

Promoting Space Sustainability

Participating of Emerging Space Countries (PESC)

Moon Village Association (MVA)

30 June 2021

Implementation of the Guidelines for the Long-term Sustainability (LTS) of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space

Operational Case Studies

I. Short description of the outer space activity

In this case study, we outline how, The Moon Village Association (MVA) has taken the lead in fostering the involvement, of Emerging Space Countries and Non-Space Faring countries, side by side with Space faring countries to join the Moon Village activities and benefits.

The goal of the Moon Village Association is “the creation of a permanent global informal forum for stakeholders like governments, industry, academia and the public interested in the development of the Moon Village”.

The USA, ESA members, Russia, India, China, and Japan are among the major players with solid plans to the Moon. However, much of the rest of the world lags behind. Within this objective, The Moon Village Association launched an international initiative “Participation of Emerging Space Countries (PESC)”.

The project aims to make the moon a truly international destination. Although we are witnessing a rush to the moon, most of the world's population is not part of this rush. Therefore, the PESC project provides support and mentorship for teams to identify moon opportunities and develop road maps of development for their countries. These opportunities can be scientific, engineering, commercial, or cultural opportunities. The PESC project can be seen as an outreach capacity-building project, a platform to create local and international new partnerships in the development of moon activities.

In April 2019, the first version of the MV-PESC project was conducted in Kuwait. This initial event was aimed to be a pilot project for the MV-PESC project. As mentioned above, the aim of the MV-PESC Kuwait was to create a roadmap for Kuwait that identifies opportunities for moon activities. 3 teams were competing to win a scholarship to attend the Space Generation Congress (SGC) and the International Astronautical Congress (IAC). The event was sponsored by the Kuwait Foundation for the Advancement of Science (KFAS). In addition to the roadmap, a list of 9 recommendations for Kuwait was drafted and presented during the COPUOS meeting in June 2019.

The official launch of the MV-PESC project was in March 2020. The launch was after one year of organizing the MV-PESC event in Kuwait as a pilot project. In summer 2020, the first call for teams was announced. It was decided that the MV-PESC project will be conducted fully online due to the COVID-19 Pandemic. A serious of

webinars were organized for the participating teams to familiarize them with the PESC project and to mentor them on how to structure their roadmaps.

8 countries submitted the roadmaps in the phase 1. The countries are Jordan, Egypt, Kenya, Colombia, Mexico, Chile, Nepal, Mongolia and Thailand. In addition to Kuwait, the PESC project has created a network of 9 countries around the world working to make the moon a truly international destination. And, as part of the mentorship process, Feedback meetings were conducted for all teams in January 2021. The Feedback meetings were conducted for each country mentored by the president and vice president of the Moon Village Association.

More information on the mentoring process can be found at “Feedback Meetings Final Report January 2021”:
<https://moonvillageassociation.org/download/feedback-meetings-final-report-january-2021/>

There are two components in the PESC project, the PESC event and the roadmap.

Component 1: PESC Event

The first component of the PESC project was the PESC event. Due to COVID-19, the PESC event was held fully online. After the end of the Call-for-Teams announcement, an evaluation process was used to select several teams per region. Selected teams attended an exclusive invitation-only online lecture where they were being introduced to the PESC mentorships program. The mentorship program connected each local team with an expert from the MVA, who guided them in the development of a roadmap for their country’s participation in the Moon Village. Local teams were informed about the overall structure of the roadmap, and were provided with background readings materials, on how to lead participants from their country to brainstorm ideas for the roadmap.

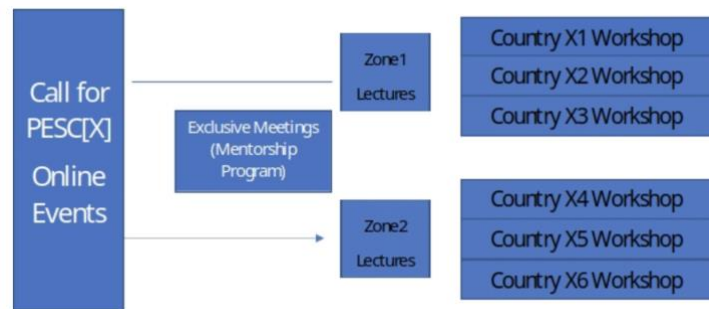
After the mentorship program introduction, participants attended general lectures which are open to the public. The lectures generally introduce the participants to the Moon Village concept and included discussions about future moon missions for preparing them to develop their country’s Moon Village Roadmap.

Component 2: Roadmap

After the general lectures, participants from each country worked together to brainstorm ideas for the roadmap following the milestones set by the PESC Project leadership. Mentors from the MVA supported and provided feedback in the brainstorming sessions and roadmap development for each country.

The roadmap was the output of the PESC project for each country. It focused on the whole country and considered the country’s interests and capabilities. Participants’ ideas were explained in roadmaps, with the scenario for the country’s participation in the Moon Village specified.

The following block diagram shows the PESC components in more details:



MVA is actively involved in soliciting applications to form local teams in each emerging space country that would like to join the PESC project in the phase 2 Call that will be issued in July 2021

II. Connection with the LTS Guidelines

In relation to the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space, PESC contributes with Guideline C. International cooperation, capacity-building and awareness, specifically with Guideline C.1, on Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities. PESC project road maps that have the objective an mission of encouraging and proposing partnerships and cooperation in an international level to expand the development of moon activities locally and globally. These partnerships can happen between the PESC teams, or between the PESC teams and individuals and institutional members of the MVA.

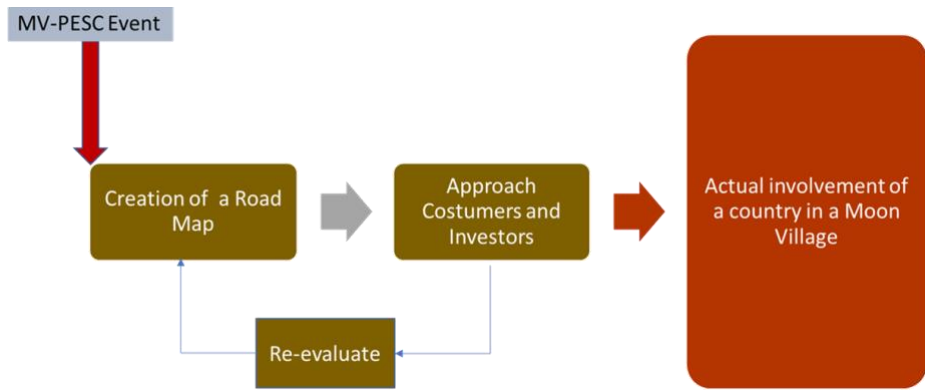
- **PESC Support in regard to Guideline C.4 Raise awareness of space activities**

The development of the roadmap it's the main capacity-building activity that raises awareness. Experts from the MVA support the local teams to write the roadmaps. As the teams finalize their roadmaps, they present their work to experts from the MVA so they can have comments and advice. Therefore, the PESC project is connected to C3.

There are two approaches to convince the involvements of countries around the world in moon activities:

- **Bottom/Up Approach:** The PESC project focuses on the youth between 18 – 35 years old. experts' members are welcomed to participate as well to support the youth in one team representing their country. The project calls for local teams to draft a roadmap. This roadmap can be considered the core of the PESC project. The roadmap describes the youth prospective about their countries capabilities and how to utilize the countries capabilities for moon activities. This roadmap developed by every team, is based on support and advisors from the Moon Village Association. The Roadmap is a dynamic document that changes over time based on meetings with potential stockholders.

The block diagram below shows the process that each team follows:



As can be seen above, drafting the roadmap and communicating with stockholders is an iterative process. This means that local teams will be modifying their roadmaps as they approach stakeholders and listen to their opinions.

- **PESC Contribution to Guideline C.2, Share experience related to the long-term sustainability of outer space activities and develop new procedures, as appropriate, for information exchange**

In addition, some of the teams are involved and planning to perform moon projects. From scientific research, analogue missions and outreach activities, the local teams are forming a network (mostly consisting of young professionals), in which everyone believes that space exploration should be an international effort.

- **Top – Down approach:** Many countries today have established national space agencies. The MVA is a permanent observer in UN-COPUOS. This allows the MVA to be exposed and to communicate with many countries. The Top-Down approach is a complimentary and important support for the local team’s activities.

As part of the local team’s activities in raising awareness locally about the importance of moon activities, PESC counts with 9 countries working to raise awareness on their local languages.

III. Lessons learned

- **Expansion of The Moon Village concept globally:**

Space exploration should be an international effort. Emerging countries vary regarding their willingness to participate in moon activities. The PESC project gathers everyone under one umbrella. Countries with clear plans and interests (decision making level). In the PESC project, we try to support local teams to provide information and exposure for their countries.