

ASEAN SPACE COOPERATION

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Abstract

In the 21st century, space activities have more influence towards the world society, economics, culture and environment. Every country in the world has to pay more attention on space benefits by especially using "the notion of International Cooperation" as a crucial element for sustainable development in many areas including the Space field. Therefore, in order to promote sustainable space development and to solve space conflicts within the Southeast Asian region, all ASEAN nations should enhance regional space cooperation among them as soon as possible. Because regional space cooperation can assure equal rights to space benefits, it does not limit returns only to the first beneficiary or the first user who receives space benefits. In the end, the total space benefits will be spread to other cooperating countries equally.

As can be seen in the first stage of Space Age until the 21st century, a lot of countries have founded their own space agencies and supported capital investment providing in space activities to gain advantages in accordance with any objectives or strategies such as: foreign policy objectives; promoting national and regional Security; scientific progress; commercial payoffs; and, space technology progress¹. However, there are many problems for the sustainable development of space activities not only in developed

countries² but also in developing countries. Although in the 21st century every countries in the World have been an increasing space utilization and exploration, some of them (especially developing countries) have been facing with many problems such as: inadequate information³; data access and cost⁴; no

¹ A.Houston and M. Rycroft as editors, KEYS TO SPACE: An interdisciplinary approach to space studies, USA: An International Space University Publication, 1999, p.2-6 to 2-12.

² After the Cold War, the two space superpowers (United States and Russia) try to find the solution of the problems by changing the concept of space programme. At present, NASA has to change its operation from the big project as used to be in the past to become "Be Faster, Better and Cheaper" as a new philosophy and Russia space agency within a small size mainly emphasizes on commercial purpose to be in accord with the world situation by running the space business.

³**Inadequate Information:** This results from the differences between the developed and developing countries in space development with respect to the distribution and reception of

involvement of end users⁵; and, sustainability of transferred technologies and commercialization of space activities⁶. Furthermore, at the same time it has immediately not leveled the discrepancies between haves and have not because the development of space activities, in fact, needs more financial support, natural resources, and human resources, etc. Thus it may foster to any international conflict among developed and developing countries because at this time there are still inequalities among those countries in space benefits.

In light of the above context, we should explore and weigh potential solutions to the problems and also identify ways to increase sustainable space development and capabilities to extend equitable space benefits for developing countries, based on the principles of international cooperation, non-discrimination and dependent

information. Information is considered as the most powerful commodity.

⁴ **Data access and cost:** From the past until now, data involved in the national security have been highly classified by the developed countries in order to protect their interest in high technologies in space from other countries. Also, at present, space operations tend to have high commercial potential, therefore; space operations are an expensive monopoly with benefits accruing only to the sponsoring developed countries. Developing countries must purchase data at prohibitively high costs.

⁵ **No involvement of end users:** The policies and plans of the developing countries often do not give importance towards any benefit they will gain from space activities that can lead to future sustainable development.

⁶ **Sustainability of transferred technologies and Commercialization of space activities:** These problems will be major obstacles for developing countries in terms of space activities and in obtaining benefits from such activities because of increasing commercialization of space operations and because of the relatively unstable world economy.

theory. Especially, 'International Cooperation' principle has codified in the Outer Space Treaty 1967 and the UN Declaration 1996 on International Cooperation in Exploration and Use of Outer Space for the Benefit and the Interest of All States, Taking into Particular Account the need of Developing Countries. The United Nations has urged the developing countries to cooperate in benefits from space project in order to minimize the differences in space development between developing and developed countries. The concept of international cooperation was also proposed in UNISPACE III conference by the United Nations in 1999; this idea as cited in section (e) is a basic objective to promote international cooperation in space development and utilization in accordance with space technology and its application. Although the concept of international cooperation in space activities has been evoked many times by the United Nations, the concept, since the beginning of Space Age, has had limited success primarily due to the lack of honesty and friendly relations due to Cold War politics. The present Age of Globalization has helped change that idea. Sustainable space development should promptly be a concern, and the United Nations is now trying to realize the potential of 'international cooperation'.

The concept of international cooperation in space activities for sustainable space development has, likewise, been developed since the beginning of the Space Age. Considering international cooperation in relation to space activities, each country could pay more attention to space benefits, and international cooperation itself can theoretically be divided in to three

groups: global cooperation⁷; regional cooperation⁸; and, bilateral cooperation⁹.

⁷ At present, an International Space Station can be viewed as cooperation among the developed countries in space development. This leads one more step closer to the feasibility of forming Global Space Cooperation. The concept of Global Space Cooperation was proposed by Pedersen in 1993; whose article concerning a World Space Agency in *Space Policy* magazine (issued in May) was published under the title of "Is It Time to Create a World Space Agency?" Pedersen presented the idea of establishing a World Organization to be responsible for various aspects of space operation and ensure that a great number of benefits will be gained. The advantages obtained from this World Organization include open access for everyone to obtain the benefits from space projects, and accepted standard on space activities that emphasize using space project for peaceful ends. For now and in the near future, however, a World Space Agency will likely not be established because extent space activities have emphasized disproportionately power, national security, and commercial benefits. Therefore, it does not serve the interest of most developed-nations to be under such a World Space Agency's authority. In addition, no world organization or institution has authority to force any state to perform activity under its regulations.

⁸ Currently, the European Space Agency (ESA) is considered as the most successful regional space cooperation among developed countries. At its founding, these European community member countries brought a new concept to the world community concerning space cooperation during the Cold War. The aim was to create a power within the European Community to negotiate internationally with powerful countries such as the USA and the Soviet Union. Another objective was to reduce competition among its members on space activities. Certainly, ESA's achievement resulted from the basic idea of collaboration on economy and politics among the countries in the European Community. Importantly, the European Community realized that a sizeable investment of human resources, capital, and natural resources must be used in space activities, so they adopted the approach of cooperation in public investment in space research and development, etc. Furthermore, for

However, on the purpose of promoting sustainable space development within the Southeast Asian Region, Regional Cooperation will be the central focus and instrument for providing sufficient space benefits. When the countries in the same geographical region can cooperate in space utilization and exploration, certainly these countries will gain substantial benefits such as reducing

the promotion of space cooperative activities within ASEAN region, I presented at first time to public about the idea of the establishment of ASEAN Space Agency at space policy and legal section of the Summer Programme, International Space University (The Summer Programme of International Space University was held at Suranaree University of Technology, Nakhon Ratchasima, Thailand) in 1999.

⁹ Bilateral cooperation between countries is the first methods used to realize and promote international activities especially in the field of space. Since recognizing the importance of space science and space applications for the fundamental knowledge of the universe, education, health, environmental monitoring, management of natural resources, disaster management, meteorological forecasting and climate modeling, satellite communications and navigation, and the major contribution that space science and technology make to the higher standards of living and conditions of economic, social and cultural progress and development, thus any state has entered into concluding many bilateral agreements and conventions with another in different objectives such as technical assistance, education and training, financial assistance for space projects, or the establishment of a network of satellite communication systems etc. Such bilateral cooperation currently extends from basic science to operational application; it includes bilateral cooperation between spacefaring states, and between the spacefaring States and developing nations, as well as between international organization and spacefaring States or non-spacefaring States. However, there has been little or no bilateral cooperation between the developing countries. See, *United Nations, International Space Programmes and Policies*, Edit by N. Jasentuliyana and Ralph Chipman, The Netherlands: Elsevier Science Publisher B.V., 1984, p.121.

natural resources consumption (For example, the orbital position of the satellite is considered as limited natural resources for mankind. One satellite can benefit many countries that are located near each other, such as ASEAN countries to obtain space benefits equally), increasing employment capacities, increasing economic development, building knowledge of space together and decreasing competition among the cooperating countries. Cooperation among the members of Association of Southeast Asian Nations (ASEAN)¹⁰ in space activities should, hence, serve to promote the effectiveness of the implementation of the concept of international cooperation in international space law. This concept can also be used to address problems and promote the exploration and use of outer space among ASEAN countries. Besides, the regional cooperation can assure equal rights to space benefits because it does not limit returns only to the first beneficiary or the first user who receives space benefits. The total space benefits will be spread to other cooperating

¹⁰ ASEAN is an International Organization founded in 1967 for the purpose of meeting various needs of Southeast Asian countries. ASEAN helps promote cooperation among the members to pursue developed nation status. Although in the past the ASEAN members were predominantly developing countries, especially with respect to the agricultural business sector, ASEAN now plays an important role in supporting economic and industrial development. In addition to economic and industrial development, ASEAN plays an important role in political, scientific, and technological advancement. Yet, no cooperation among ASEAN members exists with respect to space activities and space benefits except for Indonesia, Malaysia and Thailand. These three countries, however, have also been critiqued for a perceived focus on supporting private economic development over broad societal benefits.

countries equally. However, ASEAN's sustainable space development is reliant upon main three factors: the general principles of rights and obligations to exploration and use of outer space; the access to space technologies; and, the strengthening international cooperation in space activities.

Firstly, as directly result of ratification, accession and signature on numerous UN treaties on outer space, each ASEAN nation has agreed to fundamental rights and obligations with respect to international space law for regulating space activities. In particular, based on right to use and non-appropriation principles, the Outer Space Treaty 1967 states the following:

“Outer space, as the province of all mankind, shall be free for exploration and use by all states without discrimination of any kind, on a basis of equality and in accordance with international law¹¹ and also is prohibited from national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.¹²”

In order to confirm the guarantee of their rights and responsibilities of access to share in the benefits of space activities, some ASEAN member countries are members of the UN Committee on the Peaceful Uses of Outer Space (UNCOPOUS) and have

¹¹ Article I paragraph II of the Outer Space Treaty 1967.

¹² Article II of the Outer Space Treaty 1967.

also created national institutions responsible for space activities and research. In addition, in spite of a lack of their own space technology, most ASEAN nations have recently participated in space activities in order to accelerating their economic and social development.

Secondly, although the Outer Space Treaty 1967 establishes the general principles to exploration and use outer space as well as a series of other rights and responsibilities,¹³ there is currently no stated principle on the equitable access by states to space technologies. Nevertheless this can be implied from Article I (paragraph 1) of the Treaty, which provides that the benefits and the interests of such exploration and use of outer space shall be carried out for the benefit and interests of all countries. Furthermore, under the provision, countries shall benefit “irrespective of their degree of economic or scientific development.”¹⁴ *De jure*, the terms “for the benefit” and “in the interests” of all countries in the exploration and use of outer space are not meant to serve only the benefit and interests of countries which have the technological capability to explore and utilize outer space but all nations (including nations without space technological capabilities) under the spirit of international cooperation in attempting to expand access to space technology and applications for benefit of all countries, including developing countries.¹⁵

¹³Jasentuliyana, N., *International Space Law and the United Nations*, Kluwer Law International, 1999, p. 174.

¹⁴*Ibid.*

¹⁵*Ibid.*, p. 175.

However, Article I (paragraph 1) states a general principle and is formulated in vague terms. It is not legally binding.¹⁶ Moreover the policy in practice by the space powers draws a distinction between participation in and benefits from technology development. According to this policy, the space powers provide technological assistance to developing countries normally on a reimbursable basis, for example furnishing launch and other services, but they do not transfer know-how. Despite the need of ASEAN nations to utilize and develop space technologies to accelerate social and economic development, they are held back by a lack of scientific know-how. ASEAN also now implements space technology applications, as one of ten scientific and technological programs, for encouraging and promoting the ASEAN Community in 2020. If ASEAN member countries and ASEAN itself want to break the cycle of technological dependency and also need to get the know how from the non-ASEAN space faring countries, they need to join efforts to research and development space technologies that could be used in outer space for peaceful purposes.

Finally, there already exists the basic legal document¹⁷ supporting today’s international cooperation in space activities, such as promoting the development of space science and technology and their application; fostering the development of relevant and appropriate space capabilities in

¹⁶*Ibid.*, p. 176.

¹⁷*Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries*, adopted on 13 December 1996 (Resolution 51/122).

interested states; and, facilitating the exchange of expertise and technology among countries.¹⁸ Thus, the ASEAN organization and its member countries, as non-space faring and mostly developing countries, should consider and concede the great importance of international cooperation in the exploration and exploitation of outer space for peaceful purpose. International space cooperation is very important in order for ASEAN countries to participate in peaceful space activities. This cooperation and supporting documents can guarantee that all ASEAN countries have access to technology for the exploration and use of outer space irrespective of the country's degree of economic, social or scientific and technological development. Although ASEAN nations have cooperated in space activities not only among themselves but also with other countries and organizations outside the region, these pursuits do not adequately meet their needs for developing a sustainable space industry. Continued failure in both ASEAN and its member countries includes lack of space knowledge and computer hardware and software, lack of experienced personnel, weaknesses in the decision-making process in ASEAN, and lack of wholehearted space cooperation among ASEAN member countries. In order to support sustainable space development, all of these failures must be addressed.

Consequently, in order to maximizing space benefits for the ASEAN society, ASEAN countries should, for this reason, set up the capacity-building space organization, namely an ASEAN Space Organization (ASO). The ASO is the most effective

and suitable mechanism model to expanding use of space science and technology, advanced space applications, and new system developments in the South-East Asia Region because the pooling of resources especially makes it easier to cope with the huge investment and know-how which are necessary to operate and build satellites or even to create autonomous access to space through the development of launchers¹⁹. The objective of the ASO is in particular to promote peaceful cooperation among ASEAN nations in the research and development of space science and technology development and of its applications by elaborating and implementing a long-term ASO space policy which concertes the policies of the Member States and respects to other national and international organizations and institution; to encourage and strengthen the development of collaborative space programs between the ASO space program and national space programs by integrating the latter progressively and as completely as possible into the ASO space program, in particular as regards the development of space applications; to elaborate and implement the industrial policy appropriate to its program and by recommending a coherent industrial policy to the Member States; and, to enhance the peaceful use and exploration of outer space and the significance of international cooperation amongst states and between states and international organizations.

¹⁸ *Ibid.*

¹⁹ Volker Liebig and Kai-Uwe Schrogl, *Space Applications and Policies for the New Century*, Peter Lang GmbH: Germany, 2000, p.146.

Conclusion

ASEAN countries can launch the sustainable space development program and jump over the entrance level to space activities in theory and practical methods for achieving the space benefits of mankind and especially for the people of ASEAN on the basis of the principle of international cooperation. Therefore, the establishment of ASEAN Space Organization (ASO) should without delay be considered because it is expected that ASEAN Space Organization would distribute space benefits and any other benefit among the Southeast Asian nations such as: to provide scientific and technological benefits; to obtain the most valuable benefits while operating any space activity; to provide a chance for ASEAN member countries equally in utilizing technological equipments and networks involved in space as much as the members need; to support such a wide variety of space activities for ASEAN member countries; and, to increasingly promote a relationship within ASEAN member countries. Furthermore, cooperation could promote the training of technicians and scientists of the region in research and applications and the development of research on technologies, which could help the social and economic progress.

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