

Proposal for Forming an IAA Study Group SG 5.16

Title of Study:

Study on International Policy and Legal Regimes for Space Natural Resources Exploitation and Utilization (SREU)

Proposer(s): Jizhong LIU

(Must be member(s) of the Academy M or CM)

Primary IAA Commission Preference: Commission 5 Space Policy, Law & Economies.

(From Commission 1 to Commission 6)

Commissions: 1 Space Physical Sciences, 2 Space Life Sciences, 3 Space Technology & Systems Development, 4 Space Systems Operations & Utilization, 5 Space Policy, Law & Economics, 6 Space and Society: Culture and Education

Secondary IAA Commission Interests:

(From Commission 1 to Commission 6)

Members of Study Team:

Chair(s): Jizhong LIU, Elisabeth Back Impallomeni

(Must be member(s) of the Academy, M or CM)

Secretary: Yuhua TANG, Ruihong YANG

Other Members:

(Open to members and non-members of the Academy)

U.S.: Joanne Gabrynowicz, Amber Charlesworth

DLR: Bernhard Schmidt-Tedd

ESA: Peter Stubbe

Japan: Setusko Aoki

China: Wu Zhou (Siqi Zeng), Guoyu Wang

Argentina: Maureen Williams

Short Description of Scope of Study

Background: There's a research at the beginning of 2015, concluding that the mining of asteroids is a medium-term to long-term project (20 to 30 years) that requires a stepwise approach. Several private corporations had expressed interest in space resources exploitation and utilization of one kind or another. Besides, some relevant space programs were announced or carried on by some space agencies. On 25th March 2015, NASA announced the details of an asteroid-capturing plan. China is conducting its moon and Mars mission. Several countries are working jointly on manned lunar and Mars road maps. European Space Agency dropped a probe onto the surface of a speeding comet in 2014, which is well-known as the Rosetta Mission. India's Mars Orbiter Mission successfully entered Mars' orbit in 2014. Japan's probe Hayabusa 2 also tried to extend its sampling device in preparation for scooping up material at the asteroid. Lunar and deep space exploration projects are becoming the spotlight for international space community.

Meanwhile, the sufficiency of the space legal framework is in debate. The Outer

Space Treaty in 1967 is the cornerstone of international space law, together with the subsequent four treaties, the Rescue Agreement 1969, the Liability Convention 1972, the Registration Convention 1975 and the Moon Agreement 1979. It established the basic international space law framework. It never changes in the passed decades.

On the other hand, it should be noted that technology is rapidly developing, thus the technical feasibility of asteroid mining is just a matter of time. The critical issue is whether we are prepared with the necessary legislative and instrumental base to do so. The legal and policy certainties are highly desired.

Overall Goal:

(Expected scientific or practical benefit of the study group's efforts)

Foster an international regime or a practical model agreement for international cooperation for space natural resources exploitation and utilization, in particular with asteroid mining.

Intermediate Goals:

Discuss challenges to existing international legal framework in respect of space natural resources exploitation and utilization. Examine the necessity and feasibility to foster an international regime for space natural resources exploitation and utilization, in particular with asteroid mining.

Methodology:

(Email works, workshops, stand alone conferences, interim publications, etc.)

- A telecom meeting will be held every three month to discuss the progress.
- SG members will meet at COPUOS meetings to discuss the report.
- Email servers will be used to exchange opinions and materials.

Time Line:

(Cannot exceed three years)

Goal 1: Convene SG, Consolidated outline with identified authors - by the end of May 2016.

Goal 2: Convene Full SG to review recommendations – by the end of August 2016.

Goal 3: Draft Preliminary Report (PR) - by the end of May 2017.

Goal 4: Circulate PR for response - by the end of August 2017.

Goal 5: Finalize Preliminary Report - by the end of December 2017.

Goal 6: Schedule meetings to expand PR - January-October 2018.

Goal 7: Publish final Report - December. 2018.

Final Product (Report, Publication, etc.):

IAA Report, *Study on International Legal and Policy Regimes for Space Natural Resources Exploitation and Utilization (SREU)*

International Academy of Astronautics (IAA)

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Instructions and application form: see: "Scientific Activity" section at <http://iaaweb.org/content/view/256/393/>

Target Community:

- Space agencies
- Industrial aerospace community
- Private actors

Support Needed:

- Commission V technical assistance
- Publication of the report

Potential Sponsors:

- Lunar Exploration and Space Engineering Center of China National Space Administration

To be returned to the IAA Secretary General Paris

by fax: 33 1 47 23 82 16 or

by email: sgeneral@iaaemail.org

Date: April 4, 2016

Name: 刘建忠

(No Signature required if document authenticated).