Contribution to Sustainable Lunar Exploration and Utilization

by

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WHAT IS THE MOON VILLAGE ASSOCIATION?

The Moon Village Association (MVA) created in June 2017, to foster the implementation of the Moon Village.
MVA is Member of IAF and Observer in United Nations - COPUOS

A forum to advance development of the Moon Village involving Industry, government, space agencies, international organizations / NGOs, and the Public at large.

A catalyst stimulating a virtuous cycle of investments for the development of a lunar economy

>800 INDIVIDUALS INVOLVED FROM 60 COUNTRIES:

- 25% Female
- 25% Students
- 35% Young Professional

>28 INSTITUTIONAL MEMBERS FROM 17 COUNTRIES
MOON VILLAGE IMPLEMENTATION
-Working Groups/Projects-

- Architecture Concepts
- Participation of Emerging Space Countries -PECS-
- Analogue
- Outreach/Education/Women on the Moon
- Lunar Commerce And Economics
- Cultural Considerations
- First Payload
- Coordination & Cooperation
- Participation of Emerging Space Countries -PECS-
Moon Village 2045 Reference Concept
Many Lunar missions planned in future, from many countries/stakeholders will be conducted in close by locations (i.e. South Pole, orbit)

Lack of Coordination Mechanism could lead to harmful interference

Need to Create confidence buildings and foster peaceful cooperation
MVA SET UP:

GLOBAL EXPERT GROUP on SUSTAINABLE LUNAR ACTIVITIES (GEGSLA)
- Multi stakeholders:
  - Space Agencies/Governments
  - Industries,
  - Academia,
  - Civil society
  - Public

DEFINE/AGREE:

- Recommended Framework and Key Elements for Peaceful, and Sustainable Lunar Activities, this will include:
  - Principles
  - Key Elements (i.e. information sharing)
  - Guidelines, for implementation the key elements (i.e. interoperability, debris mitigation, safe operations, etc)
Participation of Space Emerging Countries (PECS)

MVA-PESC 2021 Participating Teams

MV-PESC
REALIZING THE MOON VILLAGE: PARTICIPATION OF EMERGING SPACE COUNTRIES
- The Project is involving a global industrial consortium from: CH, UK, Mexico, India, UAE, Egypt
- More countries are welcome
- MVA is seeking for the Lunar Lander carrier
5th Global Moon Village Workshop & Symposium

December 6-8, 2021
Nicosia, Cyprus
Global Network

- 49 national coordinators and 6 regional coordinators
- Call for new National and Regional Coordinators Open
  - Europe and Asia
Some of the Recent Activities

- **Jordan**: Spacesuit and rover competition
- **Italy**: Thursday of Galassica
- **Egypt**: Social media promotion, SG[Egypt]
- **Africa**: has been focused on recruitment
- **Greece**: Moon 2069 – A way forward
TOWARDS A LUNAR GENERATION
WORKSHOP July 2021

Sponsors and Partners

LOCKHEED MARTIN

SPACE GENERATION
ADVISORY COUNCIL
Overview

Towards a Lunar Generation Workshop

- 67 participants
- 113 applications
- 12 team members
- 6 speakers
- 5 discussion groups
- 20+ experts
- Average age: 26
- 28 countries
- 49% students

- Lunar Medical Autonomy
- Legal status and policy issues in Moon resource and Infrastructure development and utilization
- Innovation Craters Hackathon
- Moon as a base for science
- Technologies for a sustainable Moon vil

https://moonvillageassociation.org/tlg2021/
Discussion Groups

- Lunar Medical Autonomy
  - Infrastructure
  - High risk medical emergencies, and how can they be tackled
  - Major human factors (including mental health) challenges on the Moon
  - Role of analogues
- Legal and Policy Issues of Resource Utilization and Infrastructure
  - Main challenges and obstacles to a legal framework
  - Sharing of resources and infrastructure be shared between various stakeholders
  - Reducing the risk of unpeaceful interactions on the Moon
- Hackathon focused on developing business ideas for lunar Explorations in the year 2030.
- Science on the Moon
  - Scientific objectives beyond current objectives
  - Manned missions vs robotic missions
  - Role of (a permanent) human settlement on the Moon in scientific advancement
- Technologies for a sustainable Moon Village
  - Main enabling technologies for operation on the Moon and their TRL
  - Role of emerging technologies
  - Role of emerging space countries
- 5, 10 and 50 year horizons
- Role of the MVA and SGAC
High Priority Objectives
Quantum science/technology
Analogs on Earth and Moon
Moon-Earth ecosystem

Humans vs. and Robots
Each has a role to play
Human-robot collaboration

Role of Moon Village
Human physiological research
Sustainable community

International Collaboration
Standardization of interfaces and goals
Safety protocols and regulations

Emerging Space Countries
Build on national priorities
Identify scientific strengths

Role of MVA
Foster international collaboration
Create standardization working group
New MVA Project: Towards the Moon Village Generation

- Formation of the project started:
  - Website is live and we are looking for volunteers!
- Next topics Workshop will be related to:
  - Role of Emerging Space Countries
  - Science Communication and the Role of the Arts
  - Equity, Diversity and Inclusion in the Moon Village
Thank you for your attention!

www.moonvillageassociation.org