MANFRED LACHS SPACE LAW MOOT COURT COMPETITION 2017

Team No. 2

IN THE INTERNATIONAL COURT OF JUSTICE,

AT THE

PEACE PALACE, THE HAGUE

Case Concerning Lunar Facilities and Withdrawal from the Outer Space Treaty

The Republic of Perovsk

v.

The Republic of Titan

ON SUBMISSION TO THE INTERNATIONAL COURT OF JUSTICE

MEMORIAL FOR THE RESPONDENT

THE REPUBLIC OF TITAN

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Treaties and Conventions

United Nations Resolutions and Documents

International Cases

Books and Treatises

Articles & Research Papers

James Cameron & Julie Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment,* 14(1) BOSTON COLLEGE INTERNATIONAL AND COMPARATIVE LAW REVIEW 1, 2 (1991). 26
Jean Francois Mayence & Thomas Reuter, *Article XI*, in I COLOGNE COMMENTARY ON SPACE LAW 198 (Stephan Hobe *et al.* eds. 2009). 39
John Kelson, *State Responsibility for Abnormally Dangerous Activities* 13 HARV. INT'L L. J. 197, 238 (1972). 24
Julio Barboza, *International Liability for the Injurious Consequences of Acts Not Prohibited by International Law and Protection of the Environment*, RECUEIL DES COURS 247, 291 (1994). 37
Leon Trackman, *Ex Aequo et Bono: Demystifying an Ancient Concept*, 8 (2) CHICAGO JOURNAL OF INTERNATIONAL LAW, 621 (2008)..... 30
Makane Moise Mbengue, *Rules of Interpretation,* 31(2) ICSID REVIEW 388-412 (2016)..... 42
Myres McDougal et. al., *The Enjoyment and Acquisition of Resources in Outer Space*, 111 (5) UNIV. PENN. LAW REV., 544 (1963). 35
Owen McIntyre & Thomas Mosedale, *Precautionary Principle as a Norm of Customary International Law*, 9(2) JOURNAL OF ENVIRONMENTAL LAW 221, 223 (1997) 26
Patricia Birnie, Alan Boyle and Catherine Ridgewell, *State Responsibility for environmental damage.* INTERNATIONAL LAW AND THE ENVIRONMENT 216 (2009) 50
Paul B. Larsen, *Application of the Precautionary Principle to the Moon,* 71 JOURNAL OF AIR LAW AND COMMERCE 295, 301 (2006). 25
Paul G. Dembling, *Cosmos 954 and the Space Treaties*, 6 JOURNAL OF SPACE LAW. 129, 135 (1978). 47
Paul G. Dembling, *Principles of Space Law: Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies*, in I MANUAL ON SPACE LAW 21 (Nandasiri Jasentuliyana & Roy S.K. Leeeds. 1979) 24
Pentagon Sees Russian' Shot Confirming ICBM Capability, N.Y. TIMES, September 15, 1959. 35
Philip De Man, *The Commercial Exploitation of Outer Space and Celestial Bodies – A Functional Solution to the Natural Resource Challenge,* in NEW PERSPECTIVES ON SPACE LAW: 53 PROC. I.I.S.L, 67 (Mark J. Sundahl & V. Gopalakrishnan eds., 2011)..... 29
Riccardo Pisillo-Mazzeschi, *Due Diligence Rule and the Nature of International Reponsibility of States*, in STATE RESPONSIBILITY IN INTERNATIONAL LAW 113, 136 (Rene Provost ed., 2001)24
Richard Spencer, *U.K. Allies Join Protest at China Space Missile,* THE TELEGRAPH, Jan. 20, 2007..... 45
Sergio Marchisio, *Article IX*, in I COLOGNE COMMENTARY ON SPACE LAW 175 (Stephan Hobe *et al.* eds. 2009). 24
Soji Yamamoto, *Space Development in Future Society and Law* (in Japanese) (Chikuma, 1976 48
Soviet Rocket Hits Moon After 35 Hours; Arrival Is Calculated Within 84 Seconds; Signals Received Till Moment of Impact, N.Y. TIMES, September 14, 1959. 35
Stephen Gorove, *Interpreting Article II of the Outer Space Treaty*, 37 (3) FORDHAM LAW. REVIEW. 349, 352 (1999) 28
Stephen Gorove, *Liability in Space Law: An Overview*, 8 Annals. Air & Space. L. 376 (1983) . 44
Theresa Hitchens, *Article IX of the Outer Space Treaty: Data Sharing and Space Situational Awareness,* 2010 5TH ELIENE M. GALLOWAY SYMPOSIUM ON "CRITICAL ISSUES IN SPACE LAW"

Domestic Statutes and Regulations

Internet Sources

Miscellaneous

QUESTIONS PRESENTED

- I -

Whether Perovsk's activities on the Sea of Tranquility violate International law?

- II -

Whether Titan violated International law by failing to disclose its discoveries on the Moon?

- III -

Whether Titan violated International law by failing to notify or consult Perovsk before inspecting its processing stations?

- IV -

Whether Titan is liable for the damage to Perovsk's processing stations?

STATEMENT OF FACTS

THE PARTIES

Perovsk and Titan are neighboring republics with a long history of peaceful relations, a common language and shared heritage. Political disagreements between the nations are rooted in the differing economic policies of the nations. While Perovsk values individualism and *laissez-faire* economics, Titan favors State involvement and public-private partnerships in industry. Successive governments in Titan have reaffirmed their belief that outer space belongs to all mankind.

TITAN'S EARLY SPACE-FARING OPERATIONS

Titan briefly explored outer space with their robotically operated missions *Novum Organum-1* and *Novum Organum-2*, alighting on the Moon's Sea of Tranquility. The artefacts, and equipment from the *Novum Organum* missions are still present on the Sea of Tranquility. These artefacts serve as a major reminder of the monumental mission and mankind's reach towards the Moon.

CONTEMPORARY DEVELOPMENTS IN SPACE-FARING

The governments of Perovsk and Titan engaged in co-operative space projects. Both the nations pursued complementary specializations in technologies required for space activities. Perovsk specialized in developing launch and propulsion equipment, and evolved technologies for materials processing and manufacturing in outer space while Titan excelled in space design and scientific research. Notably, Perovsk's experiments in Earth's orbit were commercial in nature, focused on creating metal powders in reduced gravity for commercial use in 3D printers.

LUNAR STATIONS ON THE SEA OF TRANQUILITY

Titan began operations on *Mondiale* Lunar Station, on the Sea of Tranquility in 2019. The *Mondiale* spanned 10 sq. meters, and had a mix of scientific operations, including lunar atmosphere testing. The *Mondiale* was launched from Perovsk's *La Mancha* spaceport. Perovsk conducted independent reviews of the station's various capabilities, including the lunar atmosphere experiments, prior to the launch. Titan registered the *Mondiale* with the United Nations and also put it on its national registry of space objects.

Perovsk began operations on the *Tekla* station, on the Sea of Tranquility, in 2022. *Tekla* was made with the considerable involvement of the commercial space sector. Perovsk's officials made public statements expressing hope for a commercial lunar economy. The main private participants were Fireskin Ltd. [hereinafter "Fireskin"] and One-Zero Ltd. [hereinafter "One-Zero"], both of which are companies incorporated in Perovsk. Fireskin was granted mission authorization by Perovsk.

THE MOBILE SURVEYING UNIT

A Titanite Mobile surveying unit [hereinafter "rover"] was launched at the behest of Titan by Perovsk aboard its reusable lunar shuttle from Perovsk's *La Mancha* spaceport. Titan fully disclosed the scientific capabilities of the rover to Perovsk before the launch.

THE DISCOVERY OF ILMENITE

In 2025, Perovsk reported that its *Tekla* station was in an area rich in ilmenite, a basaltic Titanium ore. Perovsk criticized Titan for not disclosing its discoveries of ilmenite near the *Mondiale* processing station, on the Sea of Tranquility. This allegation was widely criticized for being unfounded.

REGOLITH PROCESSING EQUIPMENT

In 2023, Perovsk delivered a 3D printer and equipment capable of creating metal powder for the printer's use from lunar materials. This was done to test the feasibility of creating structural components for a launch site and refueling station to be operated by Fireskin. The equipment was installed at three mineral rich sites, one of which was within 15 km of the *Mondiale* station. The processing station of the processing equipment allowed Fireskin's operations to become more efficient. After the processing station became functional, Perovsk informed the UN Secretary General of its expanded footprint on 12th August 2025.

WITHDRAWAL FROM THE OUTER SPACE TREATY

Perovsk sent a formal withdrawal notice to the Depository Governments of the Outer Space Treaty on 26th January 2026. Receipt was acknowledged by Depository Governments on 28th January 2026. Perovsk's withdrawal was complete on 28th January 2027.

DISRUPTION IN SCIENTIFIC RESEARCH

Titan began noticing disruptions in its lunar atmosphere testing units at the *Mondiale* station. These disruptions only started occurring after Perovsk's regolith processing equipment became functional.

THE COLLISION

In February 2027, concerned that the pulverization activities were disrupting Titan's scientific research, Titan sent across its rover to inspect the processing station. However, the rover collided with the processing station due to an unforeseen solar event disrupting communication, a subsequent three second communication gap once the communication was restored, and the unnatural steepness and looseness of the lunar regolith near the regolith pulverizing processing station. The processing station remains out of use.

DESPOLIATION OF THE *NOVUM ORGANUM-1* SITE

The inspection confirmed that the processing stations had been releasing trace amounts of Oxygen into the tenuous lunar atmosphere, enough to account for the anomalous readings. The continuing regolith pulverization has caused the despoliation of the priceless and previously intact *Novum Organum-1* landing and exploration sites, and disrupted the pristine lunar environment.

THE PROCEEDINGS

Titan sent a *demarche* seeking cessation of the remaining regolith processing activities. Perovsk responded by stating that their activities were permissible and that it has exercised due regard to the corresponding interests of Titan's activities. Therefore, they contended, that cessation could not be asked for. Fireskin claimed that the processing station could have been placed elsewhere had Titan disclosed its discoveries on the Moon. Further, Perovsk claimed compensation for the damage caused to its processing station. The resulting dispute was submitted before the International Court of Justice.

THE CLAIMS

Perovsk requests the Court to adjudge and declare that:

1. Perovsk was under no obligation to notify or consult Titan about activities at the Tekla station, and that under the principles of *ex aequo et bono*, Perovsk has the right to continue its activities on the Sea of Tranquility.

2. Titan violated international law by failing to disclose its discoveries on the Moon, that Titan failed to notify Perovsk before inspecting its lunar facilities, and that Titan is liable for the damage to Perovsk's property on the Moon.

Titan requests the Court to adjudge and declare that:

1. Perovsk's activities on the Moon violated international law by failing to consult with Titan, and that Perovsk must be compelled to cease its lunar processing and production activities, the despoliation of the *Novum Organum-1* site, and the impermissible appropriation of the Moon.

2. Titan was permitted to inspect Perovsk's processing stations, and is not liable to Perovsk for damages incurred.

THE RELEVANT TREATIES

Both the republics are a party to the Liability Convention, the Registration Convention, the Return and Rescue Agreement and the Vienna Convention of the Law of Treaties. Titan is also a party to the Outer Space Treaty and the Moon Treaty. Perovsk has withdrawn from the Outer Space Treaty.

TIMELINE OF EVENTS

TIME	**EVENT**
1970s	Titan undertake the *Novum Organum* missions on the Sea of Tranquility.
2019	Titan begins operations on the *Mondiale* lunar station.

2024	Titan's mobile surveying unit is launched aboard Perovsk's satellite from Perovsk's *La Mancha* spaceport.
2025	Perovsk sets up processing stations on the Sea of Tranquility, made solely of lunar regolith; Titan notices anomalous readings in its atmospheric experiments.
2027	Perovsk withdraws from the Outer Space Treaty; Titan sends its rover to inspect Perovsk's processing unit. Intervening natural phenomena lead to accident.

SUMMARY OF ARGUMENTS

1. PEROVSK VIOLATED INTERNATIONAL LAW BY FAILING TO CONSULT TITAN BEFORE SETTING UP THE INSTALLATION.

Perovsk is responsible for breaching its obligation to consult Titan before setting up its processing stations prior to the withdrawal. Having conducted a full review of *Mondiale's* various capabilities; Perovsk was in the unique position to have reason to believe that their processing activities may interfere with Titan's peaceful atmospheric tests. Due to the extremely low density of the lunar atmosphere, and the retention of the heavier Oxygen molecules for long periods of time, artificial injection of even small amounts of Oxygen has the potential to cause harmful interference with scientific experiments.

Moreover, the precautionary principle, which applies to the fragile lunar environment, precludes Perovsk from claiming mere scientific uncertainty to avoid taking reasonable measures to prevent any harm. Further, Perovsk had the onus to conduct consultations, notwithstanding Titan's failure to request for one.

2. PEROVSK MUST BE COMPELLED TO CEASE ITS LUNAR ACTIVITIES, IMPERMISSIBLE APPROPRIATION OF THE MOON AND THE DESPOLIATION OF THE *NOVUM ORGANUM-1* SITE.

The parties have expressly agreed to decide the issue of cessation of Perovsk's activities on the Sea of Tranquility *ex aequo et bono.* Such decision must rely on principles of equity and considerations beyond the law.

Perovsk's lunar processing activities must be ceased because they violate the principle of non-appropriation. Further, States, regarding USA's Space Resource Exploration and Utilization Act,

2015 which allows private companies to mine asteroids, have confirmed that resources extraction amounts to appropriation and is impermissible. Further, any analogy with the permissible use of GSO is untenable. This is because any such "use" through mining of lunar resources, due to their exhaustible nature, amounts to a claim in perpetuity. Such claims in perpetuity are considered to be appropriation and are impermissible even in the GSO.

Even if Perovsk argues that the law as it stands permits space resource extraction, then reliance on *ex aequo et bono* shall show analogous regimes are regulated. In the absence of a globally accepted regime, such reliance on analogies would lead to the conclusion that Perovsk cannot extract minerals from outer space.

Further, it shall show that that Perovsk's activities go against the principle of intergenerational equity. Perovsk's appropriative activities have failed to have due regard for the interests of the current as well as future generations in the fragile lunar environment. Additionally, they are in violation of the Benefits Declaration, which has concretized the customary obligation to not benefit exclusively from use of outer space. In the present case, the mining of the lunar regolith was solely intended to build *Tekla's* walls and support Fireskin's operations. Thus, this amounts to exclusive benefits for Perovsk. Therefore, it would be inequitable to allow them to extract resources.

The concept of sustainable development includes within it the idea of cultural interests. This has been extended to *res communis* regimes, and outer space in particular. Titan claims the artefacts of *Novum Organum-1* are of scientific, historic and cultural importance. Further, Titan's ownership over these artefacts is not affected by their non-functionality. Therefore, Perovsk has a duty to take reasonable measures to prevent harm to Titan's scientific, historic and cultural interests in the priceless and previously intact *Novum Organum-1* site. Titan's interests must

take precedence over Perovsk's impermissible use of the lunar resources, which must therefore be ceased.

2. TITAN HAS NOT BREACHED DISCLOSURE NORMS UNDER THE OST.

Titan is not responsible for any breach of disclosure norms under Article XI of the OST. The capability of the rover to analyze soil samples, and the presence of the rover's tracks in one of the sites, must not be conflated with the rover exercising such abilities to conduct a detailed analysis of the regolith in that specific site. Such an exercise involves intent, which cannot be proved by mere circumstantial evidence. Further, the public discourse in Titan cannot be considered to be an admission by the State. In any case, subsequent State practice has shown that the disclosure norms have been interpreted to be on a need-to-know basis, and are not considered to be mandatory by the States. This is confirmed by the *travaux préparatoires* of the OST and Remote Sensing Principles, which allow for dissemination on "equitable and mutually acceptable terms". Therefore, the ICJ cannot adjudicate on the feasibility or practicability of the disclosure.

Further, the absence of a requirement of notification before inspections in the Antarctic Treaty implies that the duty to notify is not an essential pre-requisite for meeting due diligence standards before an inspection.

4. TITAN IS NOT LIABLE TO PEROVSK FOR THE DAMAGE SUFFERED TO THE PROCESSING STATION ON THE SEA OF TRANQUILITY.

Liability Convention is a strictly third-party liability instrument. Since the rover was launched from Perovsk's territory, making it a co-launching State of the rover along with Titan. Therefore, Perovsk's claim cannot be admitted. Allowing such a claim would make Perovsk jointly liable to

its own national, in its capacity as a co-launching State, further frustrating the State-centric foundation of the Liability Convention.

In any case, Titan is not liable under Article III of the Liability Convention because Titan did not commit any fault, or negligent act in failing to notify Perovsk before the inspection. Additionally, the lack of notification was not the proximate cause of the damage. This is because the alleged breach was not the *conditio sine qua non* of the damage, and the resulting damage was not reasonably foreseeable. The drafters of the Liability Convention considered that the space-faring nations were considered to have "assumed the risk" of damage through unavoidable forces. Such damage, contingent on a low probability natural event like the solar event that led to the three second communication gap, is considered to be too remote to warrant compensation. Therefore, Titan is not liable under Article III of the Liability Convention.

Further, claim may not be brought under Article VII of the OST for damage caused after Perovsk's withdrawal, as it has not attained the status of customary International law. This is because there is lack of sufficient State practice to crystallize the position of Article VII, OST as custom. In any case, in the absence of elaborate standards for liability in the OST, the Liability Convention, being *lex specialis,* will be applicable. Therefore, Titan is not responsible for negligence and any claim under Article VII, OST must fail.

Even under general International law, the scope of damage is not expanded to include absolute liability or liability based on unforeseeable damages. Therefore, Perovsk cannot claim compensation under general International law as well.

ARGUMENTS ADVANCED

1. PEROVSK VIOLATED INTERNATIONAL LAW BY FAILING TO CONSULT TITAN.

1. Perovsk has placed regolith processing equipment [hereinafter, "processing station"] on the Sea of Tranquility.[1] The processing stations have been releasing trace amounts of oxygen into the lunar atmosphere as a by-product of processing the lunar regolith.[2] This has caused disruption in and harmful interference with Titan's peaceful use of outer space.[3] The pulverization of regolith has also led to the despoliation of the pristine lunar environment and the priceless and previously intact *Novum Organum-1* site.[4]

2. Perovsk withdrew from the Outer Space Treaty [hereinafter, "OST"],[5] on January 28th 2027.[6] According to the Vienna Convention on the Law of Treaties,[7] [hereinafter, "VCLT"], Perovsk's withdrawal from the OST has led to the termination of all *further* obligations to perform the treaty as between Perovsk and every other State Party to the treaty, including Titan. However, withdrawal from a treaty does not affect the legal situation of the parties *retroactively*.[8] Thus, Perovsk is still responsible for breaching its obligations under the OST, prior to its

[1] *Compromis* §15.
[2] *Compromis* §21.
[3] *Compromis* §21.
[4] *Compromis* §21.
[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, U.S.T. 2410, 610 U.N.T.S. 205 [OST].
[6] *Compromis* §18.
[7] Vienna Convention on the Law of Treaties, *entered into force* Jan. 27, 1980 Article 70(1)(a) *read with* Article 70(2), 1155 U.N.T.S., 331 [VCLT].
[8] Herve Ascensio, *Article 70, Convention of 1969,* in II THE VIENNA CONVENTION ON THE LAW OF TREATIES: A COMMENTARY 1585, 1589 (Olivier Corten & Pierre Klein, eds. 2011).

withdrawal. Perovsk's processing stations, set up in 2025,[9] have been releasing Oxygen in quantities sufficient to account for the interference in *Mondiale's* atmospheric experiments.[10]

3. *Inter alia,* the OST obliges States to exercise "due regard" to the corresponding interests of other States, in outer space.[11] The principle of "due regard" requires a State to exercise a certain standard of care in the use of outer space.[12] Due to the ultra-hazardous nature of outer space,[13] this standard is especially high.[14] The exercise of 'due regard' primarily includes following the obligations of conduct laid down in the OST.[15] The OST obliges States to hold appropriate consultations when their activities may cause potentially harmful interference to the activities of other States.[16]

4. Titan, thus, submits *first,* Perovsk had reason to believe that its planned activities would cause potentially harmful interference in Titan's space activities **[A]**; and *second,* the onus of consultation lay on Perovsk, and not Titan **[B]**. Therefore, by failing to consult Titan, Perovsk has violated International law.

---

[9] *Compromis* §15.
[10] *Compromis* §21.
[11] Article IX, OST.
[12] Sergio Marchisio, *Article IX*, in I COLOGNE COMMENTARY ON SPACE LAW 175 (Stephan Hobe *et al.* eds. 2009).
[13] C.W. Jenks, *Liability for Ultra-Hazardous Activities in International Law*, 117 RECUEIL DES COURS, 99, 147 (1966).
[14] Riccardo Pisillo-Mazzeschi, *Due Diligence Rule and the Nature of International Reponsibility of States*, in STATE RESPONSIBILITY IN INTERNATIONAL LAW 113, 136 (Rene Provost ed., 2001); John Kelson, *State Responsibility for Abnormally Dangerous Activities* 13 HARV. INT'L L. J. 197, 238 (1972).
[15] Paul G. Dembling, *Principles of Space Law: Treaty on the Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies*, in I MANUAL ON SPACE LAW 21 (Nandasiri Jasentuliyana & Roy S.K. Leeds 1979).
[16] Article IX, OST; Dr. Istvan Herczeg, *Introductory Report: Provisions of the Space Treaties on Consultations*, 17th I.I.S.L PROC. 141, 142-143 (1974).

A. PEROVSK HAD REASON TO BELIEVE THAT THE ACTIVITIES AT THE TEKLA STATION WOULD CAUSE POTENTIALLY HARMFUL INTERFERENCE WITH TITAN'S SPACE ACTIVITIES.

5. A potential for harmful interference may arise from physical proximity as well, in addition to the nature of the activity.[17] Perovsk placed its processing equipment around 15 km away from Titan's *Mondiale* station. Prior to its launch, Perovsk had conducted a thorough review of *Mondiale's* technical capabilities, including its lunar atmosphere testing facilities.[18] Therefore, Perovsk was the unique position to possess sufficient knowledge of Titan's testing activities. Despite such knowledge and close proximity with the *Mondiale,* Perovsk set up its equipment. Their knowledge and basic scientific facts about the lunar atmosphere would give it reason to believe that the release of Oxygen during processing may potentially interfere with Titan's activities.

6. The processing activities have the potential to adversely affect the fragile lunar atmosphere. The fragility of the Moon's atmosphere and the need for its preservation in its optimal condition has been recognized by the UNCOPUOS.[19] The Moon's atmosphere has a low density, at only 100 molecules/cubic centimeters.[20] Thus, heavier molecules like Oxygen, which are being released by the processing stations, are retained in the Moon's atmosphere for long

---

[17] D. Goedhuis, *Legal Aspects of the Utilization of Outer Space*, 17(1) NETH. INT'L L. REV. 25, 33 (1970).
[18] *Compromis* §5.
[19] Report of the Committee on the Peaceful Uses of Outer Space, U.N. GAOR, 66th Sess., U.N. Doc. A/66/20 (2011); Paul B. Larsen, *Application of the Precautionary Principle to the Moon,* 71 JOURNAL OF AIR LAW AND COMMERCE 295, 301 (2006).
[20] NASA, *NASA Mission to Study the Moon's Fragile Atmosphere,* https://science.nasa.gov/science-news/science-at-nasa/2009/23oct_ladee/; Space.com, *Atmosphere of the Moon,* http://www.space.com/18067-moon-atmosphere.html.

periods of time, increasing the probability and possibility of interference with Titan's activities.[21] Therefore, Perovsk's artificial injection of even small amounts of Oxygen into the atmosphere has the potential of seriously damaging its natural composition as well as interfering with *Mondiale's* research.

7. Additionally, the 'precautionary principle' precludes States from claiming scientific uncertainty concerning any hazardous effects of its activities as a reason for not carrying out measures to prevent adverse environmental impacts.[22] This principle has become part of customary International law,[23] and has been extended to outer space.[24]

8. Therefore, Perovsk had reason to believe that its pulverization may harmfully interfere with Titan's lunar atmosphere testing experiments.

B. THE ONUS TO CONDUCT CONSULTATION LIES ON PEROVSK, NOT TITAN.

9. In case a State's *planned activities* cause potentially harmful interference with another State's activities, the former State *shall* consult with the latter, while the latter *may* request

---

[21] E.J. Opik & S.F. Singer, *Escape of Gases from the Moon*, 65(10) JOURNAL OF GEOPHYSICAL RESEARCH 3065 (October, 1960).

[22] David Kriebel *et al.*, *The Precautionary Principle in Environmental Science*, 109(9) ENVIRONMENTAL HEALTH PERSPECTIVES 871, 871 (2001); James Cameron & Julie Abouchar, *The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment*, 14(1) BOSTON COLLEGE INTERNATIONAL AND COMPARATIVE LAW REVIEW 1, 2 (1991).

[23] United Nations Conference on Environment and Development, *Rio Declaration on Environment and Development*, Principle 15, UN Doc. A/CONF.151/26 (June 14, 1992); Second International Conference on the Protection of the North Sea, *Ministerial Declaration*, of Nov. 24-25, 1987 Principle VII (London); Request for an Examination of the Situation in Accordance with Paragraph 63 of the Courts Judgment of 20 December 1974 in the Nuclear Tests Case, 1995 I.C.J. 288, 412 (Sep. 22) (dissenting opinion by Palmer, J.); Owen McIntyre & Thomas Mosedale, *Precautionary Principle as a Norm of Customary International Law*, 9(2) JOURNAL OF ENVIRONMENTAL LAW 221, 223 (1997); Olivier Ribbelink, *Article III*, in I COLOGNE COMMENTARY ON SPACE LAW 67 (Stephan Hobe *et al.* eds. 2009); MALCOLM N. SHAW, INTERNATIONAL LAW 72 (1977).

[24] Article III, OST; Ribbelink, *id.* at 67; Larsen, *supra* note 19.

consultations from the former.[25] Interpreting the terms in accordance with their ordinary meanings makes it clear that the obligation to consult lies on the State which begins its operations later in time, while the other State is merely allowed, and not *obligated*, to request a consultation.[26]

10. In the immediate instance, Titan's testing of the lunar atmosphere at the *Mondiale* station began from 2019,[27] and thus preceded the establishment of Perovsk's processing stations.[28] Therefore, the onus to conduct consultations lay with Perovsk, notwithstanding Titan's failure to request one. Thus, Perovsk is internationally responsible for failing to consult Titan.

2. PEROVSK MUST BE COMPELLED TO CEASE ITS LUNAR ACTIVITIES, IMPERMISSIBLE APPROPRIATION OF THE MOON AND THE DESPOLIATION OF THE *NOVUM ORGANUM-1* SITE.

11. Perovsk is responsible for all of Fireskin's activities in outer space.[29] Its lunar activities consist of pulverizing the lunar regolith for its own material gains. The processing units intersect with the artefacts from the priceless and previously pristine *Novum Organum-1* site.

12. For this issue, both the Parties have expressly submitted to Article 38(2) of the Statute of the ICJ,[30] which allows the ICJ to decide *ex aequo et bono*.[31] This permits the ICJ to rely on principles of equity as well as considerations beyond the law.[32]

---

[25] Article IX, OST.
[26] Article 31, VCLT; J.G. Verplaetse, *International Consultation and the Space Law Treaties*, 11 I.I.S.L. PROC. 63, 65-66 (1968)
[27] *Compromis* §4, 5.
[28] *Compromis* §15.
[29] Article VI, OST; G.A. Res. 68/74, GAOR, 68th Session, U.N. A/Res/68/74 (2013) §2.
[30] *Compromis* §24.
[31] Article 38(2), Statute of the International Court of Justice (1945); Indo-Pakistan Western Boundary (India v. Pakistan), 17 R.I.A.A. 1, 11 (1968).

13. Accordingly, Titan submits that Perovsk must be compelled to cease its lunar processing and production activities because *first,* it amounts to the impermissible appropriation of the Moon **[A]** and *second*, it has led to the despoliation of the *Novum Organum-1* site **[B]**.

A. PEROVSK'S ACTIVITIES AMOUNT TO IMPERMISSIBLE APPROPRIATION OF OUTER SPACE.

14. States' freedom to "use" and "explore" outer space, [33] is limited by the principle of non-appropriation.[34] The principle of non-appropriation prohibits a State from taking resources from the Moon, including the "sub-soil of the heavenly bodies",[35] for its *exclusive* use and control.[36] This principle is *jus cogens*,[37] from which a State cannot, under any circumstance, deviate.[38]

15. Furthermore, subsequent State practice has confirmed unregulated space-resource mining as a form of appropriation.[39] This is seen in States' responses to USA's Space Resource Exploration and Utilization Act, 2015.[40] The Act allows private individuals to mine asteroids.[41] The legislation was discussed in the UNCOPUOS, and most States opposed such practice since it amounts to "either a claim of sovereignty or a national appropriation of those bodies and thus

---

[32] *infra* §20.
[33] Article I, OST.
[34] Article II, OST; G.A. Res. 1721 (XVI), 16th Sess., U.N. Doc A/RES/1721 (1961).
[35] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 10th Sess., 152nd-169th mtg., August 3, 1966, 6, U.N. Doc. A/AC-105/C.2/SR.70 (June 29, 1971) (statement by the Representative of France).
[36] Stephen Gorove, *Interpreting Article II of the Outer Space Treaty*, 37 (3) FORDHAM LAW. REVIEW. 349, 352 (1999); U.N. GAOR, 21st Sess., 1492 plen. mtg., at 47 U.N. Doc. A/C.1/PV.1492 (December 17, 1966) (Statement of the representative of Austria, "The legal principle that outer space is free for exploration and use by all States would indeed be of little value if enjoyment of that freedom could be destroyed by the use which a single State might make of it.").
[37] Valérie Kayser, *Launching Space Objects: Issues of Liability and Future Prospects*, 26 (Ram Jakhu et al. eds. 2001).
[38] Article 26, Articles on State Responsibility; Article 53, VCLT.
[39] Article 31(3)(b), VCLT.
[40] Space Resource Exploration and Utilization Act, 51 U.S.C. § 51303 (2015).
[41] *id.*

could constitute a violation of the Outer Space Treaty".[42] This extends the preemptory norm of non-appropriation to the mining of space resources and minerals as well.[43]

16. Admittedly, States are allowed to use the Geosynchronous Orbit [hereinafter, "GSO"] which is considered to be a limited natural resource due to limited slots.[44] However, an analogy between the GSO and *in-situ* resource utilization is untenable. This is because the GSO in itself is inexhaustible. Therefore, utilization by States does not prejudice the use by others, whereas minerals on the Moon are exhaustible. Further, even in the GSO, States are not permitted to use the orbit in perpetuity since any satellite registered by prior users "should not provide any *permanent* priority" over later users.[45] This is because any claim in perpetuity would amount to *de facto* appropriation of the GSO.[46]

17. Perovsk's activities amount to appropriation by use. In the present case, the processed regolith serves to provide more solid habitat walls for a larger *Tekla* station.[47] Further, it seeks to test the feasibility of creating structural components for a launch site and refueling station to be operated by Fireskin.[48] This amounts to *exclusive* use and control by Perovsk. Further, the

---

[42] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 55th Sess., April 15, 2016) U.N. Doc. A/AC.105/C.2/L.298/Add.1, §21.
[43] *id.*, at § 22 – 30.
[44] Constitution of the International Telecommunications Union, *entered into force* July 1, 1994, ATS (1994) 28, BTS 24 (1996) Article 44 [ITU Constitution].
[45] The World Radio communication Conference, *Equitable use, by all countries, with equal rights, of the geostationary-satellite and other satellite orbits and of frequency bands for space radiocommunication services*, Rev. WRC-03 (Geneva, 2003) [Rev. WRC-03]; Philip De Man, *The Commercial Exploitation of Outer Space and Celestial Bodies –A Functional Solution to the Natural Resource Challenge,* in NEW PERSPECTIVES ON SPACE LAW: 53 I.I.S.L PROC., 67 (Mark J. Sundahl & V. Gopalakrishnan eds., 2011).
[46] Carl Q. Christol, *The geostationary orbital position as a natural resource of the space environment*, 26 NETHERLANDS INT. L. REV. 1, 10-11 (1979).
[47] *Compromis* §14.
[48] *Compromis* §14.

pulverization of ilmenite has depleted the ores.[49] This amounts to a claim *in perpetuity* over the pulverized ilmenite, and hence appropriation of the moon.[50]

18. Perovsk may contend that, *de lege lata*, extraction of resources from outer space is permissible. In such a case, *ex aequo et bono* would empower the ICJ with the flexibility to decide equitably.[51] It entitles the Court to use any appropriate equitable measures, procedure, principle or method *without inhibitions*.[52] These principles are based in fairness and equity.[53] Accordingly, departing from strict legal rules,[54] the ICJ may consider practical[55] and political[56] requirements, as well as rely on analogies drawn from other legal regimes or principles to fill gaps in the law.[57]

---

[49] Gorove, *supra* note 37 at 353.
[50] MANFRED LACHS, THE LAW OF OUTER SPACE, 43 (1972).
[51] Maritime Delimitation (Denmark v. Norway) (Merits), 1993 I.C.J. (Jun. 14) (separate opinion by Weeramantry, J.); Alain Pellet, *Article 38* in THE STATUTE OF THE INTERNATIONAL COURT OF JUSTICE: A COMMENTARY, 703 (Andreas Zimmermann, Christian Tomuschat & Karen Oellers-Frahm (eds., 2012).
[52] Maritime Delimitation (Denmark v. Norway) (Merits), 1993 I.C.J. (Jun. 14) (separate opinion by Weeramantry, J.) §55; THOMAS M. FRANCK, FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS, 53 (1998); Leon Trackman, *Ex Aequo et Bono: Demystifying an Ancient Concept*, 8 (2) CHICAGO JOURNAL OF INTERNATIONAL LAW, 621 (2008).
[53] *Ex aequo et bono*, BLACK'S LAW DICTIONARY 500 (5th ed., 1979); Maritime Delimitation (Denmark v. Norway) (Merits), 1993 I.C.J. (Jun. 14) (separate opinion by Weeramantry, J.) §55; Alain Pellet, *Article 38* in THE STATUTE OF THE INTERNATIONAL COURT OF JUSTICE: A COMMENTARY, 703 (A. Zimmerman *et al*, eds., 2012).
[54] League of Nations, *Documents of the First Assembly*, Meetings of the Committee, 403 (Vol. I, 1920); Continental Shelf (Tunis. v. Libya) (Merits), 1982 I.C.J. 18 (Feb. 24), §71 "The Court can take such a decision only on condition that the Parties agree (Art. 38, para. 2, of the Statute), and the Court is then freed from the strict application of legal rules in order to bring about an appropriate settlement."
[55] Stephen Hall, *The Persistent Spectre: Natural Law, International Law and the Limits of Legal Positivism*, 12 EUROPEAN J INTL L. 261, 278-81 (2001).
[56] H. LAUTERPACHT, THE FUNCTION OF LAW IN THE INTERNATIONAL COMMUNITY 379 (1933).
[57] O. Schachter, *International Law in Theory and Practice*, in 178 RECUEIL DES COURS 85-86 (1982); North Sea Continental Shelf Case (Germany v. Netherlands) (Merits), 1969 I.C.J. (Feb. 20) (separate opinion by Ammoun, J.) §39.

19. In the present case, analogous regimes **[I]** and equitable principles governing benefits derived from space **[II]** prohibit unregulated mining.

I. Analogous regimes prohibit unregulated mining.

20. In the absence of a globally accepted regime for space resource extraction, reliance must be placed on regimes governing other *res communis* zones such as Antarctica and the Deep Sea Bed. The Antarctic Treaty has served as a model for the development of the OST.[58] State parties to the treaty expressly prohibited *"any activity relating to mineral resources, other than scientific research"*[59] through the Madrid Protocol.

21. Even if reliance is placed on regimes that permit gaining benefits through resource extraction, the Deep Seabed's 'Area' exploitation is regulated by the International Seabed Authority set up by State parties to the UNCLOS.[60] Therefore, even if extraction of minerals is permitted, it must not be unregulated. Such exploitation would lead to the absurd consequence of monopolization of outer space. This interpretation is confirmed by the *travaux préparatoires*.[61]

---

[58] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5th Sess., 57th mtg., 12 July, 1966, 6-7, U.N. Doc. A/AC.105/C.2/SR.57 (October 20, 1966) (statement by the representative of the USA).

[59] Protocol on Environmental Protection to the Antarctic Treaty, *entered into force on* Nov. 16, 1994, 402 UNTS 7, Article 7.

[60] United Nations Convention on the Law of the Sea, *entered into force on* Nov. 16, 1994, 1933 UNTS 397, Articles 208-209.

[61] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5th Sess., 64th mtg., 21 July, 1966, 3, U.N. Doc. A/AC-105/C.2/SR.64 (October 24, 1966) (statement by the representative of Hungary, "…the obligation of States to avail themselves of the freedom to explore space only to the extent that it did not infringe the interests of other States…"); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Records, 6th Sess., 23, U.N. Doc. A/AC.105/PV.29 (December 8, 1964) (statement by the representative of Czechoslovakia, "A worldwide system on a non-discriminatory basis cannot…be built on a basis of a capitalistic share corporation which at the same time limits…the number of States which may adehere to such a system."); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 56th Sess., 10, U.N. Doc. A/AC.105/1122 (April 18, 2017) (§50, "… space resources were accessible to only a very limited number of States and to a handful of enterprises within those States…it

II. Equitable principles prohibit unregulated mining.

22. Two equitable principles that govern the benefits derived from outer space are: equitable sharing of benefits and inter-generational equity. Perovsk's use violates both these principles. The first is embodied in the *Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries,* which was passed unanimously.[62] It concretized the customary nature of the obligation both to not benefit exclusively from the exploration or use of outer space, and to equitably share benefits.[63]

23. Perovsk's mining and processing of the lunar regolith has been done specifically to build more solid habitat walls for its own station, *Tekla*[64] and operate a relaunching and refueling station, which does not amount to an equitable sharing of benefits.[65] Therefore, Perovsk's activities amount to a violation of the said declaration.

---

would be important to assess the impact of a "first come, first served" doctrine on the global economy, with the creation of a de facto monopoly in complete contradiction with the letter and the spirit of the United Nations treaties and resolutions.").

[62] G.A. Res. 51/122, U.N. GAOR, 51st Sess., at 4, U.N. Doc. A/RES/51/122 (1996).

[63] Article I, OST; Rev. WRC-03, *supra* note 45; Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 39th Sess., (April 20, 2000) U.N. Doc. A/AC.105/738; Press Release, General Assembly, Benefits From Space Exploration Must Be Shared Among All Nations, Fourth Committee Is Told, U.N. Press Release GA/SPD/291 (13 October 2004); VII BRICS Summit, *Ufa Declaration,* (July 9, 2015); G.A Res. 69/85, GAOR, 69th Session, U.N. Doc A/RES/69/85 (2014).

[64] *Compromis* §14.

[65] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 56th Sess., 10, U.N. Doc. A/AC.105/1122 (April 18, 2017) (§230, "…a greater understanding among States of the principles set out in the Outer Space Treaty was needed, as was a multilateral approach to addressing issues relating to the extraction of resources from the Moon and other celestial bodies, in order to ensure that States adhered to the principles of equality of access to space and that the benefits of the exploration and the use of outer space were enjoyed by all humanity.").

24. The second is the principle of "inter-generational equity".[66] It lays down that mankind holds the *"natural and cultural environment of the Earth in common both with other members of the present generation and with other generations, past and future"*.[67] This principle is grounded in the understanding that humankind possesses the potential to cause resource depletion and environmental degradation.[68] Mankind has a common interest in outer space and celestial bodies such as the Moon.[69] States have extended the principle of intergenerational equity to outer space.[70]

25. Any present action undertaken by a State must be with 'due-regard' to future generations. The use of outer space as the province of all mankind can only be realized if this aspect of equity is given consideration.[71] By using regolith for their appropriative activities, Perovsk has disregarded the fragility of the space environment,[72] leading to the despoliation of the pristine lunar environment and the depletion of the exhaustible natural resources on the Moon. Therefore, Perovsk has not only deprived the current generation of mankind of any use of these resources, but also violated the principle of inter-generational equity.

B. PEROVSK'S PULVERIZATION HAS LED TO THE DESPOLIATION OF THE *NOVUM ORGANUM-1* SITE.

---

[66] Edith Brown Weiss, *Intergenerational Equity*, 5 MAX PLANCK ENCYCLOPEDIA PUB. INT'L L., 287 (2012); THOMAS M. FRANCK, FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS 76 (1998); EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 48 (1989) [WEISS].
[67] WEISS, *id.*
[68] United Nations Environment Program, *GEO-5: Global Environment Outlook: Environment for the Future We Want* 88 (2012).
[69] Article I, OST; G.A. Res. 1962 (XVIII), GAOR, 18th Sess., U.N. Doc A/RES/19/1962 (1963).
[70] G.A. Res. 2779, U.N. GAOR, 26th Sess., at 28, U.N. Doc. N8429 (1971); WEISS, *supra* note 66.
[71] G.A. Res. 2779, *id.*
[72] G.A. Res. 70/82, U.N. GAOR, 70th Sess., at 1, U.N. Doc. A/RES/70/82 (2015); G.A. Res. 71/90, U.N. GAOR, 71st Sess., at 1, U.N. Doc. A/RES/71/90 (2016).

26. Perovsk's regolith processing equipment overlaps with Titan's *Novum Organum-1* site, causing despoliation to the priceless site.[73] Titan retains ownership, control and jurisdiction over the space objects on the site.[74] This ownership is not affected by their non-functionality.[75] States have a duty to not injure the rights of other States.[76] This also includes injury to property of another State.[77] The OST gives ownership of objects launched from Earth to Space to the State which has launched such object.[78] The *Novum Organum-1* and its components have been registered by Titan, and are owned by Titan.[79] Therefore, any damage to the artefacts of the *Novum Organum-1* site due to the ongoing regolith processing amounts a continuing wrongful act and must be ceased.

27. Titan has an interest in the preservation of the "priceless and previously intact"[80] *Novum Organum-1* site due to its scientific, historic and cultural significance. This is evidenced in the "irreplaceable character"[81] of objects with such significance. Perovsk may contend that Titan's preservational interest amounts to appropriation of outer space.[82] Appropriation by occupation involves physical presence *and* the intention to act as sovereign in relation to the occupied

---

[73] Clarifications, at 32.
[74] Article VIII, OST; Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *entered into force* July 11, 1984, 1363 U.N.T.S. 3, Article 11(3) [Moon Treaty].
[75] Bernhard Schmidt-Tedd & Stephan Mick, *Article VIII*, I COLOGNE COMMENTARY ON SPACE LAW 154 (Stephan Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl eds. 2009).
[76] Corfu Channel (United Kingdom v. Albania) (Merits) 1949 I.C.J. 4 (Apr. 9); Trail Smelter Arbitration (United States v. Canada) 1938/1941, R.I.A.A. 1905; LOTTA VIIKARI, THE ENVIRONMENTAL ELEMENT IN SPACE LAW 150 (2008).
[77] VIIKARI, *id.*
[78] Article VIII, OST.
[79] *Compromis* §2.
[80] *Compromis* §21.
[81] G.A. Res. 3026 (XXVII), U.N. GAOR, 27th Sess., at 71, U.N. Doc. 3026 A (XXVII) (1972).
[82] Article II, OST.

location.[83] Titan's symbolic objects have a physical presence, but do not lead to appropriation since there is no claim to title over the lunar territory.[84]

28. Symbolism does not create a title over the Moon.[85] This may be seen in light of the Soviet Luna 2 placing USSR insignias on the Moon.[86] The US Department of State responded to this act by stating that "[T]he placing of national insignia would not of course constitute a sufficient basis to found a claim of sovereignty over unoccupied land masses."[87] The non-appropriative nature of objects of historic or cultural significance is also evidenced in Apollo 11 mission crew implanting the US flag, which was a symbol of "national pride in achievement and not to be construed as a declaration of national appropriation".[88]

29. *Ex aequo et bono* empowers the ICJ to consider equitable principles that exist within the law, in addition to those beyond it.[89] It is in this context that the freedom to use outer space is subject to the principle of sustainable development.[90] This principle seeks to "balance environmental protection and economic development in a way that is sustainable for both present generations and the future of humankind."[91] It also ensures that the "use and exploration" of outer space remains the "province of *all* mankind". Culture contributes to, and is therefore a part

---

[83] IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 124-125 (6th edn., 1967); Islands of Palmas Case (United States v. the Netherlands) (1928) 2 R.I.A.A. 829.
[84] FRANCIS LYALL & PAUL LARSEN, SPACE LAW: A TREATISE 61 (2013).
[85] Myres McDougal *et. al*., *The Enjoyment and Acquisition of Resources in Outer Space*, 111 (5) UNIV. PENN. LAW REV., 544 (1963).
[86] *Soviet Rocket Hits Moon After 35 Hours; Arrival Is Calculated Within 84 Seconds; Signals Received Till Moment of Impact*, N.Y. TIMES, September 14, 1959, at 7.
[87] *Pentagon Sees Russian' Shot Confirming ICBM Capability*, N.Y. TIMES, September 15, 1959, at 20.
[88] H.R. 11271, 91st Cong. §8 (1969).
[89] *infra* §20.
[90] G.A. Res. 70/82, U.N. GAOR, 70th Sess., at 1, U.N. Doc. A/RES/70/82 (2015); G.A. Res. 71/90, U.N. GAOR, 71st Sess., at 1, U.N. Doc. A/RES/71/90 (2016).
[91] VIIKARI, *supra* note 76, at 129.

of this principle.[92] States have extended scientific, historic and cultural interests to objects in other similar *res communis* jurisdictions.[93] Such interest has been extended to outer space as well.[94] Thus, Titan can claim the aforementioned interests in the non-functional artefacts as well. Therefore, Perovsk must be compelled to cease its activities for the continuous damage to Titan's artefacts.

30. Moreover, *ex aequo et bono* may also be relied upon to balance conflicting interests of States in order to reach and fair, just and equitable decision.[95] Accordingly, symbolic significance over space objects of the *Novum Organum-1* must be taken into consideration in deciding Titan's claim. Therefore, Titan's need to protect its artefacts must be viewed against Perovsk's misuse of technology leading to the despoliation of a 'fragile'[96] lunar environment and consequently to the damage to Titan's symbolic space objects.

---

[92] G.A. Res. 70/1, U.N. GAOR, 70th Sess., at 17 & 20, U.N. Doc. A/RES/70/1 (2015).

[93] 1959 Antarctic Treaty, *entered into force* June 23, 1961, 12 U.S.T. 794, 402 U.N.T.S. 71; United Nations Convention on the Law of the Sea, *entered into force on* Nov. 16, 1994, 1933 UNTS 397, Article 149; Convention on the Protection of the Underwater Cultural Heritage, *entered into force* Nov. 2, 2001, 41 ILM 40.

[94] NASA, *Recommendations to Space-Faring Entities: How to Protect and Preserve the Historic and Scientific Value of U.S. Government Lunar Artifacts*, https://www.nasa.gov/pdf/617743main_NASA-USG_LUNAR_HISTORIC_SITES_RevA-508.pdf; Apollo Lunar Landing Legacy Act of 2013, H.R. 2617, 113th Cong (2013); U.S. Naval Research Laboratory, *Vanguard's Legacy: Vanguard celebrates 50 years in space*, https://www.nrl.navy.mil/vanguard50/legacy.php; Beth Laura O'Leary, *One Giant Leap: Preserving Cultural Resources on the Moon* in HANDBOOK OF SPACE ENGINEERING, ARCHAEOLOGY, AND HERITAGE 775 (Ann Darrin & Beth O'Leary ed., 2009); China National Space Agency, *Policies and Announcements*, *available at* http://www.cnsa.gov.cn/n6443408/n6465645/n6465648/c6480839/content.html, *reads*,"The purposes of China's space industry are: to… improve the scientific and cultural knowledge of the Chinese people…"

[95] Delimitation of the Maritime Areas Between Canada and France (St. Pierre and Miquelon), 31 I.L.M. 1149 (1992) §36.

[96] G.A. Res. 69/85, U.N. GAOR, 69th Sess., at 2, U.N. Doc. A/RES/69/85 (2014).

31. Additionally, International law obliges States to prevent transboundary harm and compensate for any damage if such obligation is breached.[97] Since any activity on outer space is ultra-hazardous,[98] the 'precautionary principle' would prevent Perovsk from disclaiming any knowledge of consequential damage to the lunar environment.[99] Given the wrongful damage to the pristine environment and the priceless site, Perovsk must cease its activities.

3. TITAN HAS NOT BREACHED DISCLOSURE NORMS UNDER THE OST.

32. Perovsk has submitted that Titan is responsible for the non-disclosure of its alleged discovery of ilmenite deposits on the Sea of Tranquility. Article XI of the OST provides for disclosure of space activities by all space-faring nations, subject to the feasibility and practicability of the same.[100] Titan submits *first*, there exists no conclusive evidence proving the alleged discovery of minerals **[A]**; *second*, alternatively, Article XI is a self-judging clause, and is thus not subject to judicial review **[B]**.

A. THERE EXISTS NO CONCLUSIVE EVIDENCE PROVING THE ALLEGED DISCOVERY OF MINERALS.

33. There is no direct evidence pointing to Titan's alleged discovery of ilmenite deposits on the Sea of Tranquility. Further, in the *Avena* case, the ICJ held that it was the claimant's burden to demand evidence exclusively in control of the other party with sufficient specificity, and that

---

[97] ILC Articles on the Responsibility of States for Internationally Wrongful Acts, G.A. Res. 56/83, U.N. GAOR, 56th Sess., Supp. No. 10, U.N. Doc A/56/10 (2001) [Articles of State Responsibility]; Julio Barboza, *International Liability for the Injurious Consequences of Acts Not Prohibited by International Law and Protection of the Environment*, RECUEIL DES COURS 247, 291 (1994); M. FITZMAURICE, RESEARCH HANDBOOK ON INTERNATIONAL ENVIRONMENTAL LAW, 182, 289, 325 (2010).

[98] C.W. Jenks, *Liability for Ultra-hazardous Activities,* RECUEIL DES COURS 147 (1966).

[99] Kriebel, *supra* note 22.

[100] Article XI, OST.

in the absence of such demands, the claimant will be held to not have met the burden of proof.[101] Thus, Perovsk has not been able to meet the burden of proof for establishing State responsibility through direct evidence by failing to request Titan to produce any specific evidence.

34. Further, the ICJ cannot rely on mere circumstantial evidence to conclusively establish Titan's discovery of minerals. The scope of reliance on circumstantial evidence as laid down in the *Corfu Channel* Case,[102] has been circumscribed by subsequent judgments of the ICJ.[103] In the *Crime of Genocide* Case,[104] the ICJ clarified that using circumstantial evidence to prove specific intent of high level government officials, as opposed to inferring mere knowledge, is difficult. Thus, intention cannot be imputed through mere circumstantial evidence.[105]

B. IN ANY CASE, ARTICLE XI IS A SELF-JUDGING CLAUSE AND IS NOT SUBJECT TO JUDICIAL REVIEW.

35. Subsequent State practice is a primary method of treaty interpretation.[106] The State practice regarding disclosure has confirmed that it is not an obligatory provision.[107] In fact, the

---

[101] Avena (Mexico v. U.S.) (Merits) 2004 I.C.J. 12, 41 (Mar. 31).
[102] Corfu Channel (United Kingdom v. Albania) (Merits) 1949 I.C.J. 4 (Apr. 9).
[103] Sovereignty Over Pulau Ligitan and Pulua Sipadan (Indonesia v. Malaysia) (Merits) 2002 I.C.J 625, 667 (Dec. 17); Oil Platforms (Iran v. U.S.) (Merits) 2003 I.C.J. 161, 190 (Nov. 6, 2003); Military And Paramilitary Activities in and Against Nicaragua (Nicaragua V. USA) (Merits) 1986 I.C.J. 14 (Jun. 28); Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia & Herzegovina v. Serbia & Montenegro) (Merits) 2007 I.C.J. 47, 196 (Feb. 26).
[104] Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia & Herzegovina v. Serbia & Montenegro) (Merits) 2007 I.C.J. 47, 196 (Feb. 26).
[105] Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia & Herzegovina v. Serbia & Montenegro) (Merits) 2007 I.C.J. 47, 196 (Feb. 26); MICHAEL P. SCHARF & MARGAUX DAY, RECONCILABLE DIFFERENCE: A CRITICAL ASSESSMENT OF THE INTERNATIONAL COURT OF JUSTICE'S TREATMENT OF CIRCUMSTANTIAL EVIDENCE, 2 (2010), *available at* http://works.bepress.com/michael_scharf/2.
[106] Article 31(3)(b), VCLT.
[107] DR. DIEDERIKS-VERSCHOOR & DR. V. KOPAL, AN INTRODUCTION TO SPACE LAW, 30 (2008).

disclosure norms under the European Space Agency Convention,[108] are implemented on a need-to-know basis, and not as an obligation to ensure scientific co-operation.[109] Further, the Remote Sensing Principles have provided that dissemination of the resulting data *shall* be agreed on "equitable and mutually acceptable terms."[110] Therefore, in line with subsequent state practice, "feasibility and practicability" must be interpreted as affording discretion to States.[111]

36. This is also supported by the *travaux préparatoires* to the OST.[112] The USSR delegate, in the Legal Sub-Committee of the UNCOPUOS [hereinafter, "LSC"] brought up concerns of inequity in disclosure as nations engaging in space-faring at great expense will be compelled to yield information to other nations at no cost.[113] This was the basis for introducing discretion in the disclosure norms under Article XI.[114] Therefore, the final assessment of whether a piece of information is viable to be disclosed is to be the decision of the sovereign State alone.[115] Thus, Titan's decision is not subject to judicial review on the criteria of feasibility or practicability.

---

[108] Convention for the Establishment of a European Space Agency, *entered into force* Oct. 30, 1980, 1297 U.N.T.S. 186, Article III [ESA Convention].
[109] Jean Francois Mayence & Thomas Reuter, *Article XI*, in I COLOGNE COMMENTARY ON SPACE LAW 198 (Stephan Hobe *et al.* eds. 2009).
[110] Principles Relating to the Remote Sensing of the Earth from Outer Space, G.A. Res. 41/65, Annex, U.N. GAOR, 41st Session, U.N. Doc. A/RES/41/65 (1986); Mayence & Reuter, *id.*
[111] BIN CHENG, STUDIES IN INTERNATIONAL SPACE LAW, 253 (1997).
[112] Article 32, VCLT.
[113] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5th Sess., 73rd mtg., September 16, 1966, 7, U.N. Doc. A/AC.105/C.2/SR.73 (October 19, 1966).
[114] *id.*
[115] Mayence & Reuter, *supra* note 109, at 197-198.

4. TITAN IS NOT LIABLE TO PEROVSK FOR THE DAMAGE SUFFERED TO THE PROCESSING STATION ON THE SEA OF TRANQUILITY.

37. In February 2027, Titan sent its rover from the *Mondiale* station to inspect the processing station.[116] An intervening solar event led to the disruption of communication from Earth to the rover.[117] The three-second communication gap prevented timely response once communication was restored.[118] Moreover, the regolith on the site was steeper and looser than previously observed.[119] As a result, the rover accidently crashed into the processing station.[120]

38. Titan submits that it is not liable for the damage to the processing station, *first*, under the Liability Convention **[A]**; *second,* under Article VII of the OST **[B]**; or *third,* under general International law **[C]**.

A. TITAN IS NOT LIABLE UNDER THE LIABILITY CONVENTION.

39. *First*, this collision is out of the scope of the Liability Convention **[I]**. *Second,* alternatively, Titan is not liable under Article III of the Liability Convention **[II]**.

I. <u>Liability Convention is not applicable to the collision.</u>

40. *First*, both Titan and Perovsk are launching states of the rover **[1]**; *second,* claims between two launching states are out of the scope of the Liability Convention **[2]**; *third,* Article III of the Liability Convention does not apply to this event of damage **[3]**.

1. Titan and Perovsk are launching states of the rover.

---

[116] *Compromis* §20.
[117] *Compromis* §20.
[118] *Compromis* §20.
[119] *Compromis* §20.
[120] *Compromis* §20.

41. A "Launching State" under the Liability Convention includes the State from whose "territory or facility the space object is launched",[121] and the State which "procured the launch of the space object".[122] The rover that caused damage to the processing station was launched from the *La Mancha* Spaceport in Perovsk's territory, on a Perovsk-operated rocket.[123] Additionally, the launch has been conducted at Titan's request.[124] Therefore, Titan and Perovsk are the co-launching states of the rover.

2. Claims between co-launching States are out of the scope of the Liability Convention.

42. Perovsk, as a co-launching State of the rover and the sole launching State of the processing station is precluded from claiming against Titan under the Liability Convention. The Liability Convention is a strictly third-party liability instrument.[125] It takes into account joint launching scenarios *only* to the limited extent that "joint liability towards third party" is concerned.[126] Thus, the Convention is only applicable to claims brought by non-participants to the launch of the space object.[127] Therefore, claims between launching States of the same space object are out of the scope of the Liability Convention.[128]

---

[121] Article I(c)(ii), Liability Convention.
[122] Article I(c)(i), Liability Convention; Armel Kerrest, *Remarks on the Notion of a Launching State*, 42 I.I.S.L PROC. 308 (1999).
[123] *Compromis* §9.
[124] *Compromis* §9.
[125] Jason R. Bonin, *Responsibility and Liability in International law as a matter of sequence and succession,* 52nd I.I.S.L PROC. (2009).
[126] Article IV, Liability Convention.
[127] Bonin, *supra* note 125.
[128] F.G. Von Der Dunk, *Too-Close Encounters of the Third Party Kind: Will the Liability Convention Stand the Test of the Cosmos 2251-Iridium 33 Collision?,*52nd I.I.S.L PROC. (2009).

43. Further, allowing claims between co-launching States leads to an internal contradiction within the Liability Convention, and such an interpretation is not allowed by the VCLT.[129] Under the Liability Convention, a claim is inadmissible against a national's own State.[130] However, all launching States are jointly and severally liable for "all damage caused by the space object".[131] Therefore, a claim on behalf of a national, by a launching State against a co-launching State would lead to the national's own launching State being jointly liable for payment.[132] Thus, allowing claims between co-launching States causes a launching State to be liable to its own nationals under International law,[133] further frustrating the foundation of the Liability Convention as a state-centric liability regime.[134] Such an interpretation is absurd and must be discarded.[135]

44. The *travaux préparatoires* also confirms this proposition.[136] Belgium's "Working paper on unification of certain rules governing liability for damage caused by space vehicles",[137] [hereinafter, "Belgium's Working Paper"] clearly prohibited a launching State from claiming for damage caused in its own territory.[138] Territory was defined as inclusive of any vehicle as well as space object registered by the launching State.[139] On the one hand, the working paper was

[129] BIN CHENG, STUDIES IN INTERNATIONAL SPACE LAW 307 (2004).
[130] Article VII, Liability Convention.
[131] Article V, Liability Convention.
[132] CHENG, *supra* note 129 at 308.
[133] CHENG, *supra* note 129 at 308.
[134] Dan St. John, *Trouble with Westphalia in Outer Space: The State-centric liability regime,* 40 DENVER JOURNAL OF INTERNATIONAL LAW AND POLICY 686 (2012).
[135] Article 32, VCLT; Makane Moise Mbengue, *Rules of Interpretation,* 31(2) ICSID REVIEW 388-412 (2016).
[136] Article 32, VCLT.
[137] "Belgium: *Proposal Working paper on the unification of certain rules of liability for damages caused by space devices"* (1963) *at* U.N. Doc Annex II, 19 U.N. Doc A/AC/C.2/L.7 (1963). [hereinafter, "Belgium Working Paper"].
[138] *id.*
[139] Belgium Working Paper, *supra* note 137.

adopted unanimously by the LSC,[140] and served as the foundation for the Liability Convention.[141] On the other hand the Italian draft,[142] which allowed a launching State to claim against a co-launching State for damage, was rejected by the LSC.[143] This clearly represents the drafters' intention of rendering claims between co-launching States inadmissible under the Liability Convention. Therefore, Titan is not liable under the Liability Convention.

3. Article III of the Liability Convention does not apply to this event of damage.

45. Article III only prescribes for compensation when damage has been caused due to the fault of a State to a space object of another "launching State". The definition of a launching State can be located in Article I(c) of the Liability Convention.[144] Since the damaged processing unit was assembled on the Moon and never launched by Perovsk in any manner, it is not the launching State of the damaged unit. Therefore, Article III cannot be invoked.[145]

46. Further, Perovsk must not be awarded compensation for the damage to the processing unit due to its inherent nature. The damaged processing unit has been constructed solely through lunar materials. Lunar material belongs to all mankind. The ICJ ruling in Perovsk's favor would give them the exclusive right of compensation over this damaged lunar material. Exclusive rights in outer space must be discouraged,[146] since it amounts to an affirmation of *de facto* sovereignty

---

[140] Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 2nd Sess., 48th mtg., August 5th, 1963, 7, U.N. Doc. A/AC.105/C.2/SR.50 (Nov. 30, 1963).
[141] *id.*
[142] "Italy: *Working paper - Draft convention concerning liability for damage caused by the launching of objects into outer space*" (1968) *at* U.N. Doc Annex II, 19 U.N. Doc A/AC.105/C.2/L.40 (June 13,1966).
[143] CHENG, *supra* note 129.
[144] Article I(c), Liability Convention.
[145] Article III, Liability Convention.
[146] Gorove, *supra* note 36.

over the parcel of lunar material used to create the processing station. This is expressly prohibited under Article II, OST.[147]

II. Alternatively, Titan is not liable under Article III, Liability Convention.

47. Art III of LIAB imposes liability for damage due to another State's fault.[148] Titan submits, *first,* fault is a negligent act **[1]**; and *second,* Titan was permitted to inspect the processing unit, and was not negligent **[2]**; *third,* in any case, there is no proximate causation between the act and the damage **[3]**.

1. Fault is a negligent act.

48. The term "fault" is not defined in the Liability Convention. Recourse may be taken to general International law to ascertain ambiguous portions of space treaties.[149] Fault is constituted by negligence.[150] The failure to exercise due diligence is negligence.[151] Due diligence standards may be extracted from prior obligations between States.[152] A breach of these obligations triggers State responsibility.[153]

2. Titan was permitted to visit the processing unit and was not negligent.

---

[147] Article II, Liability Convention.
[148] Article III, Liability Convention.
[149] Article III, Outer Space Treaty; Carl Q. Christol, *The Legal Common Heritage of Mankind: Capturing an Illusive Concept and Applying it to the World Needs*, 18th I.I.S.L PROC. 48 (1976).
[150] GEORGE T. HACKET, SPACE DEBRIS AND CORPUS JURIS SPATIALIS, 180 (1994); Stephen Gorove, *Liability in Space Law: An Overview*, 8 Annals. Air & Space. L. 376 (1983); HOWARD BAKER, SPACE DEBRIS: LEGAL POLICY AND IMPLICATIONS 84 (1989).
[151] Horst Blomeyer-Bartenstein, *Due Diligence* in 10 ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 138, 141 (R. Dolzer *et al*. eds., 1981).
[152] *2nd Report,* ILA STUDY GROUP ON DUE DILIGENCE IN INTERNATIONAL LAW (2016); BIN CHENG, GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS, 224 (1953); Russian Claim for Interest on Indemnities (Russia v. Turkey) 1912, 11 R.I.A.A. 42.
[153] Article 2, *Commentary to ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts*, 2(2) ILC Yearbook (2001) 31.

49. Titan's act of sending the rover to inspect the processing station does not amount to a breach of its obligation to exercise due diligence. This is because the duty to notify or consult before inspection cannot be inferred from Art IX of the OST since the was conducted post Perovsk's withdrawal from the OST.[154]

50. Further, it is not a part of customary International law. Formation of custom requires state practice and *opinio juris*.[155] The duty to consult under Article IX for activities that may cause potentially harmful interference has not been accepted as custom by the major space faring nations. State practice, in fact, supports the opposite conclusion.

51. This can be evidenced by China's Anti-Satellite tests in 2007, which clearly posed a potential for harmful interference but were conducted without any prior international consultations.[156] Admittedly, calls for consultations were made for the ASAT tests,[157] but it is pertinent to note that *only* Japan invoked the duty to consult under Article IX as a legal obligation.[158] Additionally, both the USA and the USSR conducted similar tests, which were not

---

[154] *Compromis* §18, 19

[155] MALCOLM N. SHAW, INTERNATIONAL LAW 72 (1977).

[156] VIIKARI, *supra* note 76, at 61-62.

[157] Michael C. Mineiro, *FY-1C and USA-193 ASAT Intercepts: An Assessment of Legal Obligations under Article 9 of the Outer Space Treaty*, 34 JOURNAL OF SPACE LAW 321, 341 (September 14, 2008).

[158] David A. Koplow, *ASAT-isfaction: Customary International Law and the Regulation of Anti Satellite Weapons*, 30(4) MICHIGAN JOURNAL OF INTERNATIONAL LAW 1190, 1241 (2009); Theresa Hitchens, *Article IX of the Outer Space Treaty: Data Sharing and Space Situational Awareness*, 2010 5TH ELIENE M. GALLOWAY SYMPOSIUM ON "CRITICAL ISSUES IN SPACE LAW" (Dec. 2, 2010), http://www.spacelaw.olemiss.edu/events/pdfs/2010/galloway-hitchens-presentation-2010.pdf; *Britain Concerned By Chinese Satellite Shoot-Down*, AGENCE FRANCE-PRESSE, (Jan. 19, 2007).
http://www.spacewar.com/reports/BritainConcerned-By ChineseSatelliteShootDown_999.html;
Richard Spencer, *U.K. Allies Join Protest at China Space Missile*, THE TELEGRAPH, Jan. 20, 2007.

met with any objections by other States.[159] This is especially significant as these are the only three nations that have conducted such tests in outer space.[160]

52. Therefore, in the absence of consistent State practice regarding notification or consultation,[161] the obligation to consult cannot be said to exist under Article IX as custom. The inspection was conducted post Perovsk's withdrawal from the OST. Therefore, Titan is not obliged to exercise this particular obligation towards Perovsk.

53. Further, the duty to notify or consult before inspection is not a compulsory part of the obligation to exercise due diligence.[162] This has been accepted as a general principle of International law.[163] Thus, standards of due diligence are applicable to *all* activities in the international arena. In this light, it is pertinent to note the absence of the need of notification in the Antarctic Treaty.[164] Therefore, notification or consultation is not an essential condition to meet due diligence requirements while carrying out an inspection in similar *res communis* regimes.

---

[159] Mineiro, *supra* note 157, at 345.
[160] Mineiro, *supra* note 157, at 346.
[161] U.S. Department of Defense News Transcript, DoD News Briefing with Deputy National Security Advisor Jeffrey, Gen. Cartwright and NASA Administrator Griffin, Feb. 14, 2008, http://www.spacelaw.olemiss.edu/resources/pdfs/usa193-selected-documents.pdf; Jessica West, *Back to the Future: The Outer Space Treaty Turns 40*, THE SPACE REVIEW, (October 15, 2007), http://www.thespacereview.com/article/982/1; Marchisio, *supra* note 12, at 180; Michael J. Listner, *Customary International Law: A Troublesome Question for the Code of Conduct?*, THE SPACE REVIEW, (Apr. 28, 2014), http://www.thespacereview.com/article/2500/1.
[162] Michael J. Listner, *Space Debris Remediation and the Customary Usage of Article IX, https://spacethoughtsblog.wordpress.com/2015/11/10/space-debris-remediation-and-the-customary-usage-of-article-ix/*.
[163] Timo Koivurova, *Due Diligence,* 3 MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 236, 243 (R. Wolfrum ed., 2012); Alabama Arbitration (United States v. United Kingdom) 1872, R.I.A.A. 125, 129; Pulp Mills, *supra* note 91, at 55; United States Diplomatic and Consular Staff in Tehran (United States v. Iran) (Judgment) 1980 I.C.J. 3, 31 (May, 24).
[164] Listner *supra* note 162.

54. In the absence of an obligation to notify or consult before the inspection, Titan cannot be held responsible for a breach of the same.[165] Thus, Titan was permitted to inspect the processing station. Further, Titan took into account the lunar topography whilst planning the inspection.[166] The unnaturally steep lunar regolith cannot be attributed to it.[167] Therefore, Titan cannot be held responsible for a breach of due diligence.

3. In any case, Titan's act is not the proximate cause of damage.

55. A State is liable for compensation only when the damage is caused "due to its fault".[168] Thus, there must be proximate causation between the breach of a legal obligation imputable to a State and the damage.

56. Proximate causation requires the fulfilment of two elements. *First* the act must be the *conditio sine qua non* of the damage,[169] and *second,* the damage must be reasonably foreseeable.[170] Both the requirements are similar since they are based on compensating damage with a degree of foreseeability to a reasonable man.[171] Remote damages are not compensable.[172]

---

[165] Article 1, Articles of State Responsibility.
[166] *Compromis* §20.
[167] *Compromis* §20.
[168] Article III, Liability Convention.
[169] RENÉ LEFEBER, TRANSBOUNDARY ENVIRONMENTAL INTERFERENCE AND THE ORIGIN OF STATE LIABILITY, 89 (1996); H.L.A. HART & TONY HONORÉ, CAUSATION IN THE LAW (1985).
[170] Special Rapporteur on State Responsibility, Second Report of the Special Rapporteur, 16-17, UN Doc. A/CN.4/425 & Corr.1 and Add.1 & Corr.1 (June 9, 1989) (by Mr. Gaetano Arangio-Ruiz); Rep. of the International Law Commission, 58th session, May 1- June 9, July 3- August 11, 2006, 157 U.N.Doc. (A/56/10); U.N. GAOR, 61st Sess., Supp. No. 10 (2006); HART & HONORÉ, *id.* at 254-290.
[171] The Factory at Chorzów (Germany v. Poland) (Merits) 1928 P.C.I.J. 57 (Ser. A) No. 17 (Sept. 13); Paul G. Dembling, *Cosmos 954 and the Space Treaties*, 6 JOURNAL OF SPACE LAW 129, 135 (1978).
[172]Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia & Herzegovina v. Serbia & Montenegro) (Merits) 2007 I.C.J. 47, 196 (Feb. 26).

A low-probability event renders the damage unforeseeable, unanticipated and beyond the limits of proximate causation.[173]

57. The susceptibility of space operations to natural forces was recognized by the drafters of the Liability Convention.[174] Moreover, space-faring nations were considered to have *assumed the risk* of damage being caused due to unavoidable forces. [175] Therefore, any chain of causation contingent on low-probability natural events materializing was considered indirect and too remote to warrant compensation.[176]

58. In the present case, the collision was contingent on several low probability events materializing at the same time. *First,* Titan's communication was disrupted by an unavoidable,[177] unpredictable,[178] solar event,[179] s*econd,* at the *critical* moment when the rover was near enough to the processing station for Titan to not be able to exercise contingencies.[180] *Third,* the regolith near the installation was steeper than previously observed,[181] resulting in the rover colliding into the installation. Thus, the test of foreseeability is plainly not satisfied. If it did, it would follow

[173] Rep. of the Int'l Law Comm'n, 53rd Sess., April 23- June 1, July 2- Aug. 10, 2001; Article 23, Articles of State Responsibility; VALÉRIE KAYSER, LAUNCHING SPACE OBJECTS: ISSUES OF LIABILITY AND FUTURE PROSPECTS, 48-49 (2010); Bolton v. Stone [1951] AC 850; Valentiner Case (Germany v. Venezuela) 10 R.I.A.A. 357, 404 (1903); CARL Q. CHRISTOL, THE MODERN INTERNATIONAL LAW OF OUTER SPACE 96 (1982).
[174] STEPHEN GOROVE, DEVELOPMENT IN SPACE LAW: ISSUES AND POLICY 149 (1991).
[175] Soji Yamamoto, *Space Development in Future Society and Law* (in Japanese) (Chikuma, 1976), 89; A/AC.105/C.2/SR.91 (1968), 2, 4, 12-13; A/AC.105/C.2/SR.92 (1968), 6-7.
[176] Special Rapporteur on State Responsibility, Fourth Report of the Special Rapporteur, 13, U.N. Doc A/CN.4/517 (Mar.15, 2000) (by James Crawford).
[177] NASA, *Small solar eruptions affect unprotected planets,* https://www.nasa.gov/content/goddard/small-solar-eruptions-affect-unprotected-planets/
[178] Space.com, *Sunspots, Solar Flares & Coronal Mass Ejections,http://www.space.com/11506-space-weather-sunspots-solar-flares-coronal-mass-ejections.html.*
[179] *Compromis* §20.
[180] *Compromis* §20.
[181] *Compromis* §20.

that any and all damage resulting out of an act, regardless of its remoteness, deserves compensation.

59. Such a regime imputing liability for accidents caused due to these unavoidable natural elements would impose absolute liability for every accident in outer space. This would make space-faring extremely undesirable, and frustrate the purpose of Article III, the Liability Convention. Therefore, there is no proximate causation between the act and the damage.[182] Hence, Titan is not liable for compensation under Article III, the Liability Convention.

B. TITAN IS NOT LIABLE UNDER ARTICLE VII OF THE OST.

60. Admittedly, The Liability Convention does not prejudice a claim under other legal instruments.[183] Article VII of the OST provides for international liability of a launching State whenever its space object damages the interests of other states "on the surface of the Earth, in air space or in outer space".[184] Ordinarily, in the event of the ICJ declaring that Perovsk is precluded from bringing a claim under the Liability Convention, a claim is admissible, under the principle contained within Article VII of the OST.

61. However, Article VII is not International custom. The requirement of consistent and persistent state practice, laid down in the *North Sea Continental Shelf* Case,[185] is not fulfilled in the present case. In *North Sea*, ICJ rejected 63 instances of State practice as not enough for the

---

[182] S.S. 'Lisman' Disposal of Pecuniary Claims Arising out of the Recent War (United States v. Great Britain) (1914–1918), 3 October 1937, reprinted in R.I.A.A., vol. 3, 1767; R.B. Lillich (ed.), THE UNITED NATIONS COMPENSATION COMMISSION (1995); Gattini, '*The UN Compensation Commission: Old Rules, New Procedures on War Reparations'*, 13(1) EJIL 161 (2002); Heiskanen, '*The United Nations Compensation Commission'*, 293 RECUEIL DES COURS 265 (2002).

[183] Article XXIII, Liability Convention.

[184] Article VII, OST.

[185] North Sea Continental Shelf (Germany v. Denmark), 1969 I.C.J. 3 (Feb. 20).

formation of custom.[186] Article VII has been invoked as grounds for compensation *only* in one instance, the *Cosmos 954* collision. Even in the *Cosmos 954* collision, compensation was awarded *ex gratia*.[187] Thus, clearly there is not sufficient State practice for the provision to be deemed as custom. Hence, the principle contained within Article VII is not customary International law.

62. In any case, Article VII is not clear regarding the applicable standard for adjudging liability.[188] Therefore, recourse must be taken to the provisions of the Liability Convention, which seeks to clarify and elucidate upon the principle contained within Article VII.[189] The Liability Convention is *lex specialis* with respect to Article VII.[190] Therefore, liability for outer space accidents must only be adjudged on the basis of "fault".

63. As elaborated above,[191] Titan's act of sending the rover does not constitute fault. Therefore, Perovsk's claim for compensation for the damage to their rover is not recoverable under Article VII.

C. TITAN IS NOT LIABLE UNDER GENERAL INTERNATIONAL LAW.

64. General International law does not impose strict liability for damage to other states.[192] States are only obligated to exercise due diligence in their conduct towards other states.[193] As

---

[186] *id.* at §60-82.
[187] Settlement of Claim between Canada and the Union of Soviet Socialist Republics for Damage Caused by "Cosmos 954" (released on Apr. 2, 1981), Art. II and §14, 33.
[188] Armel Kerrest and Lesley Jane Smith, *Article VII*, I COLOGNE COMMENTARY ON SPACE LAW 142 (2009).
[189] *Paragraph 4*, Preamble, Liability Convention.
[190] Kerrest and Smith, *supra* note 188, at 144.
[191] *infra* §52-53.
[192] Patricia Birnie, Alan Boyle and Catherine Ridgewell, *State Responsibility for environmental damage*, INTERNATIONAL LAW AND THE ENVIRONMENT 216 (2009).
[193] *id.*

elaborated above, the obligation of due diligence in space does not include the duty to notify or consult before an inspection.[194]

65. Moreover, general International law does not widen the scope of damage to include unforeseeable or remote damages.[195] The damage suffered to Perovsk's processing station was unforeseeable at the time of the act.[196] Therefore, Titan is not liable for damage under general International law.

[194] *infra* §44-49.
[195] Birnie and Boyle, *supra* note 192, at 217.
[196] *Infra* §50-54.

SUBMISSIONS TO THE COURT

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

1. Perovsk's activities on the Moon violated international law as it failed to consult with Titan.
2. Perovsk must be compelled to cease its lunar processing and production activities, the despoliation of the *Novum Organum-1* site, and the impermissible appropriation of the Moon.
3. Titan is not internationally responsible for the violation of disclosure obligations under the OST.
4. Titan was permitted to inspect Perovsk's processing stations and it is not liable to Perovsk for damages incurred to its property on the Moon.