on establishing guidelines that promote responsible exploration and use of the Moon, in line with international laws and agreements.

This side event was particularly timely as nations and private entities showed increasing interest in lunar exploration. The discussions and outcomes of this event were expected to play a pivotal role in guiding the international community towards a consensus on how to manage and utilize lunar resources effectively, ethically, and sustainably.

Participants anticipated a highly informative session that not only delved into the intricacies of lunar policy but also offered a glimpse into the future of lunar exploration and its potential impact on humanity's presence in space.

COPUOS 66th Session Side Event, June 2023

## International Lunar Coordination: A Round Table



The Side Event, titled "International Lunar Coordination: A Round Table," was hosted at the United Nations Office for Outer Space Affairs (UNOOSA). This event was organized by the Global Expert Group on Sustainable Lunar Activities (GEGSLA) and brought together an array of speakers representing various Permanent Observers, including renowned organizations like the Moon Village Association, Secure World Foundation, Open Lunar Foundation, and The Hague Institute for Global Justice.

The discussions focused on the evolving landscape of lunar activities and the importance of international collaboration in this realm. The event was an excellent opportunity for attendees to understand the complexities and potential of lunar exploration, highlighting the need for a unified approach in shaping the lunar journey

**ANNUAL REPORT 2023** 

# GEGSLA at UN COPUOS 2023



#### Scientific and Technical Subcommittee 60th Session 2023

- A/AC.105/C.1/2023/CRP.20\* Report of the Moon Village Association on the Global Expert Group on Sustainable Lunar Activities - Status/Deliverables/Plan
- "The Recommended Framework and Key Elements for Peaceful and Sustainable Lunar Activities", side event organized by Moon Village Association, 9 Feb. 2023, starting at 2:00 p.m. Vienna time (CET), in the Vienna International Centre MOE100 room, hybrid format.

#### Legal Subcommittee 62th Session 2023

- <u>A/AC.105/C.2/2023/CRP.31</u> Report of the Moon Village Association on the Global Expert Group on Sustainable Lunar Activities Status/Deliverables/Plan
- "The Recommended Framework and Key Elements for Peaceful and Sustainable Lunar Activities" organized by the Moon Village Association, 22 March 2023, starting at 14:00 p.m. Vienna time (CET)
- The First International Moon Day Results and Outlook for 2023; Mr. Nasr AlSahhaf and Ms. Bernadette Detera; Moon Village Association

#### COPUOS 66th Session 2023

- A/AC.105/2023/CRP.9 Report of the Moon Village Association on the Global Expert Group on Sustainable Lunar Activities - Status/Plan
- COPUOS Side event: "International Lunar Coordination: A Round Table", co-organized by the Moon Village Association, Secure World Foundation, Open Lunar Foundation, and the Hague Institute for Global Justice, Room CR-7, 7 June 2023, starting at 6:00 p.m. Vienna time (CEST)

### **GEGSLA Sponsors 2023**



ANNUAL REPORT 2023 013/

## Annex 1 : GEGSLA Participants

#### **GEGSLA Participant List**

Name	Surname	Country	Affiliation
Aslan	Abashidze	Russia	RUDN University, Moscow State Institute of International Relations
Ayman	Ahmed	Egypt	EgSA
Mohamed Amine	AIDI	N/A	Student
Nasr	Al-Sahhaf	Saudi Arabia	Alsahhaf Consultant Engineers
Isabella	Alvares Fernandes	N/A	N/A
Thibaut	Atché	France	Y20
Stefan-Claudiu	Axinia	Romania	Student
Ruth	Bamford	UK	RAL Space/Science and Technology Facilities Council
Donald	Barker	USA	Jacobs/NASA
Javid	Bayandor	USA	University at Buffalo – The State University of New York
P.J.	Blount	Luxembourg	University of Luxembourg
Lamboray	Bob	Luxembourg	Luxembourg Space Agency
Yuri	Bondarenko	Russia	Institute of Applied Astronomy of the Russian Academy of Sciences
Marco	Borghi	Italy	Space Economy Evolution Lab, SDA Bocconi
Christophe	Bosquillon	France	Autonomous Space Futures Ltd
Charbel	Boutros	Lebanon	Icon Engineering
Ioana	Bratu	Netherlands	Vrije Universiteit Amsterdam
Kate	Calderwood	USA	Montana State University

Name	Surname	Country	Affiliation
Nerma	Caluk	USA	Structural Engineer
Selene	Cannelli	Italy	N/A
Victor	Carvalho Pinto	Brazil	Brazilian Federal Senate
Gabriele	Checchia	Italy	N/A
Irina	Chernykh	Russia	RUDN University
Ian	Christensen	USA	Secure World Foundation
Timothy	Cichan	USA	Lockheed Martin
Christopher	Cokinos	USA	University of Arizona
Victor	Counillon	France	Lunar Village learning program at INSEEC
Ivan	Coupka	Russia	N/A
Mireille	Couston	France	University of Lyon
Ian	Crawford	UK	Birkbeck College, University of London
James	Crowell	USA	Crow Industries, Inc.
Anthony	Cruz	USA	OUSD (Research & Engineering)
George	Danos	Cyprus	Republic of Cyprus, CSEO
Saswati	Das	N/A	N/A
Upasana	Dasgupta	N/A	N/A
Guillermo	Delgado Aparicio	Perù	CITRL Georgia Tech Associate
Rossana	Deplano	N/A	N/A
Peppino Stefano	Disperati	UAE	Information Management Global
Alexandra	Dolce	N/A	N/A
Simon	Drake	Germany	Lunar Resources Registry UG, Space Ventures Investors Ltd
Hui	Du	China	Space Policy and Law Research Center, China Academy of Space Technology
Ziv	Dubinsky	Israel	Metabolic Robots feeding solutions ltd
Daniyal	durrani	UK	N/A
Steve	Durst	USA	International Lunar Observatory Association / ILOA Hawai'i

Name	Surname	Country	Affiliation
Sahba	El-Shawa	Italy	IUSS Pavia
Ilankuzhali	Elavarasan	India	Space Development Nexus
Viktors	Engelbrehts	Austria	IAEA/UN
Amy	Fagan	N/A	N/A
Myron	Fendall	USA	NASA
Oscar Mario	Fernández	Costa Rica	UN
Bernard	Foing	Netherlands	ESA
Marc	Fournier	France	La Paillasse
Steven	Freeland	Australia	Western Sydney University
Hasan	Galal	Egypt	Egyptian Space Agency
Meecha Sara	George	India	N/A
Stephen	Gerdts	USA	NASA
Ashfaq Gilkar	Gilkar	UK	N/A
Mike	Gold	USA	Redwire Space
Eladio	Gonzales Machin	Spain	Member of Spanish Space Commission Experts
Thomas	Gooch	Australia	Office of Other Spaces
Alice	Gorman	Australia	Flinders University
Thanos	Goulas	UK	Loughborough University
Angelo	Graceffa	Czech Republic	Novartis
Rafał	Graczyk	Luxembourg	University of Luxembourg, Interdisciplinary Center for Security, Reliability and Trust
Will	Green	USA	N/A
Gernot	Groemer	Austria	Austrian Space Forum
Xiaoxi	Guo	China	Space Policy and Law Research Center, China Academy of Space Technology
Humberto García Montano	Hagmnica	Nicaragua	UNAN-MANAGUAUniversity
Michelle	Hanlon	USA	For All Moonkind
Pasindu	Hatharasinghe	Sri Lanka	N/A

Name	Surname	Country	Affiliation
Dan	Hendrickson	USA	Astrobotic
Charles	Hibbitts	N/A	N/A
Hailey	Hillsman	USA	The Global Space Law Center at Cleveland State University
Bernd J.	Hoefer	Germany	A9C Capital, Bahrain, IAF, MVA
Marchel	Holle	USA	ispace
Amy	Holt	France	International Space University
Izzy	House	USA	N/A
Tomas	Hrozensky	Austria	ESPI
David	Huer	Canada	N/A
Marina	Huidobro	Brazil	University Catholic of Santos
Anna	Hurova	Ukraine	National Academy of Sciences
Iwao	Igarashi	Japan	Mitsubishi Heavy Industries, Ltd.
Stephen	Indyk	USA	Honeybee Robotics
Susan	Ip-Jewell	USA	MMAARS (Mars-Moon Astronautics Academy and Research Sciences)
Shimpei	Ishido	Japan	Nishimura & Asahi
Pieter	Jansen	Netherlands	N/A
Devanshu	Jha	India	N/A
Samuel	Johnson	Sierra Leone	N/A
John	Jossy	USA	Space Settlement Blogger
Caroline	Justino	Brazil	Grupo de Pesquisa em Direito e Política Espacial da UniSantos
Sylvester	Kaczmarek	UK	AI, Robotics, and Cybersecurity Expert in Aerospace & Defense
Mykhailo	Kaliapin	Ukraine	Yuzhnoye State Design Office
Jay	Kamdar	India	SEDS India
Tufan	Kayaci	Republic of Türkiye	Turkish Space Agency
Jonathan	Keller	N/A	N/A
Hailee	Kepchar	USA	The Global Space Law Center at Cleveland State University

Name	Surname	Country	Affiliation
Jim	Keravala	USA	OffWorld
Harshita	Khera	Canada	Open Lunar Foundation
Eleanor	Kithaka	Kenya	N/A
Frank	Koch	Germany	Orbit Recycling
Paula	Korn	USA	Creative Consulting for Exploring Space
Charalampos	Kosmas	Greece	Kosmas Georing Services
Lukas	Kuhn	Germany	N/A
Erik	Kulu	Canada	Factories in Space
Mahamane	Labo	N/A	N/A
Ian	Lange	USA	Colorado School of Mines
Atip	Latipulhayat	Indonesia	Padjadjaran University
Andreas	Ligtvoet	Netherlands	World Futures Studies Federation
Jonathan	Lim	Australia	Jus Ad Astra
Sungwoo	Lim	UK	The Open University
Michael J	Listner	USA	Space Law & Policy Solutions
Oswaldo	Loureda	Brazil	Acrux Aerospace Technologies
Yuliia	Lysenko	Ukraine	Yuzhnoye State Design Office
Volker	Maiwald	N/A	N/A
Suyan Cristina	Malhadas	Brazil	Catholic University of Santos
Carlos	Mariscal	Mexico	Dereum Labs
Anne-Sophie	Martin	Italy	Sapienza University of Rome
Dovile	Matuleviciute	Luxembourg	Luxembourg Space Agency
Looliya	Mayan Musaliarakath	India	N/A
Siavash	Mirzaee	N/A	N/A
Igor	Mitrofanov	Russia	Space Research Institute (IKI), Russian Academy of Sciences
Iván Leonel	Molina Magaña	Argentina	N/A
Graham	Morrison	South Africa	University of Cape Town

Name	Surname	Country	Affiliation
Annamalai	Muthu	N/A	N/A
Obadiah	Mutio	Kenya	N/A
Masatoshi	Nakano	Japan	N/A
Lakshmi Narayanan	Nammalwar	India	N/A
Michael	Newman	Austria	UNOOSA
Kevin	Nhlapo	South Africa	Infinite Aerospace & BNTInternational
Varias	Nicholas	Canada	O.A.A. (Retired Member); O.B.O.A.
Jessyka	Nunes	Brazil	University Catholic of Santos
Andrew	Nyawade	Kenya	Kenya Space Agency
Dennis	O'Brien	USA	The Space Treaty Institute
Omolade	Odetara	Nigeria	Leaf Space
Fatai Damilola	Ogundana	Nigeria	African School of Diplomacy and International Relation
Ihor	Ohorodnyk	Ukraine	Yuzhnoye State Design Office
Vivian Adhiambo	Otieno	Netherlands	TU Delft and University of Amsterdam
Scott	Pace	USA	Space Policy Institute, Elliott School of International Affairs
Amit Pandey	Pandey	USA	Lockheed Martin Space
Edward	Patrick	USA	Southwest Research Institute
Lykke	Pedersen	Denmark	N/A
Burak	Pehlivan	Republic of Türkiye	Republic of Türkiye
Jing	Peng	China	China Academy of Space Technology
Guillermo	Poveda	Colombia	N/A
Dorin	Prunariu	Romania	ROSA
Dhanusshya	Raghu	N/A	N/A
Rajeswari	Rajagopalan	India	Observer Research Foundation
Naveen	Rajan	N/A	N/A
Bianca	Ramalho	N/A	N/A

Name	Surname	Country	Affiliation
Rosa Ma	Ramirez de Arellano y Haro	Mexico	Mexican Space Agency
Julio	Rezende	Brazie	University Federal do RIo Grande do Norte
Renata	Ribeiro	Brazil	Brazilian Space Agency
Stephen G	Robison	USA	Georgetown University Law Center
Kathryn	Robison Hasani	Australia	N/A
Zhanna	Rodionova	Russia	Sternberg Astronomical Institute of Moscow State University
David	Rodríguez	Switzerland	EPFL Space Center (eSpace)
Andrei	Romanov	Russia	P.N. Lebedev Physical Institute of the Russian Academy of Sciences
Giuliana	Rotola	Italy	Sant'Anna School of Advanced Studies
John	Rummel	USA	Friday Harbor Partners LLC
Gennaro	Russo	Italy	Italian Institute for the Future and Center for Near Space
Thais	Russomano	UK	InnovaSpace UK
Andrei	Sadovski	Russia	N/A
Mitsuhiro	Sakamoto	Switzerland	International Telecommunication Union
Antonino	Salmeri	Italy	Open Lunar Foundation
Gerald	Sanders	USA	NASA
Hannah	Sargeant	UK	The Open University
Jessy Kate	Schingler	USA	Open Lunar Foundation
Thomas	Schrage	Germany	Airbus Defence and Space
John	Sheldon	UAE	Lunapolitics
Galina	Shinkaretskaia	Russia	Institute of State and Law, Russian Academy of sciences
Michael	Simpson	USA	Institute of Space Commerce
Ramdayal	Singh	India	Student
Miyuki	Sohara	USA	Sakura Production USA LLC and Kyushu Seven Stars Association

Name	Surname	Country	Affiliation
Cassandra	Steer	Australia	Australian National University College of Law
Hoornaert	Stephan	Belgium	N/A
Vitalii	Stoliarchuk	Ukraine	State Design Office "Yuzhnoye" / Oles Honchar Dnipro National University
Vitalii	Strashko	Ukraine	Dnieper State Academy of Civil Engineering and Architecture
Mark	Sundahl	USA	Cleveland State University
Gabriel	Swiney	USA	NASA
Mina	Takla	Egypt	CosmoX
Asli Pinar	Tan	Türkiye	N/A
Pavlo	Tanasyuk	Luxembourg	Spacebit
Maria	Terekhova	Ukraine	N/A
Sasiluck	Thammasit	Thailand	N/A
Madhu	Thangavelu	USA	University of Southern California
ITIR	TOKSÖZ	Republic of Türkiye	Dogus University, MVA
Rania	Toukebri	Germany	N/A
Vishal	Tripathi	India	Anna University
Geet	Uikey	India	N/A
Ezinne	Uzo-Okoro	USA	White House Office of Science and Technology Policy
Aitana	Valderrey	N/A	N/A
Arnaldo	Vargas	USA	N/A
Guoyu	Wang	China	Academy of Air, Space Policy and Law (AASPL), Beijing Institute of Technology (BIT)
Jilian	Wang	China	China Academy of Space Technology
Daniel Ngacha	Wariari	Kenya	N/A
Gordon	Wasilewski	Poland	Space Research Centre, Polish Academy of Sciences
Josh	Waters	USA	insistent Galactic Operations (iGO)
Derek	Webber	USA	Spaceport Associates, ForAllMoonkind

Name	Surname	Country	Affiliation
James	Wertz	N/A	N/A
Ron	Wilson	USA	N/A
Jean-Claude	Worms	France	COSPAR
Yu	Xu	China	Foreign Ministry of China
Maria	Xygkaki	Australia	N/A
Burak	Yaglioglu	N/A	N/A
Jerry	Yao	Philippines	N/A
Álvaro	Yuste	Spain	Liceo Europa School
Kris	Zacny	USA	Honeybee Robotics
Thais	Zandoná	Brazil	University Catholic of Santos
Alica	Zimmerlin	Japan	N/A

