



The 2013 Manfred Lachs Space Law Moot Court Competition

Case Concerning the Operation of a Lunar Station

Lydios v Endymion

Part A: Introduction

The 22th World Final of the Manfred Lachs Space Law Moot Court Competition took place in Beijing, China, on 26 September, 2013. This event took place at the Beijing Institute of Technology School of Law and was organized in the framework of the IISL Colloquium on Space Law.

The name of the 2013 Moot Court Problem was *Case Concerning the Operation of a Lunar Station (Lydios v Endymion)*. The Problem was authored by Prof. Setsuko Aoki, from Japan. Fifty-eight teams from around the world registered and submitted memorials and about 150 persons judged memorials and/or oral pleadings.

Two days prior to the World Final, the four teams representing North America, Europe, Asia Pacific and Africa competed in two Semi-Finals for the selection of the Finalists. The World Final was judged by Judges Leonid Skotnikov, Xue Hanqin and Julia Sebutinde, from the International Court of Justice.

The IISL's Moot Court Committee expresses its gratitude to the following persons that helped with the local organization of this event and the IISL Dinner:

- Mr. YUAN Jie, Vice Chair of LOC of the 64th IAC, Vice President of IAF and President of China Institute of Space Law
- Mr. HU Haiyan, Vice Chair of LOC of the 64th IAC, Vice President of Chinese Society of Astronautics and President of Beijing Institute of Technology
- Mr. YANG Junhua, Vice President, Secretary General, Chinese Society of Astronautics
- Prof. ZHANG Zhenjun, Secretary General, China Institute of Space Law
- Prof. LI Shouping, Director, Institute of Space Law of Beijing Institute of Technology, China

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The following organizations kindly sponsored the World Finals:

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- European Finalist sponsor: European Centre for Space Law, ECSL/ESA
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The following organizations kindly sponsored the IISL Annual Awards Dinner and the Moot Court Competition:

- Chinese Society of Astronautics
- China Institute of Space Law
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Book donations, brochure design and printing:

- Martinus Nijhoff Publishers
- Eleven International Publishing
- South African Space Association

The IISL is most grateful to all these generous sponsors.

World Finals

Winner of World Finals / Lee Love Award:

Georgetown University, Washington D.C., USA

Students: Ms. Amanda Joann Krause and Mr. Adam Martin Wesolowski

Faculty Advisor: Ms. Petra Vorwig

Faculty Advisor Assistant: Mr. Zachary Conrad Garthe

Runner up:

International Institute of Air and Space Law, Leiden University, The Netherlands

Students: Mr. Philippe Carous, Mr. Matthew Maniscalco and Ms. Sonja Radosevic

Faculty Advisor: Mrs. Neta Palkovitz

Faculty Advisor Assistant: Mr. Steven Wood

Semi-finalists:

National Law University (Delhi), Delhi, India

Students: Mr. Himesh Krishna Kharel, Ms. Nandini Paliwal, and Mr. Raghav Shukul

Faculty Advisor: Prof. (Dr.) Srikrishna Deva Rao

University of Pretoria, Pretoria, South Africa Students: Mr. Matsobane Robert Maremo Matlou, Ms. Alexia Katsiginis, and Ms. Reabetswe Ntekana Mampane
Faculty Advisor: Mr. Lourens Botha Grové

Best memorials/ Eilene M. Galloway Award:

Georgetown University, Washington D.C., USA

Best oralist / Sterns and Tennen Award:

Mr. Adam Martin Wesolowski, Georgetown University, Washington D.C., USA

Judges for Finals:

H.E. Leonid Skotnikov, International Court of Justice
H.E. Judge Xue Hanqin, International Court of Justice
H.E. Julia Sebutinde, International Court of Justice

Judges for Semi-Finals (Orals):

Prof. Setsuko Aoki (Japan)
Dr. Tare Brisibe (Nigeria)
Ms. Diane Howard (United States/Canada)
Dr. Bernhard Schmidt-Tedd (Germany)
Prof. Lesley-Jane Smith (United Kingdom)
Prof. Zhenjun Zhang (China)

Judges for Semi-Finals (Memorials):

Prof. Dr. Elisabeth Back Impallomeni (Italy)
Dr. Ulrike Bohlmann (Germany)
Mr. Maury J. Mechanick, Esq. (USA)
Prof. Vernon Nase (Australia)
Dr. Sylvia Ospina (Colombia)
Adv. Phetole Patrick Sekhula (South Africa)
Prof. Li Shouping (China).
Ms. Millicent Ligare (Kenya)

Participants in the regional rounds

Africa:

1. Mount Kenya University, School Of Law, Nairobi, Kenya
2. Obafemi Awolowo University, City Of Ile-Ife, Nigeria
3. University of Kwa-Zulu Natal, School of Law, Scottsville and Durban, South Africa
4. University of Pretoria, Faculty of Law, Pretoria, South Africa

Asia Pacific:

1. Amity Law School, New Delhi, India
2. Beijing Foreign Studies University, Beijing, China
3. Beijing Institute of Technology, Beijing, China
4. City University of Hong Kong, Hong Kong, China
5. China University of Political Science and Law, Beijing, China
6. Christ University, Bangalore, India
7. Chulalongkorn University, Bangkok, Thailand
8. Dr. Ram Manohar Lohiya National Law University, Lucknow, India
9. Gujarat National Law University, Gandhinagar, India
10. Hidayatullah National Law University, Raipur, India
11. ILS Law College, Pune, India
12. Keio University, Tokyo, Japan
13. Jamia Millia Islamia, Delhi, India
14. NALSAR University of Law, Hyderabad, India
15. National Law Institute University, Bhopal, India
16. National Law School of India University, Bangalore, India
17. National Law University, Delhi, India
18. National Law University, Odisha, India
19. National University of Singapore, Singapore
20. National Law University, Jodpur, India
21. Seedling School of Law and Governance, Jaipur National University, Jagatpura, Jaipur, India
22. Symbiosis Law School, Pune, India
23. The West Bengal National University Of Juridical Sciences, Kolkata, India
24. Universitas Padjadjaran, Bandung, Indonesia

Europe:

1. Administration and Economics University, Wroclaw, Poland
2. Faculty of Law, University of Belgrade, Belgrade, Serbia
3. John Paul II Catholic University of Lublin, Lublin, Poland
4. Faculty of Law, University of Bucharest, Bucharest, Romania
5. Faculty of Law, University of Bremen, Bremen, Germany
6. Faculty of Law, University of Cologne, Cologne, Germany
7. Faculty of Law, University of Luxembourg, Luxembourg
8. Faculty of Law, University of Silesia, Katowice, Poland
9. Faculty of Law, University of Vienna, Vienna, Austria
10. International Institute of Air and Space Law, Leiden University, Leiden, The Netherlands
11. National & Kapodistrian University, Athens, Greece
12. People's Friendship University of Russia, Moscow, Russia
13. State University of Saint Petersburg, Saint Petersburg, Russia

North America:

1. Boston University, School of Law, Boston, Massachusetts, USA
2. Florida State University College of Law, Tallahassee, Florida, USA.
3. Georgetown University Law Center, Washington D.C., USA
4. George Washington University, Washington D.C., USA
5. Howard University School of Law, Washington, D.C., USA
6. McGill University, Institute of Air and Space Law, Montreal, Quebec, Canada
7. St. Thomas University School of Law, Miami, Florida, USA
8. Tulane Law School, New Orleans, Louisiana, USA
9. University of California – Davis School of Law, Davis, California, USA
10. University of Denver Sturm College of Law, Denver, Colorado, USA
11. University of Hawai'i Honolulu, Hawai'i, USA
12. University of Houston Law Center, Houston, Texas, USA
13. University of Michigan Law School, Ann Arbor, Michigan, USA
14. University of Mississippi, School of Law, Oxford, Mississippi, USA
15. University of Nebraska College of Law, Lincoln, Nebraska, USA
16. University of Pennsylvania, Philadelphia, Pennsylvania, USA
17. University of Southern California Law School, Los Angeles, California, USA

Regional organizers of the 2013 competition:

Africa: Adv. Lulu Makapela (South Africa)

Asia Pacific: Prof. Setsuko Aoki (Japan) and Mr. V. Gopalakrishnan (India)

Europe: ECSL

North America: Dr. Milton (Skip) Smith (USA)

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Dedicated internet site to the competition:

<www.iislweb.org/lachsmoot>

<www.facebook.com/spacemoot>

<www.tweeter.com/SpaceLawMoot>

Part B: The Problem

Statement of Facts

1. The Republic of Lydios and the Republic of Endymion are both advanced space faring nations with a long history of competition, rivalry and oc-

- casional warfare into the early 20th century. The relationship between the two States has much improved over the past several decades through a series of joint economic, cultural, and science and technology projects.
2. Since 2001, both Lydios and Endymion have been two of the 15 member States of the Artemis Operation Agency (AOA). AOA is an international intergovernmental organization which established and operates a lunar orbiting platform named Artemis pursuant to the Artemis Implementing Agreement (AIA). The Artemis platform is used to conduct scientific experiments, deploy satellites into lunar orbit, and to deploy other spacecraft such as interplanetary probes. Manned and unmanned reusable spacecraft were used to ferry satellites from Earth to the Artemis platform for deployment. Artemis was registered with the United Nations by the AOA in accordance with the AIA.
 3. The Artemis project was very successful, resulting in a demand, even from non-members of the AOA, to use Artemis because of the relatively low cost for the launch of satellites from the platform. The commercialization of the Artemis platform was also pursued by the AOA to decrease its operational cost. Thus, the AIA was amended to allow the commercial use by a non-member to the AOA upon approval of not less than three quarters of the member States.
 4. Lydios had conducted several missions to explore the Moon including a series of rovers called Messenger, and established and operated a manned complex, Luna-1, located near the south polar region of the Moon. The Luna-1 site was selected due to its proximity to lunar ice deposits that can be processed to produce hydrogen and oxygen for propellants, water and life support. The Luna-1 facility was comprised of several structures, each of which had a docking port to accommodate shuttle transport vehicles between the Earth and the Moon. Each of the Lydios spacecraft launched from the Earth to Luna-1 as well as the lunar facilities constructed at Luna-1 were registered by Lydios and entered into the UN registry. None of the facilities at Luna-1 were constructed solely from lunar resources.
 5. In the last decade of the 20th century, the Lydios economy suffered a substantial decline, which resulted in the reduction of the budget for Luna-1. To raise revenues, Lydios auctioned off several of its space artifacts and historical assets, including the Messenger rovers and other items sent to the Moon. Mr. Amytas Billippo, a wealthy business person of Endymion who is known for his enthusiasm for space, purchased the Messenger-3 lunar rover at one of the auctions. Messenger-3 was an exploratory spacecraft, which was sent to scout possible locations for the structures that comprise Luna-1, and was operated for several months in 1988. Mr. Billippo received a certificate of title to Messenger-3 prepared and signed by the auction company. A right to physical possession of Messenger-3 was not specified on the certificate of title. The location was described in the auction catalogues as being somewhere between 78 and 88 degrees south lunar latitude.

6. Hekate is a non-governmental pro-environment organization founded and headquartered in Lydios in 1990. Hekate has a small but vociferous membership, substantial financial resources, and is politically active within Lydios. Since its founding, Hekate has opposed exploration and use of the Moon, including the Luna-1 project. Ten years after the initiation of full operation of Luna-1, Hekate declared that it intended to procure and place its own remote sensing satellite in lunar orbit to more closely monitor activities that could disrupt the environment of the Moon.
7. The Kingdom of Kandetta is an island nation that is politically isolated. It has diplomatic relations with only a handful of States. One such State is Endymion, although the two governments are not closely allied. Kandetta has been developing its own indigenous space capability, including launch vehicles and satellites. At the time of the Hekate announcement, Kandetta had successfully launched three satellites into Earth orbit, and one into lunar orbit. Kandetta also suffered failed launches, which outnumbered the successful missions by a two to one ratio. Kandetta had sought to enter the international launch services market, but most States refused to allow their nationals to launch payloads on the unreliable Kandetta launch vehicles, citing safety and foreign policy reasons. Kandetta was determined to be a pre-eminent space faring nation, however, and announced its goal to achieve successful manned spaceflight. Kandetta's only test of a prototype launch vehicle for manned missions ended in disaster when the rocket exploded three seconds after lift-off.
8. Representatives from Hekate contacted Toriton Space Co., a corporation headquartered in Kandetta. A majority of Toriton Space Co. shares is owned by the Kingdom of Kandetta. Toriton Space Co. contracted with Hekate to build a lunar orbiting satellite with a 0.5 meter multi-spectral resolution. The satellite, to be named Toriton-1, was to be built for Hekate on a cost-only basis, provided that it was launched from a Kandetta launch vehicle and that images could only be taken by that satellite with prior approval of Kandetta. In addition, the contract specified that all images shall be furnished to Kandetta prior to any distribution or public use by Hekate.
9. At the time of the Hekate-Toriton contract, the Lydios government had not allowed any of its nationals to use Kandetta launch vehicles as a matter of foreign policy. The Hekate managing board concluded that a license to operate Toriton-1 would not be granted by Lydios, and formed a new organization with the same name, Hekate-K, in Kandetta. Hekate then transferred all its assets to Hekate-K leaving just the shell of the original entity in Lydios. However, there was no significant change in the composition of the management board or membership of Hekate-K, as compared to Hekate. The managing board and membership remained overwhelmingly comprised of citizens and nationals of Lydios.
10. In September 2002, Hekate-K and Kandetta held a joint press conference where the Science Minister of Kandetta declared that Toriton-1, and five additional small satellites for Endymion, would be transported to Artemis from Kandetta territory by its new manned space launch vehicle, named

Bennu, for deployment from the Artemis platform. He added that the Benu would have the capability to travel from Earth orbit to lunar orbit and also to installations on the lunar surface, and that the use of the Artemis platform by Kandetta was secured by an affirmative response from Endymion and 12 additional members of the AOA.

11. The government of Lydios did not make any official comment on the Kandetta announcement other than to object in the AOA according to the terms of the AIA. Informally, Kandetta assured Endymion that in the event Endymion decided to engage in lunar exploration, development and use, the Toriton-1 satellite would not be used to monitor those activities
12. In 2004, the first successful launch of the Benu to Artemis resulted in the placement of Toriton-1 in an elliptical orbit with a perigee of 75 km above the lunar surface. The five small satellites for Endymion were also successfully placed into orbit. That success helped reassure Kandetta's potential customers about Benu's services. Toriton-1 was not registered.
13. The Lydios economic downturn continued into the 21st century, and in 2005 Lydios declared that it was terminating its lunar program and was abandoning the Luna-1 facility "to the States parties to the Outer Space Treaty." In January 2006, Endymion announced that it was embarking on a program to establish a lunar station for tourists to visit the abandoned structures of Luna-1. Mr. Billippo held a press conference to publicly grant his consent to Endymion to use Messenger-3 for that purpose and said that he hoped to visit the rover himself. Endymion subsequently announced that it had chosen one of the Luna-1 structures, named Fortuna, as its primary tourist facility, as it was near the area where Messenger-3 was believed to be located. Lydios did not acknowledge or respond in any way to Endymion's announcements.
14. Endymion sent crews to Fortuna to conduct a series of preparatory missions for its Luna-1 tourist program. The lunar tourist package developed by Endymion proposed to utilize Fortuna as a base camp. Short excursions would be conducted to other Luna-1 buildings and structures as well as the lunar surface area in proximity to the complex. Tourists, staff and other visitors would arrive by a fleet of spacecraft which employed a Lydios proprietary docking port design which were compatible with the docking ports constructed by Lydios in Fortuna and each of the other inhabitable Luna-1 structures. The docking ports in the Luna-1 structures also were compatible with certain docking mechanisms other than Lydios' proprietary design, however the Lydios proprietary design was the most economical to manufacture and operate. Lydios licensed the right to use this docking port design to the AOA. Lydios, Endymion and the three other member States of the AOA which operated manned reusable transport vehicles to the Artemis platform utilized this standardized common docking port design. Lydios substantially benefited from royalty fees from this intellectual property.
15. Starting in early 2007, Endymion was occupying Fortuna on a full time basis. During that time, several other nations implemented programs to oc-

- copy abandoned structures at Luna-1, without formal objection by Lydios. These additional programs were in varying stages of completion at any given period of time. However, even the most advanced project had not progressed beyond initial preparatory missions, and none of the structures of Luna-1 utilized by these nations were operational or effectively occupied.
16. In December 2007, following general elections in Lydios which changed the ruling party, the Lydios government declared its intention to return to the Moon and to reactivate a lunar resource processing facility, Diana, at Luna-1. By November 2008, Lydios had returned to Diana and was processing lunar resources to produce oxygen and hydrogen. Diana is 200 km east of Fortuna, and those two structures are situated at the opposite ends of the Luna-1 complex. Accordingly, personnel of the two countries did not encounter each other during the reactivation of Diana.
 17. In August 2010, Kandetta announced that it would launch two twin probes from the Artemis platform to explore Comet Donkelson, a short-period comet with an orbit of 20 years that would come within 0.0628 AU from Earth. These probes would be transported to Artemis using its Benu spacecraft. Three months later, Lydios discovered that Kandetta based the design of Benu on elements derived from several of Lydios' spacecraft. Certain elements, such as the docking mechanism had been copied without modification from the Lydios original proprietary designs. This docking mechanism was indistinguishable from the docking port licensed to the AOA. Not being a member of the AOA, it was clear that Kandetta had surreptitiously obtained the design drawings and specifications.
 18. In June 2011, Hekate released dramatic images obtained by Toriton-1, which showed that Luna-1 development activities by Lydios had caused changes to the lunar surface and subsurface. Such images sparked large protests in Lydios and elsewhere.
 19. In January 2012, urged by the predominant public opinion in Lydios, the President of Lydios formally declared that the Luna-1 program would be terminated by the end of 2012. She further stated that "all activities on the Moon, especially commercial activities, shall be superseded by the utmost necessity to take precautionary measures to preserve the highly fragile environment of the Moon." Lydios decided to take staged steps to terminate operations at the Luna-1 facility. Diana was planned to be operational until the end of that process. Lydios declared that it intended to take active measures to safeguard the Moon's historical and scientific heritage, and to protect landing and return sites, rovers, robots, scientific equipment, and specific vestiges such as footprints and rover tracks.
 20. Lydios promulgated the Moon Protection Act (MPA) in April 2012. The MPA designated 23 three-dimensional buffer zones requiring prior approval of Lydios to enter, including the Luna-1 and Messenger-3 area consolidated into one zone, and 16 additional zones for separate objects launched by Lydios, as well as the six sites of the United States' Apollo landings. The MPA prohibited tourism and other commercial activities until specific

international agreements are adopted to regulate them. The buffer zones were designated as one to five km in all three dimensions from the designated object or area, with the size and altitude of individual buffer zones determined pursuant to the size, nature, and scientific and historic importance of the specific artifacts. The final provision of the MPA reaffirmed Lydios' jurisdiction and control of the Luna-1 facility, and demanded that all States occupying or using any structure within Luna-1 cease and desist their activities and vacate the zone within six months.

21. Endymion informed Lydios by diplomatic note that it did not recognize the authority of Lydios to impose the MPA on Endymion's activities, and that Endymion would not be bound by the MPA. Endymion began to advertise tours to Luna-1 including an excursion to Messenger-3. In September 2012, Endymion sent a group of government officials to Fortuna for a one-week tour of Luna-1 and the surrounding areas. Included in the tour sites visited were Messenger-3 and other buildings within Luna-1.
22. In November 2012, Kandetta conducted the second launch of the Benu transport vehicle to Artemis, with three persons, one of which was Mr. Bilippo as a paying tourist. Benu also carried the two comet probes for deployment. During pre-deployment checkout of the two twin probes while Benu was en route to Artemis, the crew determined that one of the probes had developed a very slow propellant leak. Benu's crew had the ability to repair the leak and refill the probe's fuel tank with propellant from Benu's own tanks. However, if that was done, Benu would not have sufficient propellant to dock at Artemis, deploy both space probes, and safely return to Earth. Benu had the capability to travel directly to Luna-1 and refuel from resources processed at its facilities. If refueling was successful, Benu could dock at Artemis, deploy both probes and safely return to Earth. If the refueling was not successful, however, Benu would have barely sufficient propellant to return to Earth.
23. The commander of Benu, Mr. N. Pekki, decided to request refueling from the Diana facility as that facility was known to have a reserve of processed fuel and was nearest from the navigational point of the Benu when the commander decided to go to the Moon. Mr. Pekki contacted the director of Diana, Ms. G. Ushojon and requested permission to visit Diana and to obtain propellant. This request was denied. Mr. Pekki repeated his request, and added that the propellant was necessary for the lives and safety of the personnel of the spacecraft and that his government would be responsible for the reasonable cost of the fuel. Mr. Pekki also said that personnel of Diana were welcome to visit the Benu craft as representatives of Lydios after the docking. Ms. Ushojon again refused.
24. Mr. Pekki then contacted Fortuna, and requested permission to dock and obtain propellant, which request was granted. Upon arrival, however, a malfunction occurred in the docking mechanism of Fortuna, which prevented Benu from successfully docking. After several attempts, Mr. Pekki aborted the effort as it was consuming and depleting fuel. However, during

the attempted dockings, the docking mechanism on Bennu was damaged and rendered inoperable. Unable to dock with either Fortuna or Artemis, the Bennu returned to Earth. The space probes Bennu was transporting could not be deployed, and with the launch window closed, Kandetta declared the mission a failure.

25. An investigation panel convened by the AOA concluded that the inability of Bennu to dock with Fortuna was caused by the use of the wrong fluid in a sealed canister in the hydraulic systems of the docking mechanism on Fortuna when it was constructed by Lydios. The correct fluid would support an unlimited number of dockings. The wrong fluid degraded with each use, and eventually failed. The panel further determined that the docking mechanisms of the Diana and the other structures of Luna-1 had utilized the correct fluid.
26. Six months after the AOA investigation panel released its findings, Kandetta filed a formal claim with Endymion for damages for the loss of the twin probes. Endymion promptly delivered a diplomatic note to Lydios demanding that Lydios indemnify Endymion for any amounts it may pay to Kandetta for damages to the two probes. Endymion delivered a formal protest to Lydios for the refusal to grant permission for Bennu to dock and stated that such refusal placed the life and safety of Mr. Billippo, as well as the Kandetta crew, in jeopardy. Lydios responded by delivering a letter to the Endymion ambassador stating that Endymion's continued use or occupancy of Luna-1, including Fortuna, was unauthorized and that Endymion must immediately vacate Luna-1. Lydios also stated that it was not responsible for the failed deployment of the twin probes.
27. After unsuccessful diplomatic negotiations, Lydios and Endymion have agreed to submit their dispute to the ICJ.

A. Lydios asks the Court to declare that:

- (i) Endymion violated international law by failing to comply with the Moon Protection Act including the failure to vacate Luna-1 when demanded by Lydios;
- (ii) Lydios acted in conformity with international law by declining to grant permission for the Bennu to dock at Diana; and
- (iii) Lydios is not liable for damages for the failed deployment of Kandetta's twin probes.

B. Endymion asks the Court to declare that:

- (i) Lydios violated international law by unilaterally imposing the Moon Protection Act including the demand that Endymion vacate Fortuna;
- (ii) Lydios violated international law by refusing to permit Bennu to dock at Diana; and

- (iii) Lydios is liable for damages for the failed deployment of Kandetta's twin probes.

28. Lydios, Endymion, and Kandetta are Member States of the United Nations. Lydios and Endymion are States Parties to the 1967 Outer Space Treaty, the 1968 Return and Rescue Agreement, the 1972 Liability Convention, and the 1975 Registration Convention. Endymion acceded to the 1979 Moon Agreement in 2005. Kandetta is a State Party to the Return and Rescue Agreement, but not to the other four UN treaties on outer space. Both Lydios and Endymion are States Parties to the Vienna Convention on the Law of Treaties. The AOA declared its acceptance of the rights and obligations of the Registration Convention. A majority of the members of the AOA are States Parties to the Registration Convention and the Outer Space Treaty.

Problem Clarifications

Para. 2

Does the AOA's AIA contain any provisions apportioning liability or dealing with responsibilities regarding rescue and return; if not, is there any other Intergovernmental Agreement among the parties of the AOA dealing with liability or rescue and return?

No.

Para. 10

1) Was Bennu registered by Kandetta?

Bennu is registered in accordance with paragraph 1 of the UNGA Resolution 1721 B (XVI) of 20 December 1961.

2) Did the affirmative response for the use of the Artemis platform received by Kandetta constitute an approval by the AOA in accordance with the AIA?

Yes.

Para. 11

From which time on did Lydios know about the informal treaty, referred to in paragraph 11, between Kandetta and Endymion?

No comment.

Para. 12

What is the Endymion's connection to the Bennu spacecraft's occupants and contents?

No comment.

Para. 13

In para 13 it is stated that Lydios has abandoned the Luna-1 facility to the State Parties to the Outer Space Treaty. We came across that there is nothing in OST which gives reference for such kind of abandonment but since Article III of OST speaks about the UN Charter also, and for such activities the Secretary-General can take control of the structure and to resume one's control over such

property the same has to be given back by the Secretary-General. So we would like to know whether the structure was abandoned in a sense that UN alone can take control of it and if it is so then the Compromis do not mention how Lydios has resumed the control.

No comment.

Para. 14

1) Does Endymion have a license to use the proprietary Lydios docking port design?

Yes.

2) In paragraph 14, when “Lydios licensed the right to use [the] docking port design to the AOA,” did the license include any export control provisions, such as to limit the right of AOA member States to re-export the license or design to non-member States?

No comment.

3) Should it be thirteen and not three States in paragraph 14?

Three is correct.

Para. 15

1) Did the other States that were beginning to mount operations on the Moon as stated in para. 15 respect the MPA or make statements to Lydios or the international community that they were going to respect it? Were there any comments from these States about the perceived legality of the MPA?

No comment.

2) Did Endymion begin processing or utilization of lunar resources?

Yes.

3) To operate certain missions on Fortuna, is it necessary for Endymion to obtain certain assistance of operative information from Lydios, the launching State?

No.

Para. 17

1) Paragraph 17 of the compromis refers to other States which were attempting to occupy the abandoned structures of Luna-1 in 2007, but states that none had progressed beyond initial preparatory missions. What was the response to the Moon Protection Act of these other States considering that compliance with the Moon Protection Act would bar these missions from further progression?

No comment.

2) How did the Kingdom of Kandetta obtain design drawings and specifications of Lydios docking mechanisms?

No comment.

Para. 18

1) In paragraph 18, should it be Hekate-K and not Hekate?

It is Hekate.

2) Where exactly the changes to the lunar surface and subsurface caused by Lydios occurred: was it around Diana only or around Fortuna or the rest of Luna-1 complex?

No comment.

Para. 20

1) Does the Moon Protection Act was enacted specifically in relation to Luna-1?

Please read para. 20.

2) Does the Moon Protection Act require Lydios' authorization to enter the designated buffers zones and prohibit all tourism and commercial activities on the entire Moon, or does it only prohibit States from entering the buffer zones for the purposes of tourism or commercial activities within the buffer zones without Lydios' authorization, but still allow States' access to their space objects within the buffer zones for other purposes without authorization and allow tourism and commercial activities elsewhere on the Moon?

No comment.

3) Did the Moon Protection Act reaffirm Lydios' jurisdiction and control of the Luna-1 facility alone or also over the 23 three-dimensional buffer zones?

Please read para. 20.

4) Has any other State informed Lydios of non-recognition the authority of Lydios to impose the MPA?

No comment.

5) Did any other States (including State members of AOA), in addition to Endymion, present any objections to the MPA (its validity and binding force), imposed by Lydios?

No comment.

Para. 21

1) How many people have, if any, preceded and followed Mr Billippo's trip to the Moon and had successfully completed their tourist stay there?

Please read para. 21 with respect to the fact before Mr. Billippo's trip. Other than that, no comment.

2) Did the government officials of Endymion go on board Messenger-3?

No.

Para. 22

1) Was the presence of Mr. Billippo known to Lydios when Bennu requested refuelling at Diana?

Yes.

2) What was Mr. Billippo's role on the Bennu? Did he have any roles on board the Bennu or was he a passive passenger?

He was just a paying tourist.

3) Did Bennu's crew repair the probe's leak and refill the probe's fuel tank with propellants from Bennu, before attempting to refuel from the Diana facility?

The leak of the space probe was repaired by Bennu's crew but no propellant was transferred into the probe.

Para. 23

1) Is Ms. Ushojon stationed onboard of Lunar-1?

Yes.

2) Did commanders of Bennu and Diana communicate with their mission control centers or launching States in order to inform them about vehicle configuration, status, commanding, and other operational activities on-board (including off-nominal or emergency situations), especially in respect to propellant leak?

No comment.

Para. 24

1) Was the docking port that malfunctioned, as described in paragraph 24 of the Agreement/Compromis, manufactured on Earth and launched to the Moon, or was it manufactured in situ on the Moon?

Please read paras. 4 and 14.

2) Did Endymion utilize the malfunctioning docking mechanism on Fortuna which caused the failed docking of the Bennu during its occupation of Fortuna? If the answer is yes, did Endymion encountered similar malfunction?

Please read paras. 24 and 25.

Para. 25

1) Did Endymion perform any maintenance check-ups or related activities during its occupation of Fortuna? If so, were they routine or not?

No comment.

2) Does the result of investigation panel held by the OAO impose any obligations on Lydios or other States involved?

No comment.

Para. 26

1) What if any "damage" actually occurred to the twin probes that were lost; para. 26 says the "loss" of the twin probes, however Lydios claims it isn't responsible for the "failed deployment."

The twin probes were nor physically lost, but as the launch window was closed, the usefulness of the twin probes was lost. In other words, the "loss" of the probes is the failed deployment. There was no physical damage caused to the probes by the failed docking at Fortuna.

2) Does Endymion's claim for damages for the "failed deployment of Kandetta's twin probes" include that for the loss of the probes?

See answer above.

3) Does Endymion claim compensation for its own expenses arising out of a restitution owed to Kandetta?

No comment.

4) Regarding Kandetta's claim against Endymion for the docking port failure, mentioned in paragraph 26 of the Agreement/Compromis, has the claim between Endymion and Kandetta been settled, paid, or adjudicated?

No comment.

Para. 28

Is Lydios a State Party to the 1979 Moon Agreement?

Please read para. 28.

Part C: Finalists Memorials

Memorial for the Applicant the Republic of Lydios

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Students: Mr. Philippe Carous, Mr. Matthew Maniscalco and Ms. Sonja Radosevic.

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Argument

I. Endymion Violated International Law by Failing to Comply with the Moon Protection Act Including the Failure to Vacate Luna-1 When Demanded by Lydios

By promulgating the Moon Protection Act (hereinafter MPA) and demanding that Respondent vacates Luna-1 installation, Applicant acted in accordance with international law¹ (1.) To the contrary, Respondent violated international law by refusing to vacate Luna-1 (2.)

1.1. Lydio's Decision to Promulgate the MPA and the Moon Protection Act in Itself are Consistent with International Space Law as the *Lex Specialis* Applicable to the Given Facts

Lydios submits that it was entitled to promulgate the MPA under relevant provisions of international space law as the *lex specialis* applicable to the given facts (1.1.) Lydios additionally submits that the content of MPA, mainly the obligation to vacate Luna-1, is in accordance with international space law and general international law (1.2).

1 INTERNATIONAL STATUTE OF THE COURT OF JUSTICE, (hereinafter ICJ Statute), art. 38 (1).

1.1.1. By promulgating the MPA, Lydios lawfully exercised quasi-jurisdiction over its registered space object in complete accordance with international space law

Lydios registered several objects in accordance with international and therefore is entitled to exercise legislative jurisdiction (1.1.1.) Additionally, Lydios' power to exercise legislative authority over Luna-1 was not affected by its unilateral declaration to abandon the facilities (1.1.2), by the presence of Endymion (1.1.3.) or the transfer of ownership of Messenger-3 (1.1.4.).

1.1.1.1. Lydios retains exclusive jurisdiction over the space object carried out in its registry in accordance with OST Article VIII and Article II RC

The basis for jurisdiction over a space object and any personnel therein is the registration of that object in accordance with Article III of the Outer Space Treaty (hereinafter OST) and the Registration Convention (hereinafter RC).² The term "jurisdiction" means the exclusive right and ability to legislate and enforce laws in relation to persons and objects.³ Accordingly, the registration of Luna-1 in accordance with RC⁴ confers Lydios the right as a State of Registry to promulgate the MPA.⁵ The jurisdiction over a space object is referred to as quasi-jurisdiction.⁶

1.1.1.2. The unilateral declaration of 2005 to abandon Luna-1 to the States parties to the OST did not affect Lydios' jurisdiction as a State of Registry

A space object cannot be abandoned to become a *res nullius* as it remains the property of the state of registry,⁷ Lydios in present case. Applicant consequently submits that international space law does not provide for the possibility to

2 Setsuko Aoki, *In search of the current legal status of the registration of space objects*, in PROCEEDINGS OF THE FIFTY-THIRD COLLOQUIUM ON THE LAW OF OUTER SPACE, (Corinne M. Contant Jorgenson ed., 2010).

3 Bernhard Schmidt-Tedd, Stephan Mick, *Article VIII of the Outer Space Treaty*, in I COLOGNE COMMENTARY ON SPACE LAW, 157 (Stephan Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl eds., 2010) (hereinafter Art.VIII CoCoSL); Bin Cheng, *STUDIES IN INTERNATIONAL SPACE LAW*, 74 (1997) 74.

4 Compromis, §4.

5 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *entered into force* Oct. 10, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205, (hereinafter OST), art.VIII; Imre Anthony Csafabi, *THE CONCEPT OF STATE JURISDICTION IN INTERNATIONAL SPACE LAW*, 108 (1971).

6 Art. VIII CoCoSL, *supra* fn. 3, 44, 157 (2009).

7 Francis Lyall & Paul B. Larsen, *SPACE LAW: A TREATISE* 183 (2009).

waive jurisdiction by abandoning a space object,⁸ and therefore Lydios' unilateral declaration is invalid⁹ *vis-à-vis* the applicable *lex specialis*.

Alternatively, the abandonment of a space object does not lead to the loss¹⁰ or transfer of jurisdiction.¹¹ Further, it is widely supported in doctrine¹² and state practice¹³ that a change of jurisdiction must be accompanied by a change in registry, which in present case never took place. Lydios never informed the UN Secretary-General about a change of status in accordance with Article IV(2) RC and the recommended state practice, as reflected in the UNGA resolution relating to registration of space objects.¹⁴ The result of this reasoning is further in line with the 1974 *Nuclear Test* case in which this Court considered that “*when States make a statement by which their freedom of action is to be limited, a restrictive interpretation is called for*”.¹⁵

Applicant ultimately submits that the occupation of Luna-1 by Endymion for touristic purposes and the dramatic images released by Hekate constitute a fundamental change of circumstances for revoking the unilateral declaration in accordance with international law.¹⁶

1.1.1.3. By occupying and using Luna-1 since 2007, Endymion could not acquire any legal right of prerogative to the detriment of Lydios
OST Article II prohibits appropriation of celestial bodies “*by claim of sovereignty, by means of use or occupation or by any other means*”.¹⁷ Being *res*

8 Francis Lyall & Paul B. Larsen, *ibid.*, 67, 310, (2009); Report of the International Interdisciplinary Congress on Space Debris Remediation and On-Orbit Satellite Servicing, Scientific and Technical Subcommittee, 49thSess., at 31, U.N. Doc. A/AC.105/C.1/2012/CRP.16.

9 Fisheries Case (United Kingdom v. Norway), ICJ Reports 1951, p. 20.

10 Francis Lyall & Paul B. Larsen, *supra* fn. 7, at 94.

11 Art.VIII CoCoSL, *supra* fn. 3, at 157.

12 Armel Kerrest, *Legal Aspects of Transfer of Ownership and Transfer of Activity*, in *Proceedings of the IISL and ECSL Space Law Symposium* (2012); Michael Chatzipanagiotis, *Registration of Space Objects and Transfer of Ownership in Orbit*, 56 Z.L.W. 230, 232(2007); Art.VIII CoCoSL, *supra* fn.3, at 155; Michael Gerhard, *Transfer of Operation and Control with Respect to Space Objects – Problems of Responsibility and Liability of States*, 51 Z.L.W. 571, 573 (2002).

13 UNGA Res.62/101 Recommendations on Enhancing the Practice of States and International Intergovernmental Organizations in Registering Space Objects, 62th session, 17 December 2007, at 2(b)(ii).

14 *Ibid.*

15 Nuclear Tests Cases (Australia v. France) (New Zealand v. France) (Judgment) 1974, I.C.J. 253, 268 (Dec. 20), §47.

16 Vienna Convention on the Law of Treaties, *entered into force* Jan. 27, 1980, art. 62, 1155 U.N.T.S. 331, 8 I.L.M. 679 (hereinafter VCLT).

17 Convention on the Registration of Objects Launched into Outer Space, *entered into force* Sept. 15, 1976, 28 U.S.T. 695, 1023 U.N.T.S. 15, (hereinafter RC), art.II.

communis omnium,¹⁸ the purpose of this rule is to declare the traditional ways of acquiring a territory under general international law, namely discovery, *occupacio* and effective control,¹⁹ inapplicable in Outer Space,²⁰ Accordingly, Endymion could not gain any right or prerogative by occupying Luna-1 facilities. Additionally, the absence of effective control over a space object does not affect the right to exercise jurisdiction. RC Article II (1) of the RC does not require the launching state to control a space object in order to register it,²¹ meaning that *de facto* control is not a condition to exercise *de iure* jurisdiction. In practice, States register and exercise jurisdiction over non-controllable objects (e.g. launch vehicle orbital stages).²²

1.1.1.4. *The transfer of ownership of Messenger-3 does not result in a transfer of jurisdiction*

A transfer of ownership does not affect the responsibility or the liability of a State regarding a registered space objects.²³ This is due to the *lex specialis* nature of the international space law as compared to general international law.²⁴ Consequently, although M. Bilippo possesses a certificate of ownership, Lydios retains jurisdiction over Messenger-3 as a State of Registry²⁵ since no change in the registry took place.²⁶

1.1.2. *By promulgating the MPA, Lydios exercised extra-jurisdiction over Apollo landing sites to avoid their harmful contamination in accordance with Article IX of the OST*

Applicant submits that the expression “where necessary” interpreted in light with the object and purpose²⁷ of OST Article IX and *lex specialis* confers Lydios the power to promulgate extra-territorial legislation to avoid the harmful contamination (1.2.1) of Apollo landing sites (1.2.2) Lydios additionally

18 OST travaux préparatoires, U.N., GAOR, 13th Sess., at 615, U.N. Doc.A/PV.792 (1958); Chris Q. Christol, *SPACE LAW: PAST, PRESENT AND FUTURE*, 71 (1991).

19 Fabio Tronchetti, *The Non-Apropritaion Principle Under Attack: Using Article II Of The Outer Space Treaty In Its Defence*, in *PROCEEDINGS OF THE FIFTIETH COLLOQUIUM ON THE LAW OF OUTER SPACE*, (Tanja Masson-Zwan ed., 2007), at 10.

20 Ogunsola Ogunbanwo, *INTERNATIONAL LAW AND OUTER SPACE ACTIVITIES*, 63 (1975)

21 RC, *supra* fn. 17, art.II.

22 Note Verbale to the UN Registry submitted by France on 28 January 2004 (UN Doc. ST/SG/SER.E/445, at 35); Note Verbale to the UN Registry submitted by the United States of America on 7 December 2009 (UN Doc. ST/SG/SER.E/587, at 3); Jan Helge Mey, *Space Debris Remediation*, 61 ZLW, 252 (2012).

23 Art.VIII CoCoSL, *supra* fn.3, 164 (eds, 2009).

24 Francis Lyall & Paul B. Larsen, *supra* fn. 7, at 54.

25 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *entered into force* Oct. 10, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205, (hereinafter OST), art.VIII.

26 *Infra* fn. 12 & 13.

27 VCLT, *supra* fn. 16, art.31.

submits that Endymion's protest against the MPA is contrary to the objective of the OST and therefore non-effective (1.2.3).

1.1.2.1. The conditions of applicability of Article IX of the OST are met, mainly a situation of necessity

It is widely accepted in doctrine²⁸ and state practice²⁹ that OST Article IX creates an obligation to avoid the harmful contamination of Outer Space, particularly on the Moon due to the fragile nature of its environment.³⁰

Bearing in mind this purpose, Applicant submits that the threat of harmful contamination associated to Endymions' lunar touristic program created a situation of necessity justifying the promulgation of the MPA. As already experienced in Antarctica,³¹ touristic activities in sensitive eco-systems impacts the environment severely, including the Moon's environment.³² Accordingly, Lydios passed the MPA 6 months before the departure of the first space tourist to the Moon.³³

1.1.2.2. Article IX allows Lydios to protect Apollo landing sites in a manner which is in line with State practice and opinio juris

OST must be understood as containing innovative legal principles rather than from the perspective of traditional legal rules adopted before the start of the space age.³⁴ Scholars have therefore considered that Article IX OST authorizes the creation of lunar "heritage parks" on to protect historical sites from harmful touristic activities,³⁵ as supported in State practice.³⁶

28 Sergio Marchisio, *Article IX*, in *CoCoSL*, *supra* fn.3, 76-77 (eds 2009); Lotta Viikari, *ENVIRONMENTAL ELEMENT IN SPACE LAW* 51 (2008); Ram Jakhu, *Legal Issues relating to the Global Public Interest in Outer Space*, 32 *JOURNAL OF SPACE LAW* 39 (2006).

29 UK Outer Space Act (Section 5, para. 2, lit e); European Space Agency Planetary Protection Policy [ESA/C(2007)14], UNGA Resolution 62/217 of 21 December 2007 on Space Debris Mitigation Guidelines; US National Space Policy (June 28, 2010) at 7-8.

30 Lotta Viikari, *supra* fn 28, at 173-176; Viorel Badescu, *MOON: PROSPECTIVE ENERGY AND MATERIAL RESOURCES*; 512 (2012); Paul B. Larsen, *Application of The Precautionary Principle to the Moon*, 71 *J. AIR L. & COM.* 295 (2006); Sergio Marchisio, *Article IX*, in *CoCoSL*, *supra* fn.3, 77 (2009).

31 Antarctic Treaty Secretariat, *Committee of Environmental Protection Tourism Study - Draft Report* (May 2012), at 36-40.

32 Ivan Almar, *Protection of the lifeless environment in the solar system*, *Proceedings of the 45th Colloquium on the Law of Outer Space* 439 (2002).

33 Compromis, §

34 Ram Jakhu, *supra* fn. 28, at 39.

35 Francis Lyall, *PLANETARY PROTECTION*, 61 (2010).

36 NASA's Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts (21 July, 2011); 113th Congress 1st Session, H.R. 2617, Proposed Bill To establish the Apollo Lunar

Moreover, it is argued that when States take *appropriate measures* under Article IX OST, their “*manoeuver possibilities [...] are extensive: they should adopt undefined appropriate measure and that only in case it is necessary [...]; their discretion remain in their own hands*”.³⁷ Applicant therefore submits that the “appropriate measures” referred to in OST Article IX can consist in domestic extra-territorial measures.

This reasoning is confirmed by the absence of vigorous objection from the international community against the MPA, particularly from the United States of America as the State of registry, which implicitly confirms the legitimacy of the MPA. State practice indeed shows that unjustified claim of jurisdiction in outer space³⁸ are rejected by the overwhelming majority of States,³⁹ which in present case did not happen. To the contrary, several space faring nations complied with the MPA⁴⁰, while the absence of protest against the MPA brings further acquiescence of the obligation to suspend commercial activities.⁴¹

Applicant alternatively submits that the MPA implements a norm possessing *erga omnes* character under international space law and therefore is binding upon all states. In particular, the global public interest in Outer Space, which includes the obligation to avoid its harmful contamination, imposes international obligation which is *erga omnes* applicable to and enforceable by all States;⁴² and provides that the inclusive interests of the international community shall prevail over commercial interests.⁴³

Accordingly, most space faring nations today require in their domestic space legislation that private commercial entities respect environmental norms as a prerequisite to obtain an operating license⁴⁴, or even to produce an impact

Landing Sites National Historical Park on the Moon, and for other purposes (July 2013).

37 Mahulena Hofmann, *Is there any Legal Regime for the Protection of the Moon's Environment?*, International Colloquium on the Law of Outer Space (IISL), IAC-07-E6.3.12. (2007).

38 See for example *Declaration of the First Meeting of Equatorial Countries*, December 3, 1976, ITU DOC. WARC_BS-81-E.

39 Fabio Tronchetti, *supra* fn. 19.

40 Compromis, §X.

41 Fisheries Case (United Kingdom v. Norway), *supra* fn.9, at 138.

42 Case concerning the Barcelona Traction, Light and Power Company, Ltd (Belg. V Spain)(Judgment), 1970 I.C.J. 32§33 (Feb. 5), Ram Jakhu, *supra* fn. 28.

43 Laurence Ravillion, DROIT DES ACTIVITÉS SPATIALES – ADAPTATIONS AUX PHÉNOMÈNES DE COMMERCIALISATION ET DE PRIVATISATION, 158 (2004); H.A. Wassenberg, PRINCIPLES OF OUTER SPACE IN HINDSIGHT, 20 (1991); J. Monserrat Filho, *Why and how to define Global Public Interest*, IISL, 22-23; Francis Lyall, Expanding Global Communications Services, IISL Proceedings at UNISPACE III 65 (1999).

44 UK Outer Space Act (Section 5, para. 2, lit e), Loi française n° 2008-518 du 3 juin 2008 relative aux opérations spatiales, art.4; UNCOPUOS Report of the Working Group on National Legislation Relevant to the Peaceful Exploration (A/AC.105/C.2/101) 7 (3 April 2012).

assessment.⁴⁵ Applicant consequently submits that the MPA is binding upon all states as it suspends commercial activities and regulates access to lunar historical sites in accordance with the global public interest in Outer Space as a norm *erga omnes*.

1.1.2.3. *Endymion protests against the MPA are ineffective*

A unilateral declaration from a State that contradicts general international law is not valid,⁴⁶ especially when it violates a norm possessing *erga omnes* character. By protesting against the MPA to protect its own commercial interests, Respondent acted in contrariety to the global public interest in outer space as a norm *erga omnes*. Lydios consequently submits that Endymion protests are ineffective.

1.1.2.4. *Alternatively, Lydios is allowed to exercise extra-jurisdiction over Apollo landing sites in accordance with general international law*

Relevant principles of international environmental law⁴⁷ apply to activities in outer space by virtue of OST III⁴⁸, including the obligation not to cause damage to environment of common space,⁴⁹ the precautionary principle⁵⁰ and the principle of sustainable environment.⁵¹

Applicant submits that extra-territorial measures are allowed under international law,⁵² particularly in the field of environmental law and protection of human rights⁵³ as they protect *erga omnes* obligation. Moreover, unilateral action for the benefit of international environmental protection of common area can prove necessary where effective multilateral action does not take place.⁵⁴ In the Fisheries Jurisdiction (UK *v.* Iceland), this honourable Court accepted the unilateral extension of Iceland's jurisdiction over the high seas.⁵⁵ Moreover,

45 Loi belge du 17 septembre 2005 relative aux activités de lancement, d'opération de vol, ou de guidage d'objets spatiaux, art8.

46 Fisheries Case (*United Kingdom v. Norway*), *supra* fn.9, at 20.

47 *Infra* fn. 49.

48 LOTTAVIHKARI, *supra* fn. 28, at 51.

49 Principle 21 of the Rio Declaration on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol.I); 1996 Advisory Opinion on *The Legality of the Threat or Use by a State of nuclear Weapons in Armed Conflict*, 8 July 1996 (1996) ICJ Rep. 226, para.29 (240), *supra* fn. 28.

50 Principle 15 of the Rio declaration, *ibid*.

51 Principle 27 of the Rio declaration, *supra* fn. 49; Case Concerning the *Gabcikovo-Nagymaros Project between Hungary and Slovakia*, (1997).

52 *SS Lotus* (France *v.* Turkey) (Merits) 1927 P.C.I.J. (ser. A/B), N° 10 (Sept. 7) at 19.

53 Malcom Shaw, INTERNATIONAL LAW, 668 (2009); R. Bernhardt, *Encyclopedia of Public International Law* 512 (2003); Cedric Ryngaert, JURISDICTION IN INTERNATIONAL LAW 42 (2008).

54 Richard B. Bilder, *The Anglo-Icelandic Fisheries Dispute*, Wis. L. Rev. 37, (1937).

55 Fisheries Jurisdiction Case (UK *v.* Iceland) 1973 I.C.J. 3 (Feb. 2), (Declaration by Judge Ignacio-Pinto) 1974 I.C.J. 35 (July 25).

Canada implemented domestic legislation to prevent damages to Arctic waters⁵⁶ since Canada was not prepared to wait the development of international rules as the solution.⁵⁷

1.1.3. *The provisions of the MPA are consistent with relevant principles of international space law as the lex specialis applicable to the given facts*

Applicant submits that the obligation to vacate Luna-1 (1.2.1.) and the MPA are in accordance with the principle of freedom of exploration and use (1.2.2.), the principle of non-appropriation (1.2.3), the principle of international cooperation (1.2.4.), and the principle of due-regard (1.2.5.) Applicant additionally submits that the MPA is in accordance with general international law (1.2.6.)

1.1.3.1. *International space law does not provide for a right of permanent occupation but only for a temporary right to visitation*

No provision of the international space law regime provides for a right to occupy the installations of another State on a permanent basis. OST Article XII only creates a temporary right to diplomatic visitations subject to reciprocity and prior notification.⁵⁸ Applicant as the State of Registry of Luna-1 is consequently allowed to request Respondent to vacate the facilities.

1.1.3.2. *The buffer zones are consistent with the principle of freedom of exploration and use*

The principle of freedom of exploration and use, of which the principle of freedom of access is part,⁵⁹ is neither absolute⁶⁰ nor unlimited.⁶¹ To the contrary, as noted by the honourable Judge Lachs, States in becoming parties to OST accept a responsibility with respect to the preservation of Outer Space for the benefit of all mankind.⁶² Lydios therefore promulgated the MPA, which only apply to less than 0.2% of the lunar surface,⁶³ to preserve the Moon from harmful touristic activities until an international agreement to regulate them is reached. Lydios additionally submits that the establishment 3D delimitation zone is a common practice in international space law, explicitly recognized on the Moon

56 Arctic Waters Pollution Prevention Act (1970).

57 Richard B. Bilder, *The Canadian Arctic Waters Pollution Prevention Act: New Stresses on the Law of the Sea*, 69 Mich. L. Rev. 1, 12 (1970).

58 OST, *supra* fn. 5, Art.XII.

59 OST, *supra* fn. 5, Art.I(2).

60 Ram Jakhu, *supra* fn. 28, at 39; Oguniola Ogunbanwo, *supra* fn. 20, at 65.

61 Manfred Lachs, *THE LAW OF OUTER SPACE: AN EXPERIENCE IN CONTEMPORARY LAW-MAKING* 117 (1972).

62 Manfred Lachs, *The International Law of Outer Space*, in III RECUEIL DES COURS 45-46, 105 (1964); Francis Lyall & Paul B. Larsen, *supra* fn. 7, at 320.

63 The MPA creates 22 individual buffer zones of maximum 25 km² each (compromis, §20) and one consolidated buffer zone of maximum 40.000 km² (compromis, §16), which all together represent 0.107% of the lunar surface (37.930.000 km²).

Agreement.⁶⁴ In this respect, the United Nation Committee on the Peaceful Uses of Outer Space recently expressed the urgent need to establish designated protective zones on the Moon.⁶⁵ Moreover, with regard to access to Geostationary Orbit, States are only authorized to use their satellite on very limited portion of the orbit, the so-called “ITU box”.⁶⁶ Finally, the United-States, France, Canada and the Philippines unilaterally created “air defence identification zone” outside their territory and above the airspace over the high-seas.⁶⁷ On the basis of this analogy, it is argued that OST does not exclude similar control area on the Moon.⁶⁸

1.1.3.3. *The MPA does not violate the principle of non-appropriation*

Two elements must be examined so as to conclude a violation of the principle of non-appropriation. First, the concept of appropriation under space law implies a sense of permanence⁶⁹ which is absent in present case. The MPA is only a temporary measure that suspends commercial activities until a specific international agreement is adopted.⁷⁰ Second, a claim of sovereignty requires the intention to act as a sovereign state⁷¹ which again does not apply Applicant.

1.1.3.4. *The principle of international cooperation only implies a non-compulsory duty to consult the other states*

The notion of cooperation is subject to a variety of interpretations in ordinary usage and in international practice, as there is no consensus on a legal definition.⁷² Article IX OST concerning international cooperation in the protection of Outer Space environment uses vague terms and lacks of procedural rules further detailing the obligation to consult other states, and therefore imposes

64 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *entered into force* July 11, 1984, 1363 UNTS 3, art.7, (hereinafter Moon Agreement).

65 Future Role and Activities of the Committee on the Peaceful Uses of Outer Space, Working Paper, Protection/Conservation of Designated areas of the Moon and other bodies of the solar System, A/AC.105/L268 (2007), at 7.

66 Convention of the International Telecommunication Union (Geneva 1992), as amended by subsequent plenipotentiary conferences, art.44.

67 Imre Anthony Csabafi, *supra* fn.5, at 62.

68 *Ibid*, at 38.

69 Stephen Gorove, *Interpreting Article II of the OST*, 37 FORDHAM LAW REVIEW 3, 349-353 (1969).

70 Compromis, §20.

71 Cestmir Cepelka, J. Gilmour, *The Application of General International Law in Outer Space*, 36 J. AIR L. & COM. 32 (1970).

72 Isabelle H. Ph. Diederiks-Verschoor, AN INTRODUCTION TO SPACE LAW 30 (2006).

an extremely weak obligation.⁷³ Thus, the obligation to consult is limited by its non-compulsory character.⁷⁴

Moreover, Article IX OST only refers to consultation when a State has “*reason to believe that an activity or experiment [...] would cause potentially harmful interference with activities of other States.*” Applicant submits that there is no reason to believe that the MPA would interfere with Endymion legitimate interests since the MPA protects the global interest of the international community as already elaborated.

1.1.3.5. *The MPA respects the corresponding interests of all States in accordance with the “due regard” principle*

The “due regard” principle stated in Article IX OST expresses a standard of care. It establishes that a State, when conducting activities in Outer Space, must have due regard to the corresponding interests and rights of other States.⁷⁵ It is rather an obligation of conduct than result.⁷⁶

This honourable Court held in the 1997 *Gabčikovo-Nagymaros* case that “*safeguarding the ecological balance has come to be considered an ‘essential interest’ of all States*”.⁷⁷ Lydios therefore submits that the MPA is in accordance with the due regard principle since it protects the global public interest of in Outer Space and more particularly the lunar environment. Moreover, Lydios paid particular attention to the corresponding interests of Respondent by allowing the crew to stay another 6 months at Luna-1⁷⁸ to organize repatriation of the crew in the best safety conditions.

To the contrary, Endymion’s touristic lunar program, materialized by the unlawful presence of Endymion’s officials at Luna-1 in violation of the *lex specialis*,⁷⁹ does not constitute a legitimate interest and therefore is not protected by the due regard principle.

1.1.3.6. *In addition, the MPA is in accordance with general international law*

As already elaborated above, the MPA is consistent with relevant provisions and principles of international environmental law.

Moreover, Applicant submits that the MPA is in accordance with the customary principle of State sovereignty and the principle of non-intervention. Firstly,

73 J. Rzymanek, *Protection of outer space environment: urgent necessity and challenge for international law*, INTERNATIONAL SPACE LAW MISCELLANEA, Liber Amicorum Honouring Prof. dr. Andrzej Gorbielm, edited by E. J. Palyga, Warsaw, 154 (1995).

74 Ibid.

75 Michael Miniero, ARTICLE IX’S PRINCIPLE OF DUE REGARD AND INTERNATIONAL CONSULTATION 3 (2010).

76 Ulrike Bohlmann, Informal Connecting the Principles of International Environment Law to Space Activities, 6.

77 *Gabčikovo-Nagymaros Project (Hungary v. Slovakia)* 1997 I.C.J. 7 (Sep. 25).

78 Compromis, §X.

79 OST, *supra* fn. 5, Art.VIII

since the Moon is a sovereignty-free area,⁸⁰ Lydios cannot violate the sovereignty of Endymion. In addition, this Court considered in two decisions that violation of the principle of sovereignty *a fortiori* also violates the principle of non-intervention.⁸¹ Thus, since Lydios did not violate the sovereignty of Endymion, Lydios did not intervene in the domestic affairs of Endymion.

1.2. Respondent's Decision Not to Vacate Luna-1 Violates International Space Law and General Principles of International Law

1.2.1. Endymion as a State party to the OST is obliged to act in good faith and to recognize Lydios' jurisdiction over Luna-1

Applicant as a State of Registry enjoys full and exclusive jurisdiction over Luna-1 and therefore is entitled under *lex specialis*⁸² to promulgate domestic legislation regulating the activities in the installations and applying to the personnel therein. Moreover, since international space law does not provide for any right to occupy Luna-1 on a permanent basis, Applicant is allowed to request Respondent to vacate the facilities. By failing to vacate Luna-1 within 6 months as demanded by Applicant, Respondent consequently failed to perform its obligation under *lex specialis*.⁸³

1.2.2. Endymion as a State party to the Moon Agreement must take measure to prevent the disruption of the Lunar environment

Pursuant to Article 7(1) of the Moon Agreement, "*States Parties shall take measures to prevent the disruption of the existing balance of its environment*". By refusing to vacate Luna-1 in order to conduct the first mission of if lunar tourist program, Applicant submits that Respondent failed to perform its obligation under Article 7(1) of the Moon Agreement and in accordance with the precautionary principle which also applies to the Moon.⁸⁴

II. Lydios Acted in Conformity with International Law by Declining to Grant Permission for the Benu to Dock at Diana

Applicant submits that its decision declining to grant permission for Benu to dock is consistent with the Rescue and Return Agreement⁸⁵ (1.) and the OST (2.).

80 OST, *supra* fn. 5, art.II.

81 Border and Transborder Armed Actions (Nicaragua v. Honduras), (1988), I.C.J.Rep.69, §205, I.C.J. *Military and Paramilitary Activities in and against Nicaragua*, (Nicaragua v. United States), Merits, (1986), I.C.J.Rep.14, §205.

82 OST, *supra* fn. 5, art.VIII and RC, *infra* fn. 17, art.II

83 RC, *infra* fn. 17, art.VIII; VCLT, *supra* fn. 16, art.26.

84 *Supra*, fn. 30.

85 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *entered into force* Dec.3, 1968, 19U.S.T.7570, 672U.N.T.S.119 (Hereinafter RRA).

2.1. RRA Does Not Oblige Applicant to Grant Bennu Access to Dock

Respondent may rely on several provisions to request assistance from Applicant under the RRA. However, as further elaborated below, the RRA does not provide for an unconditional right to assistance, especially in situations falling outside the scope and the purpose of the Treaty. Accordingly, Applicant submits that the conditions of applicability of RRA Article 3 (1.1) and RRA Article 2 and 4 (1.2) does not apply to the factual circumstance of the given facts.

2.1.1. RRA Article 3 is inapplicable to present circumstances

The duty to rescue under RRA Article 3 requires three elements: rescue is necessary, the State Party is in a position to assist, and the spacecraft must first alight.⁸⁶ Applicant submits that none of these requirements are met in this case: no rescue was “necessary” (1.1.1.); Lydios was not “in a position” to assist (1.1.2.); and Bennu did not “alight” (1.1.3.)

2.1.1.1. Rescue was not necessary

The facts clearly indicate that there was no tangible danger to the life of the crew and therefore rescue of the Bennu was not “necessary.” The only objective of the Bennu was to obtain propellant in order to deploy the two probes, in disregard for the lives of the personnel on board.⁸⁷ Moreover, the Bennu crew could have launched one probe and gone home safely or just returned to Earth once they discovered the probe’s fuel leak, rather than compromise their own safety in an uncertain attempt to refuel.

To the contrary, by first asking to dock to obtain fuel, and after being denied docking, embellishing the request,⁸⁸ Kandetta violated its obligation to act in good faith as a State party to the RRA.⁸⁹

2.1.1.2. Lydios was not in a position to rescue

The RRA and the OST permit “a wide latitude for action reserved to each nation in interpreting ‘all possible assistance’ and ‘in a position to do so’ upon receipt of a request for assistance.”⁹⁰ Accordingly, the analysis of whether a state is in a position to assist can be based on a State’s financial capability, particularly regarding rescue in space.⁹¹ Lydios has a history of financial struggles

86 Cargill Hall, *Rescue and Return of Astronauts on Earth and in Outer Space* 63, AM. J. INT’L L. 197 (1969); Frons G. von der Dunk, *A Sleeping Beauty Awakens: The 1969 Rescue Agreement after Forty Years*, *Journal of Space Law* 411, 423 (2008).

87 Compromis§22-24

88 Compromis§22-23.

89 VCLT, *supra* fn. 16, Art.28.

90 Cargill Hall, *supra* fn. 86, at 207; Fr. Von der Dunk & Goh, *Article V, CoCoSL, supra* fn.3, 98-99 (2009); Ogunzola Ogunbanwo, *supra* fn. 20, 133-4; Jasentuliyana, *OUTER SPACE FOR PEACEFUL USES*, 95-97 (1984).

91 Mark J. Sundahl, *The Duty to Rescue Space Tourists and Return Private Spacecraft*, 35 J. SPACE L. 169 (2009).

which have threatened its space program,⁹² thus financially it was in no position to assist.

Moreover, the Lydios Commander was free to assess her 'position' to assist in light of the safety risk posed to Diana. In particular here, refusal to assist was justified in part by Kandetta's poor safety record, with failures outnumbering successes 2 to 1.⁹³ The base commander has broad discretion to decide whether it is possible to perform the duty to rescue without endangering her base, crew or passengers.⁹⁴

Lydios consequently submits that the commander of Luna-1 acted in conformity with Article 3 when using its discretionary power to refuse Bennu access. With the risk of unplanned space activities, financial difficulties and national law forbidding traffic to protect the lunar environment, the commander had broad discretion to decide that Diana was not in a position to assist with a rescue operation.

2.1.1.3. *Bennu had not alighted*

Doctrine generally interprets the duty to rescue as contingent on the landing of a spacecraft,⁹⁵ as the duty is triggered when the personnel have "alighted." This provision therefore excludes distress situations in orbit⁹⁶ or when travelling in outer space⁹⁷, while some authors claim that RRA Articles 1 through 4 exclusively concern terrestrial events.⁹⁸

Further, interpretation of "alight" as requiring a landing is consistent across all 5 official languages of the treaty; Chinese, English, French, Russian and Spanish which are all equally authentic.⁹⁹

Lydios therefore submits that, in the absence of a landing, RRA Article does not apply to the given facts.

92 Compromis§5,13.

93 Compromis§7,22; E. Loquin, *La gestioncontractuelle des risquesdans l'exploitation commerciale de l'espace*, in *L'exploitation commerciale de l'espace*, 166 (1992); V. Kayser, *Launching Objects: issues of liability and future prospects* 6 (2001); H. Yoshida, *Accidents of Space Activities and Insurance* 36 Colloquim on the Law of Outer Space, 221 (1993).

94 See Note 7 *supra*; by analogy see UN Convention on the Law of the Sea, Art.98.

95 Paul G. Dembling and Daniel M. Arons, *The Treaty on Rescue and Return of Astronauts and Space Objects*, 9 WILLIAM AND MARY LAW REVIEW, at 644, 649 (1968); Mark J. Sundahl, *supra* fn. 92.

96 Van Bogart, *ASPECTS OF SPACE LAW*, 109 (1986).

97 UN General Assembly - Twenty-second Session - Plenary Meetings, 1640th meeting - 19 December 1967, A.P/V.1640; Paul G. Dembling & Daniel M. *supra* fn. 96, 649.

98 Frons G. von der Dunk, *supra* fn. 85, at 423.

99 RRA, *supra* fn. 85, Art.10; *see also* VCLT, *supra* fn. 16, arts.31-33; *Polish Postal Services in Danzig, Advisory Opinion*, 1925 P.C.I.J. (ser.B) N 11 at 39; *South West Africa Case (Eth. v S. Afr. ; Liber. v S. Afr.)*, 1962 ICJ, 319, 336.

2.1.2. RRA Articles 2 and 4 are Inapplicable to the Present Circumstances

2.1.2.1. None of the events occurred in the territory of Lydios

Article 2 of the RRA only relates to rescue efforts following “unintended landings” in “the territory under the jurisdiction of a Contracting Party,”¹⁰⁰ thus clearly irrelevant here because Benu did not land on the territory of Applicant.

2.1.2.2. The Benu was not in a situation of accident, distress, emergency or unintended landing

Article 4 of the RRA only applies in the event of “*accident, distress, emergency or unintended landing*,” none of which were present here. Moreover, ‘distress’ does not include situations under a craft’s own control, as it was here, and requires imminent danger of losing ship or lives.¹⁰¹

The Benu crew were in space intentionally, with control over their location.¹⁰² Even if they were found in space as a result of the probe “accident”, Article 4 of the RRA does not apply to the request to dock and refuel, because it only requires safe and prompt return of personnel. There was no need or request for personnel to be returned in this case, since they could and did return under their own power.¹⁰³

2.2. OST Does Not Oblige Applicant to Grant Benu Access to Dock

Applicant submits that the duty to render all possible assistance to astronauts under Article V OST (2.1) and the right to diplomatic visitations under Article XII OST (2.2) do not apply to the given facts, and therefore Applicant is not obliged to grant access to Benu.

2.2.1. Lydios was not obliged to render assistance to the Benu under Article V of the OST

2.2.1.1. Article V paragraph 1 only applies to terrestrial situation

OST Article V(1) creates a duty to render “all possible assistance” to astronauts “in the event of accident, distress or emergency landing on the territory of another party or on the high seas,”¹⁰⁴ and is thus inapplicable here.

2.2.1.2. Wide discretion of the Base Commander to determine whether assistance is possible

The notion of all possible assistance is left at the discretion of each Contracting State, which may determine whether it is possible to furnish assistance in

100 RRA, *supra* fn. 85, Art.2; Sundahl, *supra* fn. 92.

101 ARSIWA Art.24; See R. Churchill, A.V. Lowe, *The law of the sea* 200-220 (1999); *The Ship May v. His Majesty the King*, 3 DLR 15 (1931). Tanaka, *Law Of The Sea*, 80f (2012); Noyes, *Ships in Distress*, 173-178, paras 1-5, 13-14, EPIL; *The Eleanor Case*, 135, 161 (1809); *The New York*, 59, 68 (1818); Milde, *Intl. Air Law and ICAO*, 95 (2008).

102 Compromis, §21.

103 Compromis, §22.

104 OST, *supra* fn. 5, Art.V(1.).

space.¹⁰⁵ As elaborated above, Lydios submits that the commander appropriately exercised her right of discretion when concluding that the request of Bennu to dock and refuel for its probe mission was not possible under the circumstances.

2.2.1.3. *Kandetta is not a State Party to the OST*

Kandetta is not a State Party to the OST, thus Lydios had no *prima facie* duty toward the Kandetta's astronauts. Mr. Billippo's presence as an Endymion national did not create a duty to assist the Bennu crew because Mr. Billippo was not an astronaut, but a paying tourist.¹⁰⁶ Furthermore, he was not connected to the probe mission for which assistance was requested.¹⁰⁷

Respondent might argue that OST still applies as customary law. However, the OST duty to assist in space has not ascended to customary law.¹⁰⁸ The establishment of customary law requires two elements, namely State practice and *opinio juris*.¹⁰⁹ There has never been a practice of rescue in space, and neither the OST nor the RRA creates a clear duty for a rescue in space.¹¹⁰

Finally, as a result of the *lex posteriori* rule,¹¹¹ the duties created by the OST regarding astronaut assistance have been superseded by the RRA, as discussed in the previous section, and have been deprived of operative force. As stated by one author "That the Rescue Agreement was intended to supersede the Outer Space Agreement with respect to the duty to rescue and return is clear."¹¹² Thus, OST is not applicable to create a duty in favor of Kandetta in this case.

2.2.2. *Lydios was not obliged to accept Kandetta's request to visit Diana under article XII of the OST*

Article XII provides for diplomatic visits of State Parties to facilities on the basis of reciprocity, with reasonable notice, and maximum precautions to assure safety and avoid interference with normal operations. However, Applicant submits that it does not apply to the present circumstances for the following reasons.

2.2.2.1. *The right of visitation is only recognized to States Parties to the OST, not tourists, and is not absolute*

Article XII of the OST applies to "representatives of other States Parties to the Treaty on a basis of reciprocity". Thus, the right of visitation only applies

105 OST, *supra* fn. 5, Art.V(1),(2); Cargill Hall, *supra* fn. 86, at 207.

106 Francis Lyall & Paul B. Larsen, *supra* fn. 7, at 129-132; Cloppenburg, LEGAL ASPECTS OF SPACE TOURISM, 201 (2005).

107 Compromis, §22.

108 Francis Lyall & Paul B. Larsen, *supra* fn. 7, at 70-80.

109 North Sea Continental Shelf (Germany v. Denmark and the Netherlands) 1969 I.C.J. 3 (Feb.20), §27.

110 Cargill Hall, *supra* fn 86, at 201 and 205.

111 VCLT, *supra* fn. 16, art.30.

112 Mark J. Sundahl, *supra* fn. 92, at 177 and 185.

between States Parties to the treaty *inter se*¹¹³ which Kandetta is not. Similarly, Mr. Bilippo is not a state representative of Endymion.

Interpreting the expression “representatives of other States” so as to include tourists would inevitably lead to a manifestly absurd and unreasonable situation.¹¹⁴ In particular, it would contradict the main objective of OST Article XII of the OST, being to “to assure safety and to avoid interference with normal operations in the facility to be visited.” Furthermore, States have the right to refuse access if the visit is untimely or will interfere with normal operations or safety.¹¹⁵

2.2.2.2. *Kandetta did not give reasonable advance notice or satisfy the principle of reciprocity*

Kandetta did not give reasonable advance notice to Lydios as required by Article XII of the OST.¹¹⁶ In addition, Article XII is subject to reciprocity, whereby free access to installations depends on the relations between the two states.¹¹⁷ In this case, Kandetta is a politically isolated nation¹¹⁸ without diplomatic relationship with the Applicant, thus their request to visit contradicts the principle of reciprocity.

III. **Lydios Is Not Liable for Damages for the Failed Deployments of Kandetta’s Probes**

The Liability Convention (hereinafter LC)¹¹⁹ preempts both the OST and general international law, according to the *lex specialis* rule.¹²⁰ To receive compensation under the LC, Endymion must prove it suffered damages (1.), due to the fault¹²¹ of Lydios(2.), and a causal link¹²² between the fault and the damages (3.).

In this case, none of these requirements are met. To the contrary, Kandetta and Endymion caused the failed deployment of the probes. Thus, in the absence of

113 I. A. Csabafi, *supra* fn. 5, at 104.

114 *Id.*

115 Paul G. Dembling *supra* fn. 96, at 447-451; Ogunzola Ogunbanwo, *supra* fn. 20, 104; Smith, Article XII, CoCoSL, *supra* fn.3, 207, 211 (2009).

116 Compromis, §23.

117 C. Cepelka, *supra* fn. 71, at 36.

118 Compromis, §7.

119 Convention on International Liability for Damage Caused by Space Objects, *entered into force* Oct. 9, 1973, 24 U.S.T. 2389, 961 U.N.T.S. 187 (hereinafter LC).

120 Manfred Lachs, *supra* fn. 61, at 105.

121 B.A. Hurwitz, *State Liability for Outer Space Activities in Accordance with the 1972 Convention on International Liability for Damage Caused by Space Objects*, at 34 (1992).

122 P. Dembling, *A Liability Treaty for Outer Space Activities*, AMERICAN UNIVERSITY LAW REVIEW 33 (1970).

fault, damage, and causation, Lydios cannot be held liable for the failed deployment of the probes.

3.1. Endymion Has No Legitimate Damages Claim Against Lydios

LC requires that claimant prove damages.¹²³ However, Endymion has no standing to claim damages on behalf of Kandetta (1.1), and the alleged damages caused by Lydios are neither personal to Endymion (1.2) nor fall under the definition in the LC (1.3).

3.1.1. *Endymion has no standing to bring a claim on behalf of Kandetta*

Liability of one State may be invoked by another State if the obligation breached is owed directly to that second State.¹²⁴ As held by this Court, “[o]nly the party to whom an international obligation is due can bring a claim in respect of its breach”¹²⁵ and to invoke State liability, the rights claimed “must be clearly vested in those who claim them.”¹²⁶

3.1.2. *The alleged damages were not caused to Endymion but to Kandetta*

The LC, defines “damage” as loss of life, personal injury or other impairment of health; or loss of or damage to property of Sates or of persons.¹²⁷ Only “the State which suffers damage, or whose natural or juridical persons suffer damage”¹²⁸ may present a claim. Since the probes belong to Kandetta,¹²⁹ Endymion did not suffer any damage to its property and thus is not entitled to bring a claim.

In addition, because Mr. Billippo did not suffer personal injury, Endymion is not entitled to claim compensation for “damages sustained by its permanent residents” under LC Art.VIII(3). Therefore, Endymion has no basis to bring a claim for damages under the LC.

3.1.3. *Endymion cannot prove the existence of its own damage*

The LC’s purpose is to elaborate rules to ensure prompt payment to victims of damage from space objects,¹³⁰ to restore the condition which would have ex-

123 B.A. Hurwitz, *supra* fn. 122, at 12.

124 Case concerning South West Africa (Ethiopia v. South Africa; Liberia v. South Africa) (Judgment) para. 54.

125 Case concerning Reparation for Injuries Suffered in the Service of the United Nations (Advisory Opinion) at 181 (1949) ICJ 174 (Apr 11).

126 South West Africa, *supra* fn. 125, para. 44 (1966).

127 LC, *supra* fn. 120, Art.1(a).

128 LC, *supra* fn. 120, Art.8.

129 Compromis, §17.

130 LC, *supra* fn. 120, preamble.

isted if the damage had not occurred.¹³¹ Thus, without actual damage, the LC shall not apply and there can be no liability.¹³²

In this case, Endymion suffered no materialized or actual damage. First, the claim brought by Kandetta against Endymion is speculative (1.3.1). Second, Endymion has reasonable defenses to avoid its liability vis-à-vis of Kandetta (1.3.2).1.3.1. The claim initiated by Kandetta against Endymion is speculative. Kandetta's claim against Endymion is unresolved at this point and subject legitimate defenses. Such premature claims by a third party are not certain enough to support recoverable damages. In international law, damages must be certain and non-speculative.¹³³

3.1.4. *Endymion is not liable for damages to Kandetta*

There is no conclusive liability supporting Endymion's claim of indemnity against Lydios, as Endymion has strong defenses to Kandetta's underlying claim. Even if Bennu successfully refueled, successful completion of the mission was not guaranteed, given Kandetta's history of failed missions (66%)¹³⁴ and probe fuel leak here. Therefore, the high likelihood that one or both probes would ultimately fail makes compensation for them inappropriate.

In addition, the LC does not provide for compensation for non-material damages such as indirect economic damages, loss of profit, consequential or other indirect damages.¹³⁵ In space, damages must be caused by "only a direct hit" with the space object which destroys or makes it dysfunctional.¹³⁶ Accordingly Lydios submits that the fail deployment of the two probes constitutes an indirect damage since no contact occurred between the docking and the probes. Moreover, Kandetta did not suffer any loss to its probes, which were returned to Earth safely and can be redeployed for future purpose, resold or even reused in twenty years when the Comet Donkelson returns to earth proximity.¹³⁷

3.2. **Endymion Failed To Prove That Lydios Committed Fault**

The element of fault must be proven by claimant.¹³⁸ However, the LC does not define "fault." Two different approaches exist in international law in order to assess a fault.¹³⁹ First, under the objective approach, a fault consists in the

131 LC, *supra* fn. 120, Art.12.

132 C. Christol, *International Liability for the Damage Caused by Space Objects*, AM. J. INT'L LAW 71 (1980); B. A. Hurwitz, *supra* fn. 122, at 12.

133 ICJ Statute, *supra* fn. 1, Art.59; Monetary Gold Removed from Rome in 1943 (Italy v. France, UK and United States of America) (Judgment) 19, 32 (1954), ICJ Reports

134 *Compromis*, §7.

135 Valerie Kayser, *supra* fn. 94, at 44; Christol, *supra* fn. 133, at 368.

136 Valerie Kayser, *supra* fn. 94, at 47; F. Lyall & P. Larsen, *supra* fn. 7, 86, 107 (2009).

137 *Compromis*, §17.

138 B. A. Hurwitz, *supra* fn. 122, at 34.

139 Sompong Sucharitkul, *State Responsibility and International Liability under International Law*, 18 LOY.L.A.INT'L&COMP.L.REV. 834, 835 (1996).

violation of a legal obligation or in a breach of a legal duty.¹⁴⁰ Second, following the subjective approach, fault requires failure “to exercise a degree of prudence considered reasonable under the circumstances”.¹⁴¹

Applicant submits that, under both standards, the denial to grant access to Bennu (2.1) and the construction of the docking port (2.2) do not constitute a fault.

3.2.1. *The decision of Lydios to refuse the access of Bennu at Diana do not constitute a fault under lex specialis*

As already elaborated, Lydios was allowed under international space law to refuse Bennu to dock at Diana.¹⁴² Similarly, under the subjective approach, by following its reasonable decision to deny docking based on safety and protection of the lunar environment, Lydios did not act negligently.

Alternatively, if this honorable Court considers that Applicant committed a fault, it would still not amount to a breach of the LC for the probes, because liability does not automatically flow from responsibility.¹⁴³

3.2.2. *The malfunction of the Fortuna docking port does not establish fault*

Although Applicant designed the docking-mechanism with the highest level of care, technical failures are unfortunately inevitable in space activities.¹⁴⁴ As supported in doctrine,¹⁴⁵ the ultra-hazardous risk attached to space activities was implicitly recognized by the drafters of the LC.¹⁴⁶ The LC indeed follows a victim-favored approach because technical failures involving third parties damage would inevitably occur. However, this approach only applies to victims on earth who can rely on an absolute liability regime established under Article II LC, as opposed to victims involved in an accident in Outer Space since they are aware about the ultra-hazardous risks attached to space activities.¹⁴⁷ In the second scenario the LC establishes a fault based liability.¹⁴⁸ Consequently, each space-faring State “...must take reasonable care to avoid acts or omission which [they] can reasonably foresee would likely injure...” other States.¹⁴⁹

140 J. Pfeifer, *International Liability for Damage Caused by Space Objects*, Z.L.W 225 (1981).

141 VCLT, *supra* fn. 16, Art.31; Irmgard Marboe, *SOFT LAW IN OUTER SPACE*, 125-135 (2012); V. Kayser, *supra* fn. 94, at 51.

142 *Infra*, p.17.

143 Bin Cheng, *International Responsibility and Liability for Launch Activities*, 20 AIR AND SPACE LAW 304 (1995); Frans von der Dunk, *Liability Versus Responsibility in Space Law: Misconception or Misconstruction?*, 34 Proc. Collo. L. OuterSp.363, 363-4 (1992).

144 Emilie Loquin, *supra* fn. 94, at 166.

145 Valerie Kayser, *supra* fn. 94, at 6.

146 UN Documents. A/AC.105/850; A/AC.105/C.2/SR.03.

147 Pfeifer, *supra* fn. 141, at 228.

148 LC, *supra* fn. 120, Art.3

149 *Donoghue v. Stevenson* UKHL 100 (1932), in Y.B.I.L.C., 1986, Vol.I, p.208, §1.

Applicant submits that it took reasonable care in present case and therefore did not commit a fault. Firstly, the malfunctioning docking port mechanism was initially designed for its own purpose and therefore was build with the highest level of duty of care. Moreover, this level of care was confirmed by the fact that the docking-mechanism worked properly during more than 20 years, as compared to satellites that are only operational 15 year's in orbit.

3.3. Endymion Failed to Prove a Causal Link Between its Supposed Damages and the Alleged Fault of Lydios

LC requires a causal link between damage and fault.¹⁵⁰ The drafters of the LC interpreted this notion narrowly, only requiring proving a proximate causation between the damage and the alleged fault.¹⁵¹ According to State Practice¹⁵², a proximate cause is a fault that normally, naturally, and foreseeably lead to damages.¹⁵³

Accordingly, Applicant submits that the failed deployment of the two probes is not a natural, normal or foreseeable consequence of either Lydios's refusal to dock and refuel Bennu or the use of inferior hydraulic fluid in manufacturing its docking port. Moreover, Applicant submits that the primary cause of the failed deployment of the probes was the initial probe fuel leak (3.1), Kandetta failed to mitigate its damages (3.2), and Endymion's illegal occupation of Fortuna was an intervening cause of the damage (3.3).

3.3.1. The initial leak of the probe caused the failure of the mission

Several theories exist in State practice to assess the causal link between the damage and a fault.¹⁵⁴ Following the equivalence theory, every condition *sine qua non* of the damage is a cause.¹⁵⁵ In present case, had Kandetta properly manufactured the probes, no leak would have occurred with all subsequent damages. Lydios therefore submits that the fault rely on Kandetta. Respondent may argue that the malfunctioning docking port also comprises a cause of the failed deployment. However, with multiples causes, the most

150 LC, *supra* fn. 120, Art.3 "damage caused [...] by a space object"; Dembling, *supra* fn. 123, at 43; Kerrest, *supra* fn. 12, Article VII, CoCoSL, *supra* fn.3, 140-141 (2009).

151 B. Cheng, GENERAL PRINCIPLES OF LAW, 242 (2006); Christol, *supra* fn. 133, at 346-359, 362; V. Kayser, *supra* fn. 94, at 23; H.L.A. Hart, A.M. Honoré, CAUSATION IN THE LAW 104-08, 116-19, 216-29 (1985).

152 Dix Case (Venezuela v. United States of America) 1903-1905, 9RIAA119; Angola Cases (Portugal v. Germany) 1928/1930, 2RIAA1011.

153 Life Insurance Claims, (Germany v. United States of America)1924,4 RIAA 121; Blyth v. The Company of Proprietors of the Birmingham Waterworks, EWHC Exch J65 (1856) 11; Vaughan v Menlove (1837) 132 ER 490 (CP); see Black's Law Dictionary, B.A. Garner ed., 721 (2009).

154 P. LeTourneau, DROIT DE LA RESPONSABILITÉ DES CONTRATS, 565 (2010); Germany "Bedingungstheory" and Common Law "But for test" R. Buckley, THE LAW OF NEGLIGENCE, 61 (2005).

155 *Ibid.*, P. Le Tourneau.

foreseeable and proximate cause should be held to establish liability.¹⁵⁶ No evidence exists that the docking port directly or indirectly caused damage to the probes. There was no physical contact between the port and the probes, nor any physical damage to the probes themselves. Benu itself was damaged “during” repeated docking attempts, but not *per se* as a result of the defective docking port.¹⁵⁷

Thus, Applicant submits that this honorable Court should determine whether failed deployment of the probes was caused more proximately and foreseeably by the chain of events initiated by Kandetta’s leaking probe, and that the initial leak of the probe is the most foreseeable and proximate cause of the failed mission.

3.3.2. *Kandetta negligently or recklessly contributed to its own damage, violating its duty to mitigate damages*

In apportioning Kandetta’s relative contribution to its own damages under LC IV(2) or XII, the Court can equitably consider National laws regarding contributory negligence,¹⁵⁸ which generally limit liability to the extent the claimant acted negligently and contributed to the damages they suffered.

Kandetta built a leaking probe, then voluntarily took unreasonable risks in an attempt to deploy both probes. Although Kandetta had the opportunity to launch one probe and perform 50% of the mission before returning safely to Earth, Commander Pekki chose a most dangerous option consisting of an improvised lunar refueling, unnecessarily risking the lives of Benu passengers and Diana personnel.¹⁵⁹

3.3.3. *The illegal occupation of Luna-1 by Endymion is an intervening cause of the damage*

Endymion’s illegal occupation of Fortuna prevented Lydios from either maintaining its docking port or denying its use to Kandetta, establishing the basis of Endymion’s fault. Permitting Benu to dock at Fortuna is a condition *sine qua non*, by which Endymion caused the harm, while violating international law.

Had Endymion refused the docking, no damage would have occurred during the docking operations. In addition, had Endymion respected Lydios’ jurisdiction over Diana and abandoned the station as legally demanded, Lydios could have fixed the port or denied docking to Kandetta, thereby avoiding any damage.

Even were Endymion unlawful exclusive possession of Fortuna, Endymion must supervise operations there in a responsible and continuous manner,¹⁶⁰ and be held responsible for proper functioning of its systems, components and

156 R. Buckley, *supra* fn. 155, at 63.

157 Compromis, §24

158 Haanappel, P.P.C., *Product Liability in Space Law*, 2 Hous.J.INT’L L.55 (1979) 148; Salmond&Heuston, *Law of Torts*, 485 (1996).

159 Compromis, §22-24

160 F. Lyall & P. Larsen, *supra* fn. 7 at 105.

mechanisms in accordance with the maxim *terra transit cum onere*.¹⁶¹ As stated in the UNCOPUOS “the State which effectively controls the space object and causes harm would [otherwise) be free from liability.” Thus, “international liability for damage caused by certain space activities should be borne by States who exercise effective control over them.”¹⁶²

In these circumstances, equity demands Endymion be treated as launching state with regard to liability for damage, to avoid an unreasonable result. To do otherwise would allow Endymion all of the benefits of the facility, without the responsibilities, while holding Lydios permanently responsible for indemnification of damages at the facility, despite being denied its rightful control. Endymion’s attempts to recover damages from Lydios must be rejected as they are tainted with bad faith, because Endymion’s conduct and refusal to vacate Fortuna was not in conformity with international law. Lydios could only diplomatically request Endymion to vacate the facility, to maintain the primary principle of using the Moon for only peaceful purposes.¹⁶³

In this case, the relative fault of Lydios, in constructing a docking port for its own use 20 years earlier with sub-optimal hydraulic fluid, is arguably *de minimus* compared to Kandetta’s leaking probe and failure to mitigate losses by launching its one good probe, as well as Endymion granting Kandetta permission to dock at Fortuna beyond their legal authority, while preventing Lydios from exercising its lawful jurisdiction and control over the Fortuna facility and the port in question.

Submission to the Court

For the foregoing reasons, the Government of Lydios, Applicant, respectfully requests the Court to adjudge and declare that:

1. Endymion violated international law by failing to comply with the Moon Protection Act including the failure to vacate Luna-1 when demanded by Lydios;
2. Lydios acted in conformity with international law by declining to grant permission for the Bennu to dock at Diana; and
3. Lydios is not liable for damages for the failed deployment of Kandetta’s twin probes.

161 Hersch Lauterpacht, *INTERNATIONAL LAW*, Collected Papers, 136.

162 Motoko Uchitomi, *State Responsibility/ Liability for “National” Space Activities*, 44 I.I.S.L. Proc. 51, 59 (2001).

163 OST, *supra* fn. 5, Art.IV; F. Lyall & P. Larsen, *supra* fn. 7, at 524; P.G. Dembling and D.M. Arons, *supra* fn. 96, at. 434.

MEMORIAL FOR THE RESPONDENT

THE REPUBLIC OF ENDYMION

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ARGUMENT

I. **Lydios violated international law by unilaterally imposing the Moon Protection Act, including the demand that Endymion vacate Fortuna.**

In promulgating the Moon Protection Act (“MPA”), the Republic of Lydios violated basic principles of international space law and attempted to give international force to domestic legislation. Despite the fact that the international community has placed great emphasis on conducting activities in outer space with mutual cooperation,¹ Lydios unilaterally enacted the MPA in an attempt to restrict access to areas of the Moon. First, the MPA violates several of Lydios’ obligations under the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (“OST”), and second, the MPA is unenforceable against Endymion.

1.1. **Lydios’ Promulgation of the MPA Violates the OST Because the MPA Contravenes the Principles of Common Use and Mutual Cooperation in Outer Space.**

Lydios’ promulgation of the MPA is a violation of several international obligations under the OST. A state breaches an international obligation when it enacts domestic legislation that conflicts with the requirements of an international obligation.² The MPA first violates Lydios’ obligation under Articles I and II

1 *E.g.* Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, G.A. Res. 1962 (XVII) ¶6, U.N. Doc. A/RES/1962(XVII) (Dec. 13, 1963); Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, art. IX, 27 Jan. 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter OST].

2 Draft Articles on Responsibility of States for Internationally Wrongful Acts, G.A. Res. 56/83, Annex, U.N. GAOR, 56th Sess., U.N. Doc. T A/RES/56/83, art. 12 commentary, ¶12 (2001) [hereinafter Draft Articles on State Responsibility]; Bin

of the OST, requiring free access to all areas on celestial bodies and prohibiting appropriation of the Moon.³ Second, the MPA violates Lydios' obligation under Article XII of the OST, which requires that stations on the Moon remain open to representatives of other States Parties to the OST.⁴ Third, by unilaterally enacting the MPA, Lydios failed to show due regard to the corresponding interests of other spacefaring States as required by Article IX of the OST.⁵

1.1.1. The MPA Violates the Principles of Free Access and Non-Appropriation of the Moon Under Articles I and II of the OST.

The MPA constitutes an attempt to appropriate certain areas of the Moon by drawing territorial boundaries in violation of Articles I and II of the OST. OST Article I provides that "there shall be free access to all areas of celestial bodies."⁶ Expanding on the principle of free access, Article II states that "[o]uter space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means."⁷ Some scholars have determined that the principle of non-appropriation has become a norm of *jus cogens*,⁸ making it an international norm of such importance that no derogation from it is permitted.⁹ The MPA, which draws boundaries around certain areas of the Moon, violates this right of free access and constitutes "national appropriation" of those areas. Under the Vienna Convention on the Law of Treaties ("VCLT"), a treaty is interpreted "in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."¹⁰ Here, "appropriation" means "a taking of possession"¹¹ and "sovereignty" means

Cheng, *General Principles of International Law as Applied by International Courts and Tribunals* 174 (1987) [hereinafter *General Principles*] ("[T]here can be no doubt that a municipal enactment constitutes an act of the State and, as such, is capable of violating international law.").

3 OST, *supra* note 1, at art. I, II.

4 *Id.* at art. XII.

5 *Id.* at art. IX.

6 *Id.* at art. I.

7 *Id.* at art. II.

8 Valérie Kayser, *Launching Space Objects: Issues of Liability and Future Prospects* 26 (R. Jakhu et al. eds. 2001).

9 Vienna Convention on the Law of Treaties, art. 53, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter VCLT]. The VCLT is considered declarative of customary international law. See *Case Concerning Military and Paramilitary Activities in and against Nicaragua* (Nicar. v. U.S.), 1986 I.C.J. 14, 43 (June 27). Although the views of commentators do not enter the interpretational analysis under the VCLT, such opinions can themselves have the force of law under Article 38 of the Statute of this Court. Statute of the International Court of Justice, art. 38, June 26, 1945, 59 Stat. 1031 [hereinafter ICJ Statute].

10 VCLT, *supra* note 9, at art. 31.

11 Black's Law Dictionary (9th ed. 2009), appropriation.

“supreme dominion, authority, or rule.”¹² In this way, Articles I and II of the OST work in tandem: because no individual nation can exercise preeminent authority over any particular area of the Moon, it cannot deny access to that area.¹³ The MPA, however, creates “buffer zones” that are meant to exclude others from certain designated areas absent prior approval from Lydios.¹⁴ The Act draws territorial boundaries requiring Lydios’ consent to enter,¹⁵ akin to a national border on Earth, and as such amounts to appropriation of those areas. Lydios further indicated its intent to exercise sovereignty over access to the Moon when it demanded that Endymion cease its activities and vacate the lunar base, indicating its desire to exercise “supreme dominion” over those areas.¹⁶ This conduct is a clear violation of the right of free access to lunar resources and constitutes an unjust usurpation of large areas of the moon. Furthermore, current state practice indicates strong adherence to the principles of free access and non-appropriation over the Moon. For instance, the United States National Aeronautics and Space Administration (“NASA”) recently issued recommendations on how to protect and preserve the Apollo landing sites on the Moon but, in doing so, emphasized that the guidelines are not binding and therefore comport with the OST principles of free access and non-appropriation.¹⁷ Unlike the NASA guidelines that are admittedly only precatory,¹⁸ the MPA purports to bind all spacefaring nations, as indicated by the fact that Lydios deems it a violation of international law to not vacate Luna-1 at its request.¹⁹ Thus, The MPA violates the principles of free access and non-appropriation of Articles I and II of the OST because it unilaterally appoints Lydios as gatekeeper to the legally recognized commons of the Moon.”

12 *Id.*, sovereignty; see also *Island of Palmas Case* (Neth. v. U.S.), 2 R.I.A.A. 829 (1928).

13 Nandasiri Jasentuliyana & Roy S. K. Lee, *Manual on Space Law: Volume I* 11 (1979) [hereinafter *Space Law Manual*]. See also Jefferson H. Weaver, *Illusion or Reality? State Sovereignty in Outer Space*, 10 B.U. Int’l L.J. 203, 232 (1992) (“No state can legally assert its sovereignty over the Moon or other celestial bodies; it is, therefore, axiomatic that no state can legally prevent another state from exercising its rights under the Outer Space Treaty to explore or utilize outer space resources as it sees fit.”).

14 *Compromis* ¶ 20.

15 *Id.*

16 *Id.* at ¶ 23.

17 NASA’s Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts (July 20, 2011) <www.nasa.gov/pdf/617743main_NASA-USG_LUNAR_HISTORIC_SITES_RevA-508.pdf> [hereinafter NASA Guidelines].

18 *Id.* (“These recommendations are not legal requirements; rather they are technical recommendations for consideration by interested entities.”)

19 *Compromis* ¶ 27.

1.1.2. *The MPA Violates Lydios' Obligation Under Article XII of the OST Which Requires That it Keep its Lunar Stations Open to Representatives of Other States Parties.*

By entirely closing access to Luna-1, the MPA constitutes a breach of Lydios' obligation under Article XII of the OST, which requires that “[a]ll stations, installations, equipment and space vehicles on the Moon and other celestial bodies [remain] open to representatives of other States Parties to the Treaty on a basis of reciprocity.”²⁰ The drafting history of this Article indicates that the freedom of access to lunar stations is only limited “to the point of endangering the lives of astronauts or interfering with the station’s normal operations.”²¹ Importantly, it was made clear that the language “on the basis of reciprocity” was not intended to give a right to veto another state’s access to stations and installations,²² but only to allow a contracting State to refuse access to any State that did not comply with its own obligation to allow visits to its installations.²³ In contrast, the MPA creates an effective veto right over access to Luna-1 by requiring prior approval of Lydios to enter.²⁴ The legislation thus violates Article XII.

1.1.3. *By Unilaterally Enacting the MPA, Lydios Failed to Show Due Regard to the Space Activities of Other Nations as Required by OST Article IX.*

Lydios failed to show due regard to corresponding interests of other States Parties when it unilaterally enacted the MPA. Article IX of the OST provides, *inter alia*, that “States Parties to the Treaty shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in outer space, including the Moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty.”²⁵ Although the OST does not define due regard,²⁶ international tribunals have characterized the obligation as an equity principle that requires a balancing of state interests.²⁷ For instance, in the *Fisheries Jurisdiction* case, this Court held that Iceland was not entitled to unilaterally extend the boundary of its fishing jurisdiction and thus exclude the United Kingdom from it because both states have an obligation to pay due regard to the interests of other States in the conservation and equitable exploitation of the fishery resources.²⁸ Similarly, because the OST emphasizes the need for free exploration of outer space in order to “facilitate

20 OST, *supra* note 1, at art. XII.

21 Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 28.

22 Bin Cheng, *Studies in International Space Law* 250 (1997) [hereinafter *International Space Law*].

23 *Id.*; Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 28-29.

24 *Compromis* ¶ 20.

25 OST, *supra* note 1, at art. IX.

26 See Michael C. Mineiro, *FY-1C and USA-193 ASAT Intercepts: An Assessment of Legal Obligations Under Article IX of the Outer Space Treaty*, 34 J. Space L. 321, 332-33 (2008).

27 See *Fisheries Jurisdiction Case* (U.K. v. Ice.), 1974 I.C.J. 3, 40 (July 25).

28 *Id.* at 34.

and encourage international cooperation,”²⁹ Lydios’ unilateral act of limiting access to the certain areas of the Moon within the circumscribed buffer zones constitutes a failure to pay due regard to the interests of other states in the exploration and use of the Moon’s resources. Its demand that Endymion vacate Luna-1³⁰ is further indicative of Lydios’ disregard of Endymion’s interests in exploring and utilizing the Moon’s surface.

Current state practice regarding the use of outer space further supports the conclusion that Lydios’ unilateral conduct is a violation of Article IX. The NASA guidelines discussed in the preceding section stress the willingness of the U.S. government to work with foreign governments in seeking to promote the development and implementation of appropriate recommendations aimed at preserving the Apollo landing sites as well as the fragile surface of the Moon.³¹ Notably, the NASA guidelines explicitly reference the U.S. government’s Article IX obligations.³² In contrast, Lydios enacted and attempted to enforce the MPA without any consultation with the international community or recognition of its Article IX obligations.³³ Its conduct undeniably violates this provision.

1.2. Even if the MPA is Not a Violation of International Law, it is Nevertheless Unenforceable Against Endymion.

Even if the Court concludes that the MPA is not a violation of international law, it cannot be enforced against Endymion, or any other nation. First, being a piece of domestic legislation, it is superseded by international law. Second, Lydios transferred ownership over Luna-1 in 2005, and thus did not have jurisdiction and control over the lunar base when it enacted the MPA in 2012.³⁴ Third, Lydios did not have any basis of jurisdiction under principles of customary international law for enacting the MPA and could not give extraterritorial reach to its provisions.

1.2.1. Because International Law Prevails Over Domestic Law, the MPA Cannot be Enforced in Light of Lydios’ OST Treaty Obligations.

The MPA cannot be enforced against Endymion in the present dispute because it is superseded by Lydios’ international obligations. “[I]t is a generally accepted principle of international law that in the relations between Powers who are contracting Parties to a treaty, the provisions of municipal law cannot prevail over those of the treaty.”³⁵ Although States are free to regulate conduct within

29 OST *supra* note 1, at art. I.

30 See *Clarifications* ¶ 15.

31 NASA Guidelines, *supra* note 17.

32 *Id.*

33 *Compromis* ¶ 20.

34 *Id.* ¶ 13, 19.

35 *Greco-Bulgarian Communities*, Advisory Opinion, 1930 P.C.I.J. (ser. B) No 17 (July 31), at ¶ 81; *International Fisheries Company*, (U.S. v. United Mexican States) 4 R.I.A.A. 691, 709 (1931) (“The supreme law of all members of the family of nations is not its domestic law but is international law.”).

their own territory,³⁶ international law prevails over domestic legislation in disputes between States.³⁷ Thus, because the OST principles discussed in Section I.A., *supra*, inevitably prevail over the MPA, Lydios cannot enforce this legislation against Endymion.

1.2.2. Lydios Transferred its Jurisdiction and Control of Luna-1 and Therefore Could Not Demand that Endymion Leave the Lunar Base.

Lydios had no authority to unilaterally regulate conduct on Luna-1 when it promulgated the MPA and demanded that Endymion leave the lunar base because Lydios had transferred its ownership of the base.³⁸ Although Article VIII of the OST requires a state to “retain jurisdiction and control” over any object that is in outer space or on a celestial body,³⁹ the space treaties permit States to transfer that jurisdiction and control.⁴⁰ The U.N. General Assembly has twice recognized the ability of States to transfer ownership of its space objects,⁴¹ as have space law scholars.⁴² State practice further affirms that States may lawfully transfer ownership of space objects: in 1998, the International Telecommunications Satellite Organization (“INTELSAT”) transferred ownership of

36 See generally *Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 401 (1964).

37 See ICJ Statute, *supra* note 9, at art. 38 (requiring that disputes be decided in accordance with international law, looking first to treaties, international custom, general principles of law, and last, “judicial decisions . . . of the various nations, as subsidiary means for the determination of the rules of law.”). See also VCLT, *supra* note 9, at art. 26 (“A party may not invoke the provisions of its internal law as justification for its failure to perform a treaty”).

38 *Compromis* ¶ 13.

39 OST, *supra* note 1, at art. VIII.

40 See, e.g., Francis Lyall and Paul B. Larsen, *Space Law: A Treatise* 92-93 (2009) [hereinafter *Space Law Treatise*]. The Convention on the Registration of Objects Launched into Outer Space, Jan. 14, 1975, 28 U.S.T. 695, 1023 U.N.T.S. 15 [hereinafter *Registration Convention*] is silent on the issue of the transfer of space objects; because of this, the conduct is presumed to be lawful. See Carl Q. Christol, *The Modern International Law of Outer Space* 59 (1982) [hereinafter *Modern*] (“Space law, like all international law, has gone forward on the premise that conduct is presumed to be lawful in the absence of prohibitions.”)

41 See Recommendations on enhancing the practice of States and international intergovernmental organizations in registering space objects, G.A. Res. 62/101, U.N. Doc. A/RES/62/101 (Jan. 10, 2008) (recommending steps States should take following change in supervision of a space object); Application of the concept of the “launching State”, G.A. Res. 59/115, U.N. Doc. A/RES/59/115 (Jan. 25, 2005) (requesting information on State practice of transferring ownership of space objects).

42 Henry R. Hertzfeld & Frans G. von der Dunk, *Bringing Space Law into the Commercial World: Property Rights Without Sovereignty*, 6 Chi. J. Int'l L. 81, 89 (2005).

five satellites to the Dutch corporation New Skies NV, and AsiaSat 1 and 2 and Apstar-I and IA were transferred from the U.K. registry to China.⁴³ Lydios' announcement in 2005 that it was transferring the rights of the Luna-1 facility "to the States parties of the Outer Space Treaty"⁴⁴ constituted its offer to transfer ownership. When Endymion announced its intention in 2006 to utilize Luna-1 and occupied the facility in 2007 without objection from Lydios,⁴⁵ the offer to transfer ownership was accepted.⁴⁶ Although some space object transfers were conducted through a written agreement with a corresponding note made in the U.N. registry,⁴⁷ there is no requirement under international law that such a contract be executed for an agreement to be binding.⁴⁸ Here, Lydios' statement in 2005 was unconditional: it entirely relinquished its rights to Luna-1.

1.2.3. *Lydios Does Not Have Jurisdiction Under Principles of Customary International Law to Enforce the MPA Against Other States.*

The MPA cannot be given international force under any of the traditional bases of extraterritorial jurisdiction recognized under customary international law. The only arguably applicable basis of jurisdiction for the MPA is the territoriality principle,⁴⁹ but because neither territorial nor quasi-territorial jurisdiction applies, the law is unenforceable against Endymion.

43 Lyall and Larsen, *Space Law Treatise*, *supra* note 40, at 92, 337.

44 *Compromis* ¶ 13.

45 *Id.* ¶¶ 13, 15.

46 *Cf.* Restatement (Second) Law of Contracts § 50 (1981); J. Clark Kelso, *The United Nations Convention on Contracts for the International Sale of Goods: Contract Formation and the Battle of the Forms*, 21 Colum. J. Transnat'l L. 529, 540-42 (1982-1983).

47 *See* Registration Convention, *supra* note 40, at art. II. The *compromis* is silent on any changes in the U.N. Office of Outer Space Affairs registry regarding the transfer of Luna-1. However, it is not uncommon for states to report transfers to OOSA late, and the note made in the registry when a transfer occurs is very informal. *See* Lyall and Larsen, *Space Law Treatise*, *supra* note 40, at 92-93.

48 *See Legal Status of Eastern Greenland* (Denmark v. Norway), 1933 P.C.I.J., Ser. A/B, No. 53 (Apr. 5) at ¶ 192 (holding that it is "beyond all dispute" that an oral declaration by a government representative on behalf of the government is binding upon the country).

49 Other bases of jurisdiction include the nationality principle (jurisdiction over the State's nationals), the protective principle (jurisdiction to protect security of a State), the passive personality principle (jurisdiction over conduct that harms the State's nationals), the effects test (jurisdiction over conduct that has a substantial effect within the State's territory), and universal jurisdiction (any State can exercise jurisdiction over universally condemned offenses, e.g., piracy). *See* Jennifer A. Purvis, *The Long Arm of the Law? Extraterritorial Application of U.S. Environmental Legislation to Human Activity in Outer Space*, 6 Geo. Int'l Envtl. L. Rev. 455, 460 (1994).

1.2.3.1. The MPA Cannot Be Enforced as an Exercise of Territorial Jurisdiction Because the Moon is not the Territory of Any One State.

Because the MPA attempts to regulate conduct on the Moon, it is unenforceable against other States. Jurisdiction to prescribe laws⁵⁰ is generally based on territoriality,⁵¹ but because the Moon is not any one State's territory,⁵² extending the reach of domestic jurisdiction to the Moon is improper. Indeed, because "there can be no territorial sovereignty in outer space or on celestial bodies, there can be no exercise of territorial jurisdiction there."⁵³ Although all space-faring nations enact domestic legislation to regulate space exploration, those laws only regulate the conduct of the State's own nationals and do not purport to bind the activities of other States.⁵⁴ The MPA, as a piece of Lydios' domestic legislation, is no more enforceable under international law than a mere policy statement.

1.2.3.2. The MPA Cannot be Enforced as an Exercise of Quasi-Territorial Jurisdiction Because Quasi-Territorial Jurisdiction is Inapplicable to Space Objects, and Because the MPA Seeks to Exclude States from Areas Never Under the Jurisdiction and Control of Lydios.

Application of "quasi-territorial" jurisdiction, such as the right to regulate conduct on a State's ship on the high seas,⁵⁵ is also inapposite. The space treaties draw a clear distinction between the "jurisdiction and control" that a State maintains over its space objects under Article VIII of the OST⁵⁶ and the nationalization of other governmental property that is located outside of the State's national borders.⁵⁷ Unlike in the law of the sea, which requires that States grant their nationality to ships,⁵⁸ the international space treaties purposefully eschewed the concept of nationality in regard to space objects.⁵⁹ In contrast to

50 See Restatement (Third) of Foreign Relations Law of the United States § 401(a) (1987).

51 See, e.g., *The Lotus Case* (France v. Turkey), 1927 P.C.I.J., Ser. A, No. 10 (Sept. 7) ("Jurisdiction is certainly territorial; it cannot be exercised by a state outside its territory except by virtue of a permissive rule derived from international custom or from a convention.").

52 OST, *supra* note 1, at art. II.

53 Cheng, *International Space Law*, *supra* note 22, at 476.

54 See, e.g., Elena Kamenetskaya, *The Present Developments of Legal Regulations of Space Activities in Russia and Commonwealth of Independent States*, 26 *Akron L. Rev.* 465, 468 (1993).

55 Cheng, *International Space Law*, *supra* note 22, at 478-80.

56 OST, *supra* note 1, at art. VIII ("A State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and over any personnel thereof[.]").

57 Cheng, *International Space Law*, *supra* note 22, at 478-80.

58 United Nations Convention on the Law of the Sea, at art. 91, Nov. 16, 1994, 1833 U.N.T.S. 3.

59 Cheng, *International Space Law*, *supra* note 22, at 482.

the quasi-territorial jurisdiction exercised over ships, Article VIII of the OST specifies only a State's "personnel" as being within the jurisdiction of the State of registry.⁶⁰ Thus, while a State is free to legislate what conduct its nationals can engage in while in outer space, it cannot regulate conduct of nationals outside of its personal jurisdiction.⁶¹ The MPA is not limited to Lydios' own nationals; rather, the Act attempts to regulate conduct of anyone on the Moon which cannot be justified under quasi-territorial jurisdiction.

In any event, even if quasi-territorial jurisdiction was an appropriate basis of jurisdiction over Luna-1, the MPA is an unlawful overreach of that authority. The buffer zones created by the MPA include not only Luna-1 and other space objects launched by Lydios, but also the six sites of the United States' Apollo landings, which were never under Lydios' control, and the Messenger-3 area, which Lydios had sold to Mr. Billippo, an Endymion national.⁶² It would thus be unjust to allow Lydios to enforce the MPA against Endymion and other nations.

II. **Lydios violated international law by refusing to permit Benu to dock at Diana.**

When it refused to open its dock to the Benu, Lydios violated one of the fundamental principles of international space law: that activities in outer space be conducted in consideration of the welfare and safety of astronauts.⁶³ Specifically, Lydios had a duty to offer assistance to the Benu under at least two⁶⁴ provisions of international law: Article V of the OST⁶⁵ and Article 3 of the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Re-

60 *Id.* at 488.

61 *Id.* (Recognizing that a "literal reading of Article VIII would mean that [when personnel of spacecraft A visits spacecraft B while in outer space], such personnel would remain under the jurisdiction of State A, thus preventing State B . . . from exercising jurisdiction over the visitor[.]").

62 *Compromis*, ¶¶ 20, 5.

63 *See, e.g.*, Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, preamble, Apr. 22, 1968, 19 U.S.T. 7570, 672 U.N.T.S. 119 [hereinafter ARRA]; Lyall and Larsen, *Space Law Treatise*, *supra* note 40, at 134.

64 Lydios' conduct is also a violation of Article 10(2) of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 18, 1979, 1363 U.N.T.S. 3, which requires States Parties to "offer shelter in the stations, installations, vehicles and other facilities to persons in distress on the Moon." Although Lydios is not a party to the Moon Agreement, it cannot simply ignore its laws, as the Agreement serves as evidence of contemporary international law. *See* Gbenga Oduntan, *Sovereignty and Jurisdiction in Airspace and Outer Space* 208 (2012).

65 OST, *supra* note 1, at art. V.

turn of Objects Launched into Outer Space (“ARRA”).⁶⁶ Lydios’ failure to extend the minimal assistance requested constitutes a breach of each provision.

2.1. Lydios Violated its Duty to Render All Possible Assistance to Astronauts in Outer Space Under Article V of the OST.

Lydios’ failure to open its dock to the Benu was a violation of Lydios’ obligation under Article V of the OST to render all possible assistance to other astronauts when carrying on activities in outer space. Although Kandetta is not a party to the OST, Article V applies as a principle of customary international law.

2.1.1. Lydios Ignored the Benu’s Distress Calls in Disregard of its OST Obligation to Render All Possible Assistance to Astronauts.

Lydios’ failure to render any assistance to Kandetta was a blatant violation of the State’s Article V obligation. Article V of the OST requires that States Parties “regard astronauts as envoys of mankind in outer space” and provides that, “[i]n carrying on activities in outer space and on celestial bodies, the astronauts of one State Party shall render *all possible assistance* to the astronauts of other States Parties.”⁶⁷ This obligation is broad: “[the] duty for astronauts to assist each other has the advantage of being utterly unqualified – and therefore requires such assistance under any circumstances[.]”⁶⁸ The provision has been said to be “merely a logical extension of basic morality.”⁶⁹ Lydios disregarded this obligation when it failed to allow the Benu to land at Diana. Despite being informed that refueling was “necessary for the lives and safety of the personnel of the spacecraft,”⁷⁰ Lydios refused to extend assistance. Especially in light of the broad language of Article V, which is described as “utterly unqualified,”⁷¹ Lydios’ obligation under this provision at least encompassed a duty to open its port for the Benu to dock and allow the vessel to refuel – a cost that would have been repaid by the Kingdom of Kandetta.⁷²

66 ARRA, *supra* note 63, at art. 3.

67 OST, *supra* note 1, at art. V (emphasis added). The individuals on board the Benu were “astronauts” as that term is used in the context of the treaty; an “astronaut” is a “person who travels beyond the earth’s atmosphere.” Mark J. Sundahl, *The Duty to Rescue Space Tourists and Return Private Spacecraft*, 35 J. Space L. 162, 183 (2009) [hereinafter *Duty to Rescue*]. The presence of Mr. Billippo on board the Benu, *Compromis* ¶ 22, therefore did not alter Lydios’ duty to render assistance to the spacecraft.

68 Sundahl, *Duty to Rescue*, *supra* note 67, at 168.

69 William A. Hyman, *Magna Carta of Space* 275 (1966).

70 *Compromis* ¶ 23.

71 Sundahl, *Duty to Rescue*, *supra* note 67, at 168.

72 *Compromis* ¶ 23.

2.1.2. *The OST Obligation to Render All Possible Assistance Applies to All States as a Principle of Customary International Law.*

Although Kandetta is not a party to the OST, the treaty provisions have passed into customary international law; the duty to render all possible assistance to astronauts in outer space therefore extends to all nations and not only those who have signed onto the treaty. Under this Court's decision in the *North Sea Continental Shelf Cases*, treaty provisions can pass into the general corpus of international law if (1) there has been a lapse in time since the treaty came into force,⁷³ (2) non-party states have not objected to the treaty-rule,⁷⁴ and (3) a sufficient number of states have become parties to the treaty.⁷⁵ The OST meets all of these requirements.⁷⁶ Indeed, 45 years have passed since the OST entered into force in 1967, 101 nations are currently parties to the treaty, including all major spacefaring nations, and there are no known objectors to its provisions.⁷⁷

2.2. **Lydios Violated its Duty to Assist the Bennu Under Article 3 of the ARRA.**

Lydios also had a duty to rescue the Bennu under the ARRA, and its failure to do so constitutes a breach of this treaty obligation. Article 3 of the ARRA requires that Contracting Parties "assure [the] speedy rescue" of personnel of a spacecraft when (1) the Party receives information that the personnel (2) "have alighted . . . in any . . . place not under the jurisdiction of any State" and (3) the Contracting party is in a position to render such assistance.⁷⁸ This duty is incumbent on a party regardless of the cause of the distress and the availability of alternative locations for an attempted landing.

73 *North Sea Continental Shelf* (F.R.G. v. Den./F.R.G. v. Neth.), 1969 I.C.J. 3 (Feb. 20), ¶ 74. In his dissenting opinion in *North Sea Continental Shelf*, Judge Manfred Lachs cited to space law as an example of the way in which a rule of customary international law can swiftly develop because of the acceleration of social and economic change, combined with advances in science and technology. *Id.* at 230.

74 *Id.* at ¶ 73

75 *Id.*; see also Lyall and Larsen, *Space Law Treatise*, *supra* note 40, at 73-74.

76 Lyall and Larsen, *Space Law Treatise*, *supra* note 40, at 70-80.

77 United Nations Office for Outer Space Affairs, *Status of International Agreements relating to Activities in Outer Space*, <www.unoosa.org/oosa/en/SpaceLaw/treatystatus/index.html> (last visited Mar. 11, 2013). Although Kandetta is not a party to the treaty, it does not qualify as an objector because objections must be consistent and open. See T.L. Stein, *The Approach of the Different Drummer: The Principle of the Persistent Objector in International Law*, 26 Harv. Int. L.J. 457 (1985).

78 ARRA, *supra* note 63, at art. 3.

2.2.1. *Lydios Received Information that the Personnel on Board the Bennu Were in Need of Assistance.*

The duty to render assistance under ARRA Article 3 is triggered the moment a party receives information that personnel of a spacecraft⁷⁹ are in need.⁸⁰ Lydios was undeniably on notice of the Bennu's need for assistance when the commander of the Bennu contacted the director of Diana and requested permission to dock and obtain propellant.⁸¹ Lydios' duty to render assistance was thus triggered at that moment.

2.2.2. *The Duty to Rescue Under Article 3 of the ARRA Includes the Obligation to Render Assistance to Spacecraft Alighting Toward the Moon.*

The Bennu was alighting to the Moon, which, under all of the outer space treaties, constitutes a "place not under the jurisdiction of any state."⁸² Given its plain meaning,⁸³ to "alight" means to "descend from the air."⁸⁴ The use of this term in Article 3 makes the duty to extend assistance contingent on the landing of a spacecraft, as opposed to a duty to rescue individuals stranded in orbit or deep space.⁸⁵ Here, the Bennu was descending toward the Moon in an attempt to land there and thus came within the ambit of Article 3. Additionally, it would be inequitable in the present case to limit the meaning of "alighted" to require that a spacecraft have actually landed on the surface of the moon before the duty to rescue is triggered, as it was Lydios' refusal to permit docking that prevented such landing.

2.2.3. *Lydios was in a Position to Offer Assistance to the Bennu.*

When a contracting party is in the immediate vicinity of an incident and is technically capable of providing assistance, Article 3 requires that it do so.⁸⁶ Diana was the closest docking station to the Bennu when the Bennu was attempting to land on the Moon⁸⁷ and was therefore within the immediate vicinity of the incident. Also, the onus on Lydios was minimal in that all it was required to do

79 The members on board the Bennu constituted "personnel of a spacecraft" under the ARRA. The ARRA does not provide a definition of "personnel of spacecraft," but the drafting history of this provision indicates that the term "personnel" is purposefully broad "since *everyone on board* has a right to assistance for humanitarian reasons." Sundahl, *Duty to Rescue*, *supra* note 67, at 187.

80 Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 67.

81 *Compromis* ¶ 23.

82 ARRA, *supra* note 62, at art. 3. See OST, *supra* note 1, at art. II; Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 67-68 (explaining that, because the Moon is a place not under the jurisdiction of any State, it is included in the scope of Article 3).

83 VCLT, *supra* note 9, at art. 31.

84 New Oxford American Dictionary (2001), alight.

85 Sundahl, *Duty to Rescue*, *supra* note 67, at 169.

86 Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 68.

87 *Compromis* ¶ 23.

was open its port and offer fuel, of which it had an abundance.⁸⁸ Thus, Lydios was in a position to offer assistance and was required to do so.

2.2.4. Lydios' Duty to Render All Possible Assistance was not Minimized by the Availability of Alternative Assistance.

The duty to render assistance under Article 3 arises regardless of the cause of the incident or the availability of alternative locations for an attempted landing. The distress “does not have to be originated from an emergency situation”⁸⁹ and thus the duty to render assistance applies even if the personnel seeking assistance negligently caused their distress.⁹⁰ Furthermore, assistance is still necessary in instances where the distressed astronaut has a number of alternative locations on which he might attempt a landing: “if the astronaut selects his landing spot on the basis of safety and convenience, he should not be penalized for taking account of those factors.”⁹¹ It is therefore irrelevant that the Benu might have first sought to dock elsewhere; the commander of the spacecraft decided to request fueling from Diana because it was the facility that was nearest to its navigational point when the Benu decided to go to the Moon.⁹² It is similarly irrelevant that the propellant leak was discovered at pre-deployment⁹³ and that the Benu might have decided to immediately return to Earth because the duty to rescue is not conditioned on the lack of fault of the party experiencing the distress.⁹⁴ All of the elements of Article 3 were therefore met, and Lydios’s failure to offer assistance was a breach of this obligation. Furthermore, as a matter of policy, this Court should not allow States to ignore their obligation to render assistance under Article 3 capriciously; Article 3 was enacted for humanitarian purposes,⁹⁵ and Lydios blatantly ignored the potential risk to human life when it denied the Benu docking privileges.

III. Lydios is liable for damages for the failed deployment of Kandetta’s twin probes.

It is a basic principle of international law that a State’s unlawful act creates an obligation to make integral reparation to the victim so that it can be “made

88 *See id.*

89 Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 67.

90 Paul G. Dembling and Daniel M. Arons, *The Treaty on Rescue and Return of Astronauts and Space Objects*, 9 *Wm. & Mary L. Rev.* 630, 646 (1967-1968) [hereinafter *ARRA Article*].

91 *Id.*

92 *Compromis* ¶ 23.

93 *Id.* ¶ 22.

94 *See* Dembling and Arons, *ARRA Article*, *supra* note 90, at 632-33.

95 *See* Sundahl, *Duty to Rescue*, *supra* note 67, at 167.

whole.”⁹⁶ This obligation was encapsulated in the Convention on International Liability for Damage Caused by Space Objects (“Liability Convention”) as an expansion on customary international law principles of international liability.⁹⁷ First, Lydios’ wrongful conduct resulted in the loss of Kandetta’s probes and Lydios is liable for that loss under Article III of the Liability Convention.⁹⁸ Second, compensation for that loss is necessary to restore Kandetta “to the condition which would have existed if the damage had not occurred” under Article XII.⁹⁹ Finally, Lydios should be equitably estopped from avoiding liability under the Convention on the technicality that Endymion is not a “joint launching” state of Luna-1.¹⁰⁰ Additionally, because the standard for fault and recovery of damages is the same under customary international law as it is under Articles III and XII of the Liability Convention,¹⁰¹ if the Court finds that the Liability Convention is inapplicable to the present case, the standards set forth in the following discussion still control.

3.1. Lydios’ Violation of its Duty to Rescue the Bennu and its Use of the Wrong Fluid in the Hydraulic System at Fortuna Exposes Lydios to Liability Under Article III of the Liability Convention.

Article III of the Liability Convention adopts the basic standard under customary international law that a State is liable to make reparations in the event damage is due to its fault.¹⁰² The Liability Convention provides:

In the event of damage being caused elsewhere than on the surface of the Earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable only if the damage is due to its fault [.]¹⁰³

96 Cheng, *General Principles*, *supra* note 2, at 234. *See also Corfu Channel (Merits)* (U.K. v. Alb.), 1949 I.C.J. 4, at 23 (Apr. 9) [hereinafter *Corfu Channel*]; *Trail Smelter Arbitration* (U.S. v. Can.), 3 R.I.A.A. 1911 (U.S.-Can. Arb. Trib. 1941).

97 Christol, *Modern*, *supra* note 40, at 88.

98 Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187 [hereinafter *Liability Convention*]. It is irrelevant that Kandetta is not a party to the Liability Convention. The Convention only refers to “launching states” rather than contracting parties to the treaty. *See, e.g.*, Arts. II, III, IV. The Liability Convention provisions “are intended as statements of general international law of universal application, independently of the treaty” and are “not expressly stated to be applicable only as among contracting parties.” Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 99.

99 Liability Convention, *supra* note 98, at art. XII.

100 *See id.* at art. V.

101 *Compare id.* at Article III, Article XII *with Factory at Chorzów* (Ger. v. Pol.), 1928 P.C.I.J. (ser. A) No. 17 (Sept. 13) [hereinafter *Chorzów*].

102 *See* Cheng, *General Principles*, *supra* note 2, at 218-219.

103 Liability Convention, *supra* note 98, at art. III.

The docking mechanism of Fortuna and the Bennu are both space objects.¹⁰⁴ Lydios and Kandetta are launching states of Luna-1 and the Bennu respectively, by being the nations that procured the launch of those objects.¹⁰⁵ Lydios is liable for the failed deployment of Kandetta's twin probes because it is at fault for that loss. Under the Liability Convention and customary international law,¹⁰⁶ a state is at fault when an act or omission (1) is attributable to the state, (2) constitutes a breach of an international obligation of that state, and (3) is the cause of the harm suffered.¹⁰⁷

3.1.1. *It was Lydios' Wrongful Conduct That Led to the Loss of Kandetta's Twin Probes.*

Because the loss of Kandetta's twin probes was due to Lydios' denial of docking access to the Bennu, combined with Lydios' use of the wrong fluid in the hydraulic system of the docking mechanism on Fortuna,¹⁰⁸ the conduct in this case is attributable to Lydios. An act is attributable to a State under international law if the conduct was under the direction or control of the State¹⁰⁹ or if the State should have known of the act.¹¹⁰ Attribution is not an issue of factual causality but rather requires that there was an act of the State as opposed to, for instance, an act by private parties.¹¹¹ The *compromis* is clear that Luna-1 was built and established by Lydios acting in its governmental capacity,¹¹² any

104 A space object "includes component parties of a space object as well as its launch vehicle and parts thereof." *Id.* at art. I. Stations located on the Moon and other celestial bodies come within this definition. See, e.g., Stephan Hobe, *Legal Aspects of Space Tourism*, 86 Neb. L. Rev. 439, 443-44 (2007) (noting that the term "space object" includes "any object that is launched or attempted to be launched into outer space").

105 The Liability Convention defines a "launching state" as a "State which launches or procures the launching of a space object." Liability Convention, *supra* note 98, at art. I.

106 See *Chorzów*, *supra* note 101. See also Draft Articles on State Responsibility, *supra* note 2, at art. 2.

107 Draft Articles on State Responsibility, *supra* note 2, at art. 2.

108 *Compromis* ¶ 25.

109 Draft Articles on State Responsibility, *supra* note 2, at art. 8 ("The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct."); *id.* at art. 12 (conduct acknowledged or adopted by the state as its own).

110 *Id.* at Ch. IV, commentary, ¶ 4. (citing *Corfu Channel*, *supra* note 96).

111 *Id.* at art 17, commentary, ¶ 2. See also Cheng, *General Principles*, *supra* note 2, at 181 ("[Attribution] in international law is the juridical attribution of a particular act by a physical person . . . to a State . . . whereby it is regarded as the latter's own act.") Under the international space treaties, even conduct by private parties is attributable to a state.

112 *Compromis* ¶ 4.

incident arising from the act of placing Luna-1 on the Moon is thus attributable to Lydios. Similarly, Diana was under government control when Lydios denied the Benu access to its port.¹¹³ The acts leading to the loss of Kandetta's probes are thus attributable to Lydios.

3.1.2. Kandetta's Damage is a Result of Lydios' Breach of its International Duty to Rescue, as well as a Breach of its Duty to Exercise Due Diligence to Prevent Harm to Other States.

The loss in the present case is a result of Lydios' failure to abide by its international obligations in two instances. Not only did Lydios disregard its duty to rescue under the OST and ARRA when it failed to allow the Benu to dock at Diana, as established in Section II, *supra*, it also failed to exercise due diligence to prevent harm to other spacefaring nations when it negligently used the wrong fluid in the docking mechanism at Fortuna.¹¹⁴

Lydios failed to use due diligence in exercising its obligations under Article XII of the OST, which, as discussed in Section I, *supra*, requires that stations on the Moon remain open to representatives of other States Parties.¹¹⁵ It is basic tenet of international law that failing to exercise due diligence to prevent harm to others can constitute a breach of international obligations,¹¹⁶ and this Court has held that due diligence requires that States take adequate measures to ensure that its activities do not harm another State.¹¹⁷ In establishing its lunar base, Lydios had an obligation to exercise due diligence to ensure that all of its obligations under the space treaties would be fulfilled in a way that would prevent harm to other States. Thus, Lydios had an obligation to ensure the safety of its docking mechanisms; because the State knew that Luna-1 would be visited by other States Parties as required under OST Article XII, it was a foreseeable risk that by using the wrong fluid in its docking mechanisms, another State would likely be injured as a result. Lydios was clearly capable of using the correct fluid; all of the other docking mechanisms on Luna-1 were fully functional.¹¹⁸ Lydios' failure to exercise the necessary care in building the dock at Fortuna constitutes a failure to exercise due diligence in violation of customary international law.

113 *Id.* ¶¶ 16, 23.

114 *See id.* ¶ 25.

115 OST, *supra* note 1, at art. XII.

116 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, G.A. Res. 62/68, Annex, U.N. GAOR, 62nd Sess., U.N. Doc. A/Res/62/58 (2008) at art. 3. *See also Armed Activities on the Territory of the Congo* (Democratic Republic of the Congo v. Uganda), Judgment, 2005 I.C.J. 1, 77-78, ¶ 256 (Dec. 2005).

117 *Id.* at ¶ 246.

118 *Compromis* ¶ 25.

3.1.3. *Lydios' Breach of its International Obligations Caused the Loss of Kandetta's Twin Probes.*

Lydios' conduct was the proximate cause of the failed deployment of Kandetta's twin probes. Proximate cause under international law involves an inquiry into the foreseeability of the harm.¹¹⁹ Determining foreseeability of an act, however, does not require that the actor actually contemplated the specific harm but rather she could and should have foreseen it: it is the standard of the reasonable person.¹²⁰ The same is true when two or more separate acts combine to cause damage; the responsible party will still be liable for damages caused, even if its conduct is only one of the combined factors that led to injury.¹²¹ This was the case in both *Corfu Channel*¹²² and the *United States Diplomatic and Consular Staff in Tehran Case* ("U.S. v. Iran").¹²³ In *Corfu Channel*, this Court found Albania liable for its failure to warn British ships of the presence of mines, even though Albania did not lay the mines itself.¹²⁴ Similarly, in *US v. Iran*, the Islamic Republic of Iran was held fully responsible for the detention of hostages, even though militant students were responsible for the initial seizure.¹²⁵ Establishing causation is even simpler here, where the two incidents that led to the damage are attributable to the same State. Because the Benu was short on fuel, it was foreseeable that its inability to dock and refuel could have led to property loss. Similarly, in constructing Luna-1, Lydios should have anticipated that its negligent construction of the docking mechanism in Fortuna would have resulted in property damage. These acts combined to cause the failed deployment and subsequent loss of Kandetta's twin probes and, because both acts are attributable to Lydios, it is indisputable that Lydios is at fault for that loss under Article III of the Liability Convention.

3.2. **Lydios Must Pay Damages for the Loss of Kandetta's Twin Probes Because to Restore Kandetta to the Position it Would Have Been In Had Lydios Not Breached its International Obligations.**

Lydios is wholly liable for damages as a result of the failed deployment of Kandetta's twin probes.¹²⁶ When a State is found liable under Article III of the

119 Cheng, *General Principles*, *supra* note 2, at 249-51. *See also* Draft Articles on State Responsibility, *supra* note 2, at art 45, commentary.

120 Cheng, *General Principles*, *supra* note 2, at 249-51.

121 *See* Draft Articles on State Responsibility, *supra* note 2, at art. 45, commentary.

122 *Corfu Channel*, *supra* note 96.

123 *United States Diplomatic and Consular Staff in Tehran Case*, 1980 I.C.J. 3 (May 24) [hereinafter *US v. Iran*].

124 *Corfu Channel*, *supra* note 96, at 17-18.

125 *US v. Iran*, *supra* note 123, at 29-32.

126 *See* Jasentuliyana & Lee, *Space Law Manual*, *supra* note 13, at 117-19 (explaining that "fault" under Article III of the Liability Convention can mean that "a state becomes liable for the totality of the damage as soon as it has been established that there is fault on its part, and there is a causal [connection] between this fault and the damage.").

Liability Convention, damages are due in accordance with the principles under Article XII of the Convention.¹²⁷ Article XII provides:

The compensation which the launching State shall be liable to pay for damage . . . shall be determined in accordance with international law and the principles of justice and equity, in order to provide such reparation in respect of the damage as will restore the . . . State . . . on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred.¹²⁸

Under the Convention, “damage” includes “loss of or damage to property.”¹²⁹ Here, Kandetta has suffered economic damages as a result of the failed deployment of its twin probes and compensation must be made to restore the State to the condition that would have existed had Lydios not violated its international obligations.

International tribunals have generally awarded damages that are deemed as natural, normal, or otherwise predictable.¹³⁰ In other words, damages are compensable if they would arise in the ordinary course of events.¹³¹ Economic damages such as lost profits have been widely recognized by international tribunals as the sort of damages that arise in the ordinary course.¹³² Indeed, the PCIJ recognized in *Chorzow Factory* that certain economic damages including lost profits are compensable, even if some are deemed too remote to justify recovery.¹³³ Similarly, in *The Cape Horn Pigeon*, the Arbitrator held that “[t]he general principles of civil law, according to which damages ought not only to include compensation for injuries suffered, but also for loss of profit, is equally applicable in international disputes.”¹³⁴ The arbitrator went on to explain that, even if lost profits cannot be calculated with certainty, it is sufficient “to show that the act complained of has prevented the making of a profit which would have been possible in the ordinary course of events[.]”¹³⁵ Kandetta’s space probes, if successfully launched, presumably would have provided the State

127 Delbert D. Smith, *Space Stations: International Law and Policy* 121 (1979).

128 Liability Convention, *supra* note 98, at art. XII; *see also Chorzów*, *supra* note 101, at 47 (“[R]eparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.”).

129 Liability Convention, *supra* note 98, at art I(a).

130 George Schwarzenberger, *International Law as applied by International Courts and Tribunals* Vol. I, 669 (3d ed. 1957).

131 Cheng, *General Principles*, *supra* note 2, at 248.

132 *The Wanderer*, 6 R.I.A.A. 68, 76 (1921); *The Favorite*, 6 R.I.A.A. 82, 85 (1921); *Horace B. Parker*, 6 R.I.A.A 153, 154 (1925).

133 *Chorzów*, *supra* note 101, at 57.

134 Cheng, *General Principles*, *supra* note 2, at 248 (citing *The Cape Horn Pigeon*, U.S.F.R. (1902), Appx I, 467, 470-71).

135 *Id.*

with valuable scientific information¹³⁶ and, although the *compromis* is silent on the value of that loss, it is clearly compensable.

3.3. Endymion's Claim for Indemnification from Lydios is Appropriate Under the Liability Convention.

Endymion has properly asserted this claim for indemnification against Lydios¹³⁷ under the Liability Convention. Although Article V of the Convention only discusses claims for indemnification “to other participants in [a] joint launching,” which is not the case here, the Convention should be read to allow claims for indemnification in any instance of alleged joint liability. First, indemnification is permissible under customary international law, which supplements the terms of the Liability Convention. Second, because Lydios is wholly responsible for the damages sustained by Kandetta, it should be equitably estopped from avoiding liability under the Convention.

3.3.1. Claims for Indemnification are Permissible Under Customary International Law Which Supplements the Terms of the Liability Convention.

Claims for indemnification are presumptively permissible under customary international law and are therefore also permissible under the Liability Convention. The Liability Convention supplements – it does not supplant – customary international law liability principles.¹³⁸ The Draft Articles on State Responsibility, which this Court has recognized as a statement of international law,¹³⁹ addresses the situation where more than one State is responsible for the damage caused to a third State. Article 47 provides that, although each State is separately responsible for conduct attributable to it, a State that is jointly liable may have a “right of recourse against the other responsible States.”¹⁴⁰ Although Endymion does not concede liability, in the event that damages are assessed against Endymion as a result of Kandetta's claim against it, this Court should allow Endymion to seek indemnification.

3.3.2. It Would be Inequitable to Prevent Endymion's Claim of Indemnification Against Lydios under the Liability Convention When Read in Context with OST Article VI.

The Liability Convention Article V expressly allows for indemnification between joint launching states; if one jointly liable State pays compensation for damage, it has a right to present a claim for indemnification to other participants in the joint launch.¹⁴¹ Although Article V does not literally apply because Endymion is not a “launching state” of Luna-1, it would be inequitable to not

136 See *Events of Interest*, 22 J. Space. L 115, 155 (1994).

137 *Compromis* ¶ 26.

138 See Christol, *Modern*, *supra* note 40, at 88-90; VCLT, *supra* note 9, Preamble.

139 See, e.g., *Gabčikovo-Nagymaros Project* (Hung. v. Slov.), 1997 I.C.J. 7, 55 (Sept. 25).

140 Draft Articles on State Responsibility, *supra* note 2, at art. 47, commentary.

141 Liability Convention, *supra* note 98, at art. V.

allow a claim of indemnification here. The underlying assumption during the drafting of the Liability Convention was that launching states would retain ultimate control over the objects launched into space,¹⁴² but as was discussed in Section I.B, *supra*, current state practice allows for the transfer of control over space objects.¹⁴³ The literal meaning of Article V, allowing for indemnification only among joint launching states, is therefore not keeping with the current practice of spacefaring nations. In order to remain consistent with OST Article VI, which requires that a State bear international responsibility for its national activities in outer space,¹⁴⁴ the Liability Convention as a whole should be read to allow for recovery, not just from joint launching states, but from any State that is found to be responsible for damage caused. Accordingly, Article V of the Convention must be read broadly to allow for indemnification among jointly liable parties. To allow Lydios to escape liability for Kandetta's loss on the basis of a textual technicality, that Endymion is not a joint launching state within the meaning of Article V, would be unjust. Such a result would also be contrary to the Liability Convention's requirement that payment for damages should be made "in accordance with . . . the principles of justice and equity."¹⁴⁵ Thus, in order to remain true to the OST's requirement that States bear international responsibility for their conduct in outer space, Lydios, as the party responsible for the loss of Kandetta's probes, must be required to indemnify Endymion for any reparations it might pay to Kandetta.

SUBMISSIONS TO THE COURT

For the foregoing reasons, the Republic of Endymion, Respondent, respectfully requests the Court to adjudge and declare that:

1. Lydios violated international law by unilaterally imposing the Moon Protection Act including the demand that Endymion vacate Fortuna;
2. Lydios violated international law by refusing to permit Bennu to dock at Diana; and
3. Lydios is liable for damages for the failed deployment of Kandetta's twin probes.

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142 Carl Q. Christol, *International Liability for Damage Caused by Space Objects*, 74 Am. J. Int'l L. 346, 348 (1980).

143 See citations, *supra* note 40.

144 OST, *supra* note 1, at art. VI.

145 Liability Convention, *supra* note 98, at art. XII.