

2018 MANFRED LACHS SPACE LAW MOOT COURT COMPETITION

Team No 4

IN THE INTERNATIONAL COURT OF JUSTICE

AT THE

PEACE PALACE, THE HAGUE



CASE CONCERNING CONFLICTING ACTIVITIES IN OUTER SPACE,
PLANETARY PROTECTION, AND OUTER SPACE SECURITY

THE DEMOCRATIC REPUBLIC OF NEAPILIA

v.

THE REPUBLIC OF KALVION

ON SUBMISSION TO THE INTERNATIONAL COURT OF JUSTICE

MEMORIAL FOR THE RESPONDENT

THE REPUBLIC OF KALVION

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LIST OF ABBREVIATIONS

“50 Rays” programme	“50 Rays of SalPA” programme
ARS	International Law Commission Articles on Responsibility of States for Internationally Wrongful Acts
Clarifications	Responses to Requests for Clarification
FAO	United Nations Food and Agriculture Organization
Facts	Agreed Statement of Facts between the Democratic Republic of Neapilia and the Republic of Kalvion in the Case Concerning Conflicting Activities in Outer Space, Planetary Protection, and Outer Space Security
GA	United Nations General Assembly
ICJ	International Court of Justice
ICJ Statute	Statute of the International Court of Justice
HAMs	Habitable Atmospheric Modules
Kalvion	the Republic of Kalvion
LIAB	Convention on International Liability for Damage Caused by Space Objects
MA	Agreement Governing the Activities of States on the Moon and Other Celestial Bodies
Memorial	Written Submissions on behalf of Kalvion
Neapilia	the Democratic Republic of Neapilia
NSA	Neapilian Space Agency
OST	Treaty on Principles Governing the Activities of States in the

	Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies
PCIJ	Permanent Court of International Justice
RC	Convention on Registration of Objects Launched into Outer Space
SalPA Corp.	Salus Patriae ad Astra Corporation
SIENAR	SIENAR Industries
UMVs	Unmanned Mining Vehicles
UMVs-2	the second generation of UMVs — UMVs Mk2
UN	United Nations
UN Charter	Charter of the United Nations
VCLT	Vienna Convention on the Law of Treaties
Vol.	Volume

TABLE OF AUTHORITIES

A. IMPORTANT LEGAL DOCUMENTS

U. N. CHARTER

[hereinafter UN Charter] 10,11

B. TREATIES AND INTERNATIONAL AGREEMENTS

Additional Protocol to the Convention on Cybercrime, concerning the criminalisation of acts of a racist and xenophobic nature committed through computer systems, entered into force Mar. 1, 2006, E.T.S. 189

[hereinafter AP to Cybercrime Convention] 1,2

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

[hereinafter MA] *passim*

Annex 2 to the International Telecommunication Convention 1982

[hereinafter Annex to ITU Convention] 7

Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data, entered into force Oct.1,1985, E.T.S. 108

[hereinafter Convention on Automatic Processing] 1,2

Convention on Cybercrime, entered into force Jul. 01, 2004, E.T.S. 185

[hereinafter Convention on Cybercrime] 1,2

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 LIAB]. *passim*

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

[hereinafter OST] *passim*

Vienna Convention on the Law of Treaties, entered into force Jan. 27, 1980, 1155 U.N.T.S. 331

[hereinafter VCLT] 19,30

C. INTERNATIONAL LAW CASES

1. International Court of Justice (I.C.J.)

Accordance with International Law of the Unilateral Declaration of the Independence in Respect of Kosovo, Advisory Opinion, 2010 I.C.J. 403 (Jul. 22)

[hereinafter Kosovo] 1

Armed Activities on the territory of the Congo (Dem. Rep. Congo v. Uganda) (Judgment) 2005 I.C.J. 168 (Dec. 19)

[hereinafter Congo] 12

Case Concerning the Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain) (New Application: 1962, Second phase) (Judgement) 1970 I.C.J. 3 (Feb. 5) at para 71

[hereinafter Barcelona Traction] 18,27

Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia) 1997 I.C.J. 7 (Sep. 25)

[hereinafter Gabčíkovo-Nagymaros] 3,5,14

Case Concerning United States Diplomatic and Consular Staff in Tehran (United States of America v. Iran) 1980 I.C.J. 3 (May 24)

[hereinafter Consular Staff] 5

Certain Phosphate Lands in Nauru (Nauru v. Australia) (Preliminary Objections) (Judgment) 1992 I.C.J. 240 (Jun. 26)

[hereinafter Certain Phosphate Lands in Nauru, PO] 25

Corfu Channel (UK v. Albania) (Merits) 1949 I.C.J. 4 (Apr. 9)

[hereinafter Corfu Channel] 10,12

Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America) (Merits) 1986 I.C.J. 14 (Jun. 27)

[hereinafter Nicaragua] 1,10,11,12

Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America) 1986 I.C.J. 14 (Jun. 27) Sette-Camara separate opinion

[hereinafter Sette-Camara sep.op.] 12

2. Permanent Court of International Justice (P.C.I.J.)

Legal Status of Eastern Greenland (Den. v. Nor.), 1933 P.C.I.J. (ser. A/B) No. 53 (Apr. 5)

[hereinafter Eastern Greenland] 3

Legal Status of Eastern Greenland (Den. v. Nor.), 1933 P.C.I.J. (ser. A/B) No. 53 (Apr. 5) M. Anzilotti dissenting opinion

[hereinafter Anzilotti dis.op.] 3

Nationality Decrees Issued in Tunis and Morocco, Advisory Opinion, 1923 P.C.I.J. (ser. B), No. 4 (Feb. 7)

[hereinafter Nationality Decrees] 13

Phosphates in Morocco (Italy v. Fr.), 1938 P.C.I.J. 10 (ser. A/B), No. 74 (June 14).

[hereinafter Phosphates in Morocco] 5

SS Lotus (France v. Turkey) (Merits) 1927 P.C.I.J. (ser. A/B), No. 10 (Sept. 7).

[hereinafter Lotus] 1

Territorial Jurisdiction of the International Commission of the River Oder (United Kingdom, Czechoslovakia, Denmark, France, Germany, Sweden v. Poland), 1929 P.C.I.J. (ser. A), No. 23 (Sept. 10).

[hereinafter Territorial Jurisdiction] 14

3. Arbitral Tribunals

AGIP S.p.A. v. People's Republic of the Congo, ICSID Case No. ARB/77/1, 1979

[hereinafter AGIP SpA case] 21

Air Services Agreement of 27 March 1946 (United States v. France) 1978, UN R.I.A.A. Vol. XVIII, 417

[hereinafter Air Services] 14,15

AMCO Asia Corp. et al. v. The Republic of Indonesia, ICSID No. ARB/81/8, 1992 YCA, 73
[hereinafter Amco Asia Corporation 1984, 1986, 1990] 21

Chagos Marine Protected Area Arbitration (Mauritius v United Kingdom) (Award) 2015
P.C.A. (Mar. 18)
[hereinafter Chagos] 8

D. UNITED NATIONS MATERIALS

Declaration on Principles of International Law concerning Friendly Relations and
Cooperation among States in accordance with the Charter of the United Nations, U.N.G.A.
Resolution 2625 (XXV).

[hereinafter Declaration on Friendly Relations] 10,12,13

Declaration on Rights and Duties of States, U.N.G.A. Resolution 375 (IV).

[hereinafter Declaration on Rights and Duties] 12

G.A. Res. 53/70, U.N. GAOR, 53th Sess., U.N. Doc. A/RES/53/70 (1999).

[hereinafter Res.53/70] 2

G.A. Res. 55/63, U.N. GAOR, 55th Sess., U.N. Doc. A/RES/55/63 (2001).

[hereinafter Res.55/63] 2

G.A. Res. 56/121, U.N. GAOR, 56th Sess., U.N. Doc. A/RES/56/121 (2002).

[hereinafter Res.56/121] 2

G.A. Res. 57/239, U.N. GAOR, 57th Sess., U.N. Doc. A/RES/57/239 (2003).

[hereinafter Res.57/239] 2

G.A. Res. 58/199, U.N. GAOR, 58th Sess., U.N. Doc. A/RES/58/199 (2004).

[hereinafter Res.58/199] 2

G.A. Res. 64/211, U.N. GAOR, 64th Sess., U.N. Doc. A/RES/64/211 (2009).

[hereinafter Res.64/211] 2

G.A. Res. 67/27, U.N. GAOR, 67th Sess., U.N. Doc. A/RES/67/27 (2012).

[hereinafter Res.67/27] 2

G.A. Res. 69/28, U.N. GAOR, 69th Sess., U.N. Doc. A/RES/69/28 (2014).

[hereinafter Res.69/28] 2

G.A. Res. 70/237, U.N. GAOR, 70th Sess., U.N. Doc. A/RES/70/237 (2015).

[hereinafter Res.70/237] 2

Hungary Proposed Draft Agreement, A/AC.105/C.2/L.10 in A/AC.105/21 Annex II at p.2,
Art. II

[hereinafter UN Doc A/AC.105/C.2/L.10] 30

International Law Commission, Draft Articles on Responsibility of States for Internationally
Wrongful Acts, November 2001, Supplement No. 10 (A/56/10).

[hereinafter ARS] *passim*

Report of the International Law Commission, Text of the Draft Articles on Diplomatic
Protection with Commentaries, U.N. G.A., 61st Sess., Supp. No. 10 at 22, U.N. Doc. A/61/10
(2006) Art. 9

[hereinafter ADP] 18,27

S.C. Res. 111, U.N.S.C., U.N. Doc. S/RES/111 (1956).

[hereinafter S.C.Res.111] 10

S.C. Res. 316, U.N.S.C., 1650th Meeting., U.N. Doc. S/RES/316 (1972).

[hereinafter S.C.Res.316] 10

Second Report on State Responsibility, by Roberto Ago, Special Rapporteur – the Origin International Responsibility, U.N.Doc A/CN.4/233, (1970)

[hereinafter Ago Second Report] 24

Third Report on State Responsibility, by Mr. Roberto Ago, The Internationally Wrongful Act of the State, Source of International Responsibility, U.N.Doc A/CN.4/246, (1971)

[hereinafter Ago Third Report] 24

United States proposal A/AC.105/C.2/L.8/Rev.1 in A/AC.105/21 Annex II, at p.7, Art. II(2)

[hereinafter UN Doc A/AC.105/C.2/L.8/Rev.1] 24

Working Paper Submitted by the Belgian Delegation on the Unification of Certain rules Governing Liability for Damage Caused by Space Vehicles, U.N.Doc A/AC.105/12, Annex I at p.15 (1963)

[hereinafter UN Doc A/AC.105/12, An.1] 30

E. NATIONAL AND SUPRANATIONAL LEGISLATION

Cybercrime Act (2001) (Australia)

[hereinafter Cybercrime Act] 2

Cybercrimes and Cybersecurity Bill (2016) (South Afrika)

[hereinafter Cybercrimes Bill] 2

Cybersecurity Bill (2017) (Singapore)

[hereinafter Cybersecurity Bill] 2

Data Protection Act (1998) (UK)

[hereinafter Data Protection Act] 2

Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union

[hereinafter Directive 2016/1148] 1,2

Directive (EU) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA

[hereinafter Directive 2016/680] 1,2

Directive 2013/40/EU of the European Parliament and of the Council of 12 August 2013 on attacks against information systems and replacing Council Framework Decision 2005/222/JHA

[hereinafter Directive 2013/40/EU] 1,2

L’exploration et l’utilisation des ressources de l’espace. (2017) (Luxembourg)

[hereinafter Luxembourg Space Resources Act 2017] 4

Protecting Canadians from Online Crime Act (2014) (Canada)

[hereinafter Online Crime Act] 2

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC

[hereinafter Regulation 2016/679] 1,2

The Information Technology Act (2000) (India)

[hereinafter Information Technology Act] 2

U.S. Commercial Space Launch Competitiveness Act (2015) (USA)

[hereinafter US Space Act 2015] 4

F. BOOKS

ANTONIO AUGUSTO CANCADO TRINDADE, INTERNATIONAL LAW FOR HUMANKIND: TOWARDS A NEW JUS GENTIUM, 4, 327 (2010)

[hereinafter TRINDADE] 9

CHITTHARANJAN F. AMERASINGHE, JURISDICTION OF SPECIFIC INTERNATIONAL TRIBUNALS, 117 (2009)

[hereinafter AMERASINGHE] 17

ELLI LOUKA, INTERNATIONAL ENVIRONMENTAL LAW: FAIRNESS, EFFECTIVENESS AND WORLD ORDER, 6 (2006).

[hereinafter LOUKA] 6

FRANCIS LYALL AND PAUL B. LARSEN, SPACE LAW: A TREATISE, 275, 508, 510 (2009).

[hereinafter LYALL/LARSEN] 5

IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW, 509 (2008)

[hereinafter BROWNLIE] 3

JAMES CRAWFORD, ALLAIN PELLET, SIMON OLLESON, THE LAW OF INTERNATIONAL RESPONSIBILITY, 218 (2010)

[hereinafter CRAWFORD] 25

LOTTA VIKARI, THE ENVIRONMENTAL ELEMENT IN SPACE LAW, 262 (2008).

[hereinafter VIKARI] 5

MARJORIE M. WHITEMAN, DAMAGES IN INTERNATIONAL LAW VOL. III, (1837)

[hereinafter WHITEMAN] 21

MICHAEL N. SCHMITT, TALLINN MANUAL 2.0 ON THE INTERNATIONAL LAW APPLICABLE TO CYBER-OPERATIONS, 3, 79, 304, 314, 320, 329, 330, 331, 334-336, 415, 417 (2017).

[hereinafter TM 2.0] 1,2,11,12,13

PATRICIA MCCORMICK & MAURY J. MECHANICK, THE TRANSFORMATION OF INTERGOVERNMENTAL SATELLITE ORGANIZATIONS: POLICY AND LEGAL PERSPECTIVES, 259 (2013)

[hereinafter MCCORMICK] 18

PETER STUBBE, STATE ACCOUNTABILITY FOR SPACE DEBRIS: A LEGAL STUDY OF RESPONSIBILITY FOR POLLUTING THE SPACE ENVIRONMENT AND LIABILITY FOR DAMAGE CAUSED BY SPACE DEBRIS, 260 (2017).

[hereinafter STUBBE] 5

G. COLLECTIONS

Fabio Tronchetti, *Legal Aspects of the Military Uses of Outer Space*, in HANDBOOK OF SPACE LAW, 332,335 (Frans von der Dunk & Fabio Tronchetti eds., 2015)

[hereinafter Tronchetti] 8

Frans von der Dunk, *International space law*, in HANDBOOK OF SPACE LAW, 86, 87 (Frans von der Dunk & Fabio Tronchetti eds., 2017)

[hereinafter Dunk] 24,29

Katharina Ziolkowsky, *General Principles of International Law as Applicable in Cyberspace*, in PEACETIME REGIME FOR STATE ACTIVITIES IN CYBERSPACE, 172-173 (Katharina Ziolkowsky ed., 2013).

[hereinafter Ziolkowsky] 11,12

Lesley Jane Smith, *Legal aspects of satellite navigation* in HANDBOOK OF SPACE LAW, 587 (Frans von der Dunk & Fabio Tronchetti eds., 2017)

[hereinafter Smith] 24,25,30

Marco Roscini, *Cyber-operations as a Use of Force*, in RESEARCH HANDBOOK ON INTERNATIONAL LAW AND CYBERSPACE, 242 (Nicholas Tsagourias & Russell Buchan eds., 2015).

[hereinafter Roscini] 11,12

R.St. Macdonald, *The International Community as a Legal Community*, in TOWARDS WORLD CONSTITUTIONALISM, ISSUES IN THE LEGAL ORDERING OF THE WORLD COMMUNITY, 870 (R.St.J. Macdonald and D.M. Johnson eds., 2005).

[hereinafter Macdonald] 12

S.E. Doyle, *Issues of sovereignty and private property*, in LUFT- UND WELTRAUMRECHT IM 21. JAHRHUNDERT, 315-316 (M. Benko ed., 2001)

[hereinafter Doyle] 4

Shabtai Rosenne, *International Court and Tribunals, Jurisdiction and Admissibility of Inter-State Applications*, MAX PLANK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW Vol. V, 589, 590 (2012)

[hereinafter Rosenne] 17

H. ARTICLES

Alain Pellet, *The Normative Dilemma: Will and Consent in International Law-Making*, 12 AUSTRALIAN YEAR BOOK OF INTERNATIONAL LAW, 22, 22 (1988-89).

[hereinafter Pellet] 1

An Hertogen, *Letting Lotus Bloom*, THE EUROPEAN JOURNAL OF INTERNATIONAL LAW VOL. 26 NO. 4, 901, 902-903 (2015).

[hereinafter Hertogen]1

Carl Q. Christol, *International Liability for Damage Caused by Space Objects*, 74, AMERICAN JOURNAL OF INTERNATIONAL LAW, 346, 360 (1980)

[hereinafter Christol] 22,29,31,33

Elena Carpanelli & Brendan Cohen, *Interpreting “Damage Caused by Space Objects” under*

1972 *Liability Convention*, DIEDERIKS-VERSCHOOR AWARD (2013), p.6-7,

<https://iislweb.org/docs/Diederiks2013.pdf> ;

[hereinafter Carpanelli] 29,30,33

Ernst Fasan, *Protection of the Space Environment*, 24 (1) JOURNAL OF SPACE LAW 48, 51 (1996)

[hereinafter Fasan] 32

Frans von der Dunk, *Liability versus Responsibility in Space Law: Misconception or Misconstruction?*, THE PROCEEDINGS OF THE THIRTY-FOURTH COLLOQUIUM ON THE LAW OF OUTER SPACE 363, 366 (1992)

[hereinafter Dunk Liability] 24,33

Harold Hongju Koh, *International Law in Cyberspace*, HARVARD INTERNATIONAL LAW JOURNAL ONLINE VOL. 54, 1, 4 (2012).

[hereinafter Koh] 11,12

Herbert S. Lin, *Offensive Cyber-operations and the Use of Force*, JOURNAL OF NATIONAL SECURITY LAW AND POLICY VOL. 4, 63, 73 (2010).

[hereinafter Lin] 2,11,29

Hugh Handeyside, *The Lotus Principle in ICJ Jurisprudence: Was the Ship Ever Afloat?*, MICHIGAN JOURNAL OF INTERNATIONAL LAW VOL. 29, 71, 79 (2007).

[hereinafter Handeyside] 1

Lalin Kovudhikulrungsri & Duangden Nakseeharach, *Liability Regime of International Space Law: Some Lessons from International Nuclear Law*, 4 J. E. ASIA & INT'L L., 291, 306 (2011).

[hereinafter Lalin] 29

Marcelo Kohen, *The Principle of Non-Intervention 25 Years after the Nicaragua Judgment*, LEIDEN JOURNAL OF INTERNATIONAL LAW 25, 157, 157, 161 (2012).

[hereinafter Kohen] 12

Michael C. Mineiro, *FY-1C and USA-193 ASAT Intercepts: An Assessment of Legal Obligations under Article IX of the Outer Space Treaty*, JOURNAL OF SPACE LAW VOL. 34-2, 321, 352, 336, (2008).

[hereinafter Mineiro] 7

Oona A. Hathaway & Rebecca Crootof, *The Law of Cyber-Attack*, CALIFORNIA LAW REVIEW VOL.100, 817, 824 (2012).

[hereinafter Hathaway/Crootof] 2

P.J. Blount & Christian J. Robison, *One Small Step: the Impact of the U.S. Commercial Space Launch Competitiveness Act 2015 on the Exploitation of Resources in Outer Space*, NORTH CAROLINA JOURNAL OF LAW AND TECHNOLOGY, VOL. 18 Issue 2, 160 (2016)

[hereinafter Blount&Robinson] 4

Philip De Man, *The Exploitation of Outer Space and Celestial Bodies – a Functional Solution to the Natural Resource Challenge*, LEUVEN CENTRE FOR GLOBAL GOVERNANCE STUDIES. WORKING PAPER №54, 3, 17-18 (2010).

[hereinafter Man] 4,21

Pierre-Marie Dupuy, *The Constitutional Dimension of the Charter of the United Nations*

Revisited, MAX PLANCK YEARBOOK OF UNITED NATIONS LAW VOL. 1, 1, 1, 8 (1997).
[hereinafter Dupuy] 12

Samuel Black, *No Harmful Interference with Space Objects: The Key to Confidence-Building*, STIMSON CENTER REPORT NO. 69, 5 (2008).
[hereinafter Black] 7

Santiago Villalpando, *The Legal Dimension of the International Community: How Community Interests are Protected in International Law*, THE EUROPEAN JOURNAL OF INTERNATIONAL LAW VOL.21 NO.2, 387, 388, 400-406 (2010).
[hereinafter Villalpando] 9

Sebastián A. Green Martínez, *Locus Standi before the International Court of Justice for Violations of the World Heritage Convention*, 4,
<https://www.ilsa.org/jessup/jessup17/Batch%202/Locus%20Standi%20Before%20the%20ICJ.pdf>
[hereinafter Martínez] 17

Sompong Sucharitkul, *State Responsibility and International Liability Under International Law*, LOYOLA OF LOS ANGELES INT. AND COMPARATIVE LAW JOURNAL, p.821, 1996, p.832
[hereinafter Sucharitkul] 24

Stanley Mazaroff, *Exonerations from liability for Damage Caused by Space Activities*, 54 Cornell Law Review 71, 94 (1968)
[hereinafter Mazaroff] 24,33

Yosbifumi Tanaka, *Protection of Community Interests in International Law: The Case of the Law of the Sea*, MAX PLANCK YEARBOOK OF UNITED NATIONS LAW VOL.15, 329, 333, 339 (2011).
[hereinafter Tanaka] 9

I. DICTIONARIES

“Continuation” in Oxford Dictionaries Definitions, English
[hereinafter “Continuation”, Oxford Dictionary] 31

DICTIONARY OF MILITARY AND ASSOCIATED TERMS, U.S. Department of Defense, Joint Publication 1-02, (Nov. 8, 2010, as amended through Feb. 15, 2012).
[hereinafter Military Dictionary] 2

MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY (11-th ed. 2004).
[hereinafter Merriam-Webster’s] 7

NATO GLOSSARY OF TERMS AND DEFINITIONS, (AAP-6) (2013).
[hereinafter NATO Glossary] 2

J. MISCELLANEOUS

Gen. James E. Cartwright, Memorandum for Chiefs of the Military Servs., Commanders of the Combatant Commands, Dirs. of the Joint Staff Directories on Joint Terminology for Cyberspace Operations, (Nov. 2011).
[hereinafter Memorandum for Chiefs] 2

International Humanitarian Law and the Challenges of Contemporary Armed Conflicts, International Committee of the Red Cross, 31st International Conference of the Red Cross

and Red Crescent, Report 31IC/11/5.1.2, (Oct. 2011).

[hereinafter Report 31IC/11/5.1.2] 2

Michael Listner, Iridium 33 and Cosmos 2251 three years later: where are we now?, February, 13, 2012, The Space Review <http://www.thespacereview.com/article/2023/1>

[hereinafter Iridium 33 and Cosmos 2251 Collision] 32

Przemyslaw Kowalski & Max Büge & Monika Sztajerowska & Matias Egeland, State-Owned Enterprises. Trade Effects and Policy Implications (OECD Trade Policy Papers No. 147), 19-20 (2013)

[hereinafter Kowalski] 17

K. INTERNET SITES

Analysis of the 2007 Cyber Attacks Against Estonia from the information Warfare Perspective. NATO Cooperative Cyber Defence Centre of Excellence.

<https://ccdcoe.org/multimedia/analysis-2007-cyber-attacks-against-estonia-information-warfare-perspective.html>

[hereinafter Estonia 2007] 1

How Does NASA Communicate with Spacecraft?

<http://www.qrg.northwestern.edu/projects/vss/docs/communications/zoom-messages.html>

[hereinafter NASA Communication] 9

Nikola Milosevic, Case of the Cyber War: Kosovo Conflict. LinkedIn.

<https://www.linkedin.com/pulse/case-cyber-war-kosovo-conflict-nikola-milošević/>

[hereinafter Kosovo Conflict] 1

Stuxnet Worm Attack on Iranian Nuclear

Facilities..<http://large.stanford.edu/courses/2015/ph241/holloway1/>

[hereinafter Stuxnet] 1

United Nations Treaty Collection. Multilateral Treaties Deposited with the Secretary-General. Status as at 19 February 2018, Chapter XXIV-2.

<https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XXIV/XXIV-2.en.pdf>

[hereinafter UNTC] 11

QUESTIONS PRESENTED

- (1) Whether Kalvion's actions preventing the operations of the OprtonRay orbital mirrors was a lawful, non-aggressive, necessary act to defend its access to space resources and to ensure the protection of Mars' environment;
- (2) Whether Kalvion should not be held liable for any damage relating to the interruption of the "50 Rays" programme and for any consequence on SalPA Corp.'s;
- (3) Whether Neapilia is liable for the cessation of Kalvion's mining activities on Mars.

STATEMENT OF FACTS

BACKGROUND

1. The Republic of Kalvion is a former developing country. Since 2025 Kalvion’s economy has experienced massive growth accompanied by the development of space activities. The Democratic Republic of Neapilia is a developed country. Neapilia’s strong economy due to its oil and natural gas reserves allowed to invest in space technologies. In 2040 the Neapilian Space Agency (NSA) launched “TheosAres” — a Civil Space Station orbiting Mars.

2. By 2045 the global population of Earth exceeded 9.2 billion and Earth’s natural reserves have reached critical levels. Over-population led to the food crisis, the crisis of renewable natural resources, massive migrations, and social unrests. Since 2035 UN members looked for collective solutions, however no agreement was reached and states started to look for separate solutions. Kalvion suffered from the depletion of non-renewable resources longer and more severely than other states as Kalvion lacked domestic non-renewable energy resources and traditionally had relied on imported oil and gas. Neapilia had population explosion within its territory and suffered housing crisis and social rioting.

KALVION’S MINING ACTIVITIES

3. Facing energy resources problem Kalvion was forced to look for alternative sources of energy. In 2040 Kalvion developed a space programme to find natural resources on celestial bodies. After the exploration phase Kalvion chose Mars to start mining operations. Under national law, Kalvion authorised SIENAR Industries (SIENAR), a multinational company established in Kalvion, to exploit space resources they might obtain on Mars. In 2048 SIENAR deployed Unmanned Mining Vehicles (UMVs) directly to Mars. By the end of 2049 the mining activities started to provide cargo spaceships returning to Earth with the necessary space resources.

4. In March 2051 SIENAR replaced its UMVs with the second generation — UMVs Mk2. Concurrently the satellite “Aeneas-1” was launched into polar orbit around Mars to derive maximum benefit from the new UMVs Mk2. “Aeneas-1” was constructed to reveal high concentrations of resources and remotely control UMVs Mk2. The “Aeneas-UMV Mk2” system proved its capability to provide Kalvion with a long-term viable solution for the non-renewable natural resources substitution.

“50 RAYS” PROGRAMME

5. Neapilia considered exploration of outer space to be a solution to the overpopulation and resource crisis and invited the private sector to look for such solutions. Private Neapilian company *Salus Patriae ad Astra Corporation* (SalPA Corp.) proposed a programme of human resettlement on Mars after environmental intervention there. In June 2046 SalPA Corp. proposed an invention comprised of a pair of mirrors, orbiting the poles of Mars constructed to warm the planet’s surface, melt the water ice and irrigate a large area of Mars. SalPA Corp. announced that the first stage was the Technology Trial. SalPA Corp. planned to use “TheosAres” during the Trial: astronauts there should control mirrors and monitor impact on the CO₂ ice cap and underlying water ice layer of Mars. SalPA Corp. would concurrently develop a prototype of Habitable Atmospheric Modules (HAMs) that would help to sustain human vital activities on Mars. The results of the Trial were to be reported by the end of 2053.

6. Subject to successful testing, SalPA Corp. would produce 50 more mirrors operational by 2070 (the so-called “50 Rays of SalPA”). Meanwhile, the first HAMs are to be deployed by 2063 following sufficient warming of Mars’ atmosphere. All the technologies were to be designed and manufactured by SalPA Corp., which held the international patents protecting its exclusivity for the technology. After the creation of supporting infrastructure, SalPA Corp. allowed public and private investors to purchase HAM license, whose fees would more than

recover the costs of the technology.

7. Neapilia's government backed up SalPA Corp.'s programme and HAM's development by investing public funds and taking a 49% equity stake in the company. Under national law, Neapilia authorised SalPA Corp. to conduct the Technology Trial and to use "TheosAres" and its crew.

THE START OF THE TECHNOLOGY TRIAL

8. In November 2052 SalPA Corp. started the Technology Trial. After the initial success, NSA issued an international press release describing "50 Rays of SalPA" programme and inviting all nations to take advantage of this solution. Public and private entities were invited to pre-order HAMs. A number of States and high net-worth individuals were willing to purchase HAMs if the Trial succeeds.

9. Kalvion was troubled by the situation. As UMVs and UMV Mk2 were designed to operate in Mars' natural environment, subsequent effect of Neapilia's programme would be cessation of space resources delivery to Kalvion. A large number of developing states were also troubled by NSA's announcement as they had very high population density and concurrent land shortages but did not have the sufficient budgets to obtain HAMs. These states were worried that developed states would crowd all the "best places" on Mars.

10. In March 2053 Kalvion formally requested Neapilia to cease Technology Trial specifying its consequences for Kalvion's space mining programme. In March 2054 Neapilia's Minister of Commerce invited Kalvion to purchase HAMs.

TERMINATION OF THE MINING ACTIVITIES AND INTERNATIONAL CONCERNS

11. In March 2054 the communication between Kalvion's "Aeneas-1" and the UMVs Mk2 was lost despite the repeated efforts of SIENAR's technicians to restore it. An independent body of

experts concluded that the communication interruption was caused by the disturbances in the atmosphere and temperature conditions of Mars, possibly caused by Neapilia's Trial. The cessation of communication led to the termination of mining activities.

12. Kalvion spearheaded a meeting of Heads of States collectively representing 9/10 of Earth's population, who opposed the "50 Rays" programme. At the end of the meeting the "Seychelles Declaration" was adopted, stating that the environment of Mars should remain unaltered until international consensus is reached. In November 2054 Kalvion requested the UN Security Council to condemn Neapilia's acts on Mars as constituting "a threat to international peace and security" and to adopt appropriate measures should Neapilia not cease its activities. The UN Security Council unanimously adopted a Resolution, which "expressed concern" about "the situation on Mars" and "urged" Neapilia to comply with international space law and to take into consideration the rights and duties of other States in accordance with international law. In response, the Prime Minister of Neapilia declared that the Mars environmental intervention should not be stopped and that Neapilia would keep the Security Council informed about the evolution of the situation.

KALVION'S COUNTERMEASURES

13. In its public statement, Kalvion notified Neapilia about its decision to adopt "protection measures", if Neapilia immediately would not cease its environmental intervention on Mars. Neapilia did not formally respond to this statement. The cyber experts from Kalvion interfered with Neapilia's control system. On 5 January 2056, the two mirrors began to change their angle and changed it by 30° within 10 days. SalPA Corp. announced that it was unable to continue the "50 Rays" programme and suspends it indefinitely. All pending orders and contracts for HAMs were cancelled because the orbital mirror technology could not be demonstrated to the satisfaction of clients before the Technology Trial was suspended. SalPA Corp. filed for

bankruptcy and was liquidated.

14. On 17 January 2056 the Kalvionian Minister of Foreign Affairs stated that the cyber-operation was “lawful countermeasures” which “would be maintained pending a declaration of the authorities of Neapilia that the “50 Rays” programme would be definitely abandoned”. Neapilia severely protested against the aforementioned declarations, nevertheless without producing any result whatsoever.

15. Following inconclusive diplomatic consultations, Kalvion and Neapilia submitted the dispute to the International Court of Justice. There is no issue of jurisdiction before the Court.

SUMMARY OF ARGUMENT**I. KALVION'S ACTION PREVENTING THE OPERATIONS OF THE OPTRON RAY ORBITAL MIRRORS WAS A LAWFUL, NON-AGGRESSIVE, NECESSARY ACT TO DEFEND ITS ACCESS TO SPACE RESOURCES AND TO ENSURE THE PROTECTION OF MARS' ENVIRONMENT**

A. There are no legal restrictions on states' actions in cyberspace according to the Lotus principle. Kalvion's actions do not constitute a cyber-attack as this notion lacks legal contents in the absence of state will to define it. Even if it is possible to accept doctrinal definition of Tallinn Manual 2.0, Kalvion's operation does not qualify as a cyber-attack since its effects do not constitute damage to any Neapilia's objects.

B. Even if existing international law applies to cyberspace, Kalvion's actions are lawful. The cyber operation does not raise to the level of use of force in its scale and effects. Therefore, Kalvion complied with the customary rule on the peaceful uses of outer space as well as treaty provisions of Art. 2(4) of the UN Charter, Art. IV OST and Art. 3 MA. Kalvion complied with principle of non-intervention as it neither intervened in Neapilian internal affairs nor met the necessary threshold of coercion, but rather intended to make Neapilia comply with international obligations.

C. Even if Kalvion's cyber operation can be qualified as constituting an internationally wrongful act, its wrongfulness is precluded since Kalvion's actions constitute lawful countermeasures. Kalvion has the right to mine resources on Mars due to the absence of direct prohibition in international space law and inadmissibility of selective approach to different resource types. Neapilia's internationally wrongful acts injured Kalvion's right to mine resources on Mars and, therefore Kalvion had the right to undertake countermeasures. Neapilia violated its obligation to preserve the existing balance of Mars' environment under Art. 7(1) MA as changes introduced by it were adverse. Neapilia interfered with Kalvion's activities on Mars in violation of Art. 8(3) MA. Neapilia violated the obligation to pay due regard to the

corresponding interests of Kalvion and present and future generations under Art. IX OST and 4(1) MA by interfering with Kalvion's mining activities already capable of being a viable solution for the resource crisis faced by the present generation. Kalvion's actions also satisfy all criteria of lawful countermeasures under ARS.

II. KALVION IS NOT LIABLE FOR ANY DAMAGE RELATING TO THE INTERRUPTION OF THE "50 RAYS" PROGRAMME NOR FOR ANY CONSEQUENCE ON SALPA CORP.'S

A. Neapilia lacks standing to bring the claim on damage inflicted to SalPA Corp. as the company no longer exists. Even if Neapilia has standing, the LIAB is not applicable as the damage allegedly caused by Kalvion's cyber operation does not fall within the scope of the LIAB's application. Even if the LIAB is applicable, Kalvion is not liable as no damage occurred and the criterion of "fault" is not met. The officially stated reason for the suspension of the programme was the fact that OprtronRay mirrors' and HAMS' technology could not be demonstrated to the satisfaction of the clients, not the fact that the suspension was forced by Kalvion's actions. Therefore, the consequent loss of profit of SalPA Corp. did not result from Kalvion's actions. In any event, Kalvion was not at "fault". The latter is understood as an internationally wrongful act under general international law, but wrongfulness of Kalvion's cyber operation was precluded, because it constituted a lawful countermeasure. Thus, Kalvion is not liable under the LIAB.

B. Kalvion is neither liable under Art. VII OST as the latter is not applicable. The LIAB is *lex specialis* of state liability in space, thus if the liability does not arise from the LIAB, states may not refer to the OST as *lex generalis* in order to invoke liability. Thus, Kalvion is not liable under the OST.

C. In any event, Kalvion is not liable under the law of state responsibility. Indeed, even when resorting to countermeasures states are obliged to compensate material loss. However, the loss

Neapilia suffered does not qualify as material. Thus, Kalvion has complied with ARS.

III. NEAPILIA IS LIABLE FOR THE CESSATION OF KALVION'S MINING ACTIVITIES ON MARS.

A. In conformity with the general rules of diplomatic protection and provisions of Art. XI(2) LIAB, Kalvion has standing to present the claim for damage inflicted to SIENAR. Neapilia is liable for respective damage in the form of cessation of Kalvion's mining activities on Mars under Art. III LIAB. The damage has (indeed) occurred, it was inflicted by Neapilian space objects, and due to Neapilia's fault as it acted negligently.

B. In any event, Neapilia is liable, under the law of state responsibility as it committed an internationally wrongful act, which caused damage. Consequently, Neapilia is liable, *i.e.* has a duty to compensate for the damage inflicted.

ARGUMENT**I. KALVION'S ACTION PREVENTING THE OPERATION OF THE OPTRON RAY ORBITAL MIRRORS WAS A LAWFUL, NON-AGGRESSIVE, NECESSARY ACT TO DEFEND ITS ACCESS TO SPACE RESOURCES AND TO ENSURE THE PROTECTION OF MARS' ENVIRONMENT****A. THERE ARE NO LEGAL RESTRICTIONS ON STATES' CYBER-ACTIONS**

According to the decision of the PCIJ in Lotus “restrictions upon the independence of States cannot...be presumed.”¹ The decision gave rise to the *Lotus principle* holding that when there are no rules of international law, states are free to act at their discretion and when it is unclear whether norms apply, their application is never presumed.² The Court has already based its decisions on this principle.³ “Where there is State will, there is international law: no will, no law.”⁴ States have not yet expressed their will with regard to the public international legal regulation of inter-state cyber-operations.⁵ The existing documents only touch upon cyber activities by private individuals, not inter-state cyber activities⁶. Cyber-operations have taken place in international relations: operation against Iranian nuclear facilities,⁷ cyber-operations in Estonia,⁸ cyber-conflict in Kosovo.⁹ However, states did not express their will to consider such actions as violation of international law. As neither states' will nor cyber-specific norms exist, states are free to act at their discretion in cyberspace.

¹Lotus, p.18

²Handeyside, p.79

³Nicaragua, para 269, analyzed by Handeyside, p.86; Kosovo, para 84, analyzed by Hertogen, p.902-903;

⁴Pellet, p.22

⁵TM 2.0, p.3

⁶Convention on Cybercrime; Convention on Automatic Processing; AP to Cybercrime Convention, Regulation 2016/679; Directive 2016/680; Directive 2016/1148; Directive 2013/40/EU

⁷Stuxnet

⁸Estonia 2007

⁹Kosovo Conflict

B. KALVION’S ACTIONS CANNOT BE QUALIFIED AS A CYBER-ATTACK

The Applicant claims that Kalvion’s actions constitute a cyber-attack.

There is no “cyber-attack” definition in the cyber-related Council of Europe’s Conventions,¹⁰ European Union acts,¹¹ UN General Assembly resolutions.¹² Domestic cybersecurity and data protection legislation of different countries¹³ also lack definition of a “cyber-attack”. Attempts to define a cyber-attack at the international level have been unsuccessful.¹⁴ It logically follows that there was no necessity for states to mark out the term of “cyber-attack” and in the absence of state will this notion lacks legal contents. Though there exist several doctrinal definitions,¹⁵ in the absence of state will it is impossible to deduce legal one .

Even if it is possible to accept the doctrinal definition of Tallinn Manual 2.0, which is reflected in other sources,¹⁶ Kalvion’s actions do not qualify as a cyber-attack. According to this definition, cyber-attack is a cyber-operation towards objects that is reasonably expected to cause damage or destruction to objects.¹⁷ The majority of Tallinn Manual experts do not qualify the interference with functionality, which does not require the replacement of physical components, as damage to the object.¹⁸ To restore the functionality of Neapilia’s control system

¹⁰Convention on Cybercrime; Convention on Automatic Processing; AP to Cybercrime Convention

¹¹REGULATION 2016/679; DIRECTIVE 2016/680; DIRECTIVE 2016/1148; DIRECTIVE 2013/40/EU

¹²Res.55/63; Res.56/121; Res.57/239; Res.58/199; Res.64/211; Res.53/70; Res.67/27; Res.69/28; Res.70/237

¹³Information Technology Act; Cybercrimes Bill; Data Protection Act; Cybercrime Act; Cybersecurity Bill; Online Crime Act

¹⁴Hathaway/Crootof, p.824

¹⁵TM 2.0, p.415; Hathaway/Crootof, p. 826; Lin, p.63

¹⁶Report 31IC/11/5.1.2, p.37; Memorandum for Chiefs, p.5; Military Dictionary; NATO Glossary, p.2-C-11

¹⁷TM 2.0, p.415

¹⁸TM 2.0, p.417 (para 10)

it was only required to install a new system,¹⁹ not to replace its physical components, therefore, Kalvion's cyber-operation did not cause damage. Thus, in any case Kalvion's actions cannot be qualified as a cyber-attack.

C. EVEN IF EXISTING INTERNATIONAL LAW APPLIES TO CYBER ACTIVITIES, KALVION'S CYBER-OPERATION WAS LAWFUL AS IT CONSTITUTED LAWFUL COUNTERMEASURES

An injured state may take countermeasures against the state responsible for an internationally wrongful act.²⁰ Kalvion has the right to resource mining on Mars (1). Neapilia committed several internationally wrongful acts that injured Kalvion's right (2). Kalvion's countermeasures in response to Neapilia's internationally wrongful acts satisfy the criteria of countermeasures lawfulness (3).

1. Kalvion has the right to resource mining on Mars

Kalvion recognizes that under the *ex injuria jus non oritur* principle state cannot benefit from an illegal act,²¹ thus the issue of Kalvion's compliance with its space law obligations shall be examined. Kalvion's mining activity is lawful since there is no direct prohibition on such activity in international space law (a) and in the absence of *lex specialis* prohibition, selective approach to different outer space resource types is impermissible(b).

a. There is no direct prohibition on resource mining on celestial bodies in international space law

Art.II OST provides for an obligation of non-appropriation of the outer space, the Moon and celestial bodies while Art.11 MA, *lex specialis* to OST provisions, provides for status of natural

¹⁹Facts, para 31

²⁰ Art. 49(1) ARS; Gabčíkovo-Nagymaros, para 83

²¹Eastern Greenland, p.45; Anzilotti dis.op., p.95; BROWNIE, p.509

resources in space as “common heritage of mankind” and prohibits establishment of property rights over them *in place*.²² These provisions do not contain prohibition on the use of resources, while the prohibition of the appropriation extends only to resources ‘*in place*’.²³ In the absence of a specific provision prohibiting extraction of resources, it “can be interpreted as a valid “use” under general international law” in an outer space context.²⁴ Moreover, exploitation of natural resources in space is an “allowable use of outer space and celestial bodies”, which does not contradict Art.II OST and is not affected by the MA.²⁵ State practice supports this approach.²⁶ Thus, Kalvion is not prevented by *lex specialis* norms from the resource extraction on Mars.

b. Selective approach to different outer space resource types is impermissible

Resources of the outer space *sticto sensu* such as orbits are daily used by states, and these activities are not considered as appropriation of outer space contrary to Art. II OST. The selective approach to legal regime of various types of space resources is impermissible: while orbits are used by states for their own purposes, mineral resources on celestial bodies can be extracted and used as well.²⁷ Thus Kalvion has a right to mining activity on Mars.

2. Neapilia committed several internationally wrongful acts that injured Kalvion’s right

A state may only take countermeasures against a state responsible for an internationally wrongful act.²⁸ An action or omission constitutes an internationally wrongful act when it is

²² Art. II OST; Art. 11 MA

²³ Blount&Robinson, p. 172-173; Doyle, p.315-316; Man, p.17-18

²⁴Blount&Robinson, p.172

²⁵Man, p.17-18

²⁶ US Space Act 2015, para 51303; Luxembourg Space Resources Act 2017, Art. 1

²⁷ Man, p.27

²⁸ARS, Art. 49(1)

attributable to a state and constitutes a breach of its international obligation.²⁹ Activities intended to change Mars' environment are attributable to Neapilia (a) and violated its international obligations (b-f).

a. Actions of SalPA Corp. are attributable to Neapilia

States shall bear international responsibility for national activities in the outer space carried out by non-governmental entities.³⁰ Authorization and supervision of activities in space by the appropriate state is the criterion of their determination as “national”.³¹ Neapilia authorised SalPA Corp. to carry out the Technology Trial, held a 49% equity stake in the company and supervised the Trial,³² therefore SalPA Corp.'s actions are attributable to Neapilia.

b. Neapilia violated the obligation not to disrupt the existing balance of Mars' environment under Art. 7(1) MA

States shall not disrupt the existing balance of celestial bodies' environment by introducing adverse changes in the environment.³³ Space environmental law cannot be considered separately from the concepts of terrestrial environmental law.³⁴ The adversity of environmental effects is assessed based on the adverse effects for Humankind³⁵, for example assessing social and health impact is a standard component of the Environmental Impact Assessment.³⁶ These are the states themselves that decide what is considered adverse for the international community.

²⁹ARS, Art. 2; Phosphates in Morocco, p.28; Consular Staff, p.29; Gabčíkovo-Nagymaros, p.54

³⁰Art. VI OST applies as *lex specialis* to ARS

³¹STUBBE, p.260

³²Facts, paras 14,15,19,28

³³Art. 7(1) MA

³⁴Lyall/Larsen, p.275

³⁵LOUKA, p.6

³⁶VIIKARI, p.262

Heads of states collectively representing nearly 9/10 of the Earth's population declared that environmental conditions of Mars should remain unaltered.³⁷ Therefore, it can be concluded that 9/10 of the Earth's population recognize changes to Mars' environment to be adverse.

Given such unanimous opinion of the states on the matter, Neapilia's actions qualify as "adverse" in violation of Art. 7(1) MA.

c. Neapilia violated the obligation not to interfere in the activities of other states on Mars under Art. 8(3) MA

State's activities on celestial bodies shall not interfere with the activities of other states there.³⁸

The independent body of experts stated that the cessation of communication between Kalvion's equipment was caused by the disturbances in the atmosphere and temperature conditions of Mars, which were possibly caused by the deployment of the OptronRay mirrors.³⁹ Despite the fact that experts' opinion stated probable causal link between Neapilia's programme and cessation of communication, the facts here should be applied cumulatively, which provides that preponderance of evidence leads to the necessary degree of certainty. Firstly, there were only two countries conducting operations on Mars. Secondly, Kalvion had had its mining activities for 5 years by the time communication ceased, and for these 5 years no changes in Mars atmosphere occurred making mining impossible.⁴⁰ Thirdly, the purpose of the "50 Rays" programme was to change environmental conditions of Mars,⁴¹ moreover the communication between 'Aeneas-1' and UMVs Mk-2 ceased precisely after the Trial has started.⁴² Thus the preponderance of evidence supported by all the above-mentioned facts points at a higher

³⁷Facts, para 25

³⁸Art. 8(3) MA

³⁹Facts, para 24

⁴⁰Facts, paras 17-24

⁴¹Facts, para 9

⁴²Facts, para 24

probability of the causal link between Neapilia's actions and cessation of communication rather than natural factors and cessation of communication. Thus, Neapilia has violated Art. 8(3) MA by interfering in the activities of Kalvion.

d. Neapilia violated its consultation obligation under Art. IX OST

State must undertake international consultations if: there is an activity or experiment planned by the state or its nationals (i); the state must have reason to believe the activity or experiment would cause potentially harmful interference (ii); and, the activity would potentially interfere with the activities of other states in the *peaceful* exploration and use of outer space (iii).⁴³

i. Technology Trial was an activity planned by Neapilia

"50 Rays" programme was planned by SalPA Corp. and endorsed by Neapilia. The Technology Trial was part of the programme⁴⁴ so the first requirement is met.

ii. Neapilia had reason to believe the activity would cause potentially harmful interference

The criterion of having a "reason to believe" in Art. IX OST should be interpreted as having knowledge that proves the assertion that a planned activity would cause potentially harmful interference.⁴⁵ "Harmful interference" in space constitutes obstruction that is injuring, damaging or interfering with normal operation.⁴⁶

Neapilia was expressly warned by Kalvion that their UUVs will be non-functional in new environmental conditions,⁴⁷ therefore Neapilia had necessary knowledge. Neapilia's Trial

⁴³Art. IX OST

⁴⁴Facts, paras 9,10

⁴⁵Mineiro, p.336

⁴⁶Black, p.5; Mineiro, p.337 using Merriam-Webster's; Annex to ITU Convention

⁴⁷Facts, para 23

interfered with UMGs' normal operation, which constituted harmful interference.

iii. Neapilian activity interfered with the activities of other states in the peaceful exploration and use of outer space

Restrictions on military uses of outer space prohibiting nuclear weapons and weapons of mass destruction, use of force or hostile acts and some specified forms of military activities in outer space and on celestial bodies are stated in Art. IV OST and Art. 3 MA⁴⁸. Kalvion's mining activities were in compliance with the above-mentioned provisions, thus they qualify as peaceful exploration and use of outer space.

Therefore, Neapilia had reason to believe that its actions would cause potentially harmful interference with the activities of Kalvion in the peaceful uses of Mars and, nevertheless, Neapilia did not undertake any international consultations, violating Art. IX OST.

e. Neapilia violated the obligation to pay due regard to the corresponding interests of other states under Art. IX OST

States shall conduct all their activities in outer space with due regard to the corresponding interests of other states.⁴⁹ The extent of "due regard" depends on the nature and importance of other states' interests as well as on the nature and importance of activities affecting those interests.⁵⁰ The "50 Rays" programme affected both Kalvion's vital interests of continuing mining activities and interests of other states in preserving Mars atmosphere unaltered.

Kalvion has suffered "longer and more severely than other states from the depletion of Earth's resources"⁵¹ and its mining activity had already proved to be a "long-term viable solution" for

⁴⁸Tronchetti, p.332

⁴⁹Art.IX OST

⁵⁰Chagos, para 519

⁵¹Facts, para 3

Kalvion's problems.⁵² Neapilia might claim that its interests of continuing the Trial were of predominate importance since the programme was intended to be a global, not a domestic solution. However, nothing would impede Kalvion's ability to share its effective technology with other countries suffering the consequences of the global crisis. The "50 Rays" programme, on the contrary, was merely at the stage of trial, the results of which were yet to be reported. Neapilia's Trial damaged precisely the radio waves communication between "Aeneas-1" and UMVs-2, while all Earth's radio communication technologies have the same functioning,⁵³ it means that Neapilia deprived all Humankind from the possibility to use such radio waves communication on Mars in the future.

The will of states to exercise special protection over the objects of common interest is evidenced by the notions of *jus cogens, erga omnes* and the concept of "common heritage" in international law.⁵⁴ Preserving Mars atmosphere according to the will of 9/10 of the Earth population is in the line with the recognition of Mars as the object of common heritage of mankind.⁵⁵

Neapilia's Trial damaged precisely the radio waves communication between "Aeneas-1" and UMVs-2, while all Earth's radiocommunication technologies have the same functioning,⁵⁶ it means that Neapilia deprived all Humankind from the possibility to use such radio waves communication on Mars in the future. Despite Kalvion's warning that its mining technology would be non-functional in new environmental conditions⁵⁷ and contrary to the expressed will of global community to preserve Mars atmosphere⁵⁸, Neapilia proceeded with the Trial in

⁵²Facts, para 18

⁵³NASA Communication

⁵⁴Villalpando, p.338, 400-406; Tanaka, p.333, 339; TRINDADE, p.4, 327

⁵⁵Art. 11(1) MA

⁵⁶NASA Communication

⁵⁷Facts, para 23

⁵⁸Facts, para 25

blatant disregard of the interests of both Kalvion and the majority of other states thus failing to pay due regard to the interests of other states in violation of Art. IX OST

Nevertheless Neapilia proceeded with the Trial which was intended to cause changes in Mars atmosphere⁵⁹.

3. Kalvion's countermeasures satisfy the criteria of countermeasures lawfulness

To be lawful countermeasures shall not affect particular obligations (a), shall be commensurate with the injury suffered (b) and be reversible (c). Before taking countermeasures states should call upon the responsible state to fulfil its obligations and notify of their decision to take countermeasures (d). Kalvion's actions meet all these requirements, therefore they can be qualified as lawful countermeasures.

a. Kalvion's countermeasures complied with art. 50(1) of ARS not to affect particular obligations

Countermeasures shall not affect: the obligation to refrain from the threat or use of force (i); obligations under peremptory norms of general international law (ii); obligations for the protection of fundamental human rights and obligations of humanitarian character prohibiting reprisals (iii).⁶⁰

i. Kalvion's cyber-operation does not constitute the use of force complying with Art. 2(4) of the UN Charter, Art. IV OST and Art. 3(2) MA

According to Art. 2(4) of the UN Charter, all UN Members "shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence

⁵⁹Facts, para 24

⁶⁰Art. 50(1) ARS; Declaration on Friendly Relations, princ.; Corfu Channel, p.35; Nicaragua, para 249; S.C.Res.316; S.C.Res.111;

of any State, or in any other manner inconsistent with the Purposes of the United Nations”.⁶¹ According to Art. 3(2) MA any threat or use of force on celestial bodies is prohibited.⁶² According to Art. IV OST celestial bodies shall be used exclusively for peaceful purposes.⁶³ Reference to the inconsistency with the Purposes of the UN in Art. 2(4) means that any threat or use of force is illegal, not only against territorial integrity or political independence,⁶⁴ thus, this norm applies, inter alia, to outer space. Art. 2(4) of the UN Charter, Art. IV OST and Art. 3(2) MA stipulate the same prohibition on the use of force in outer space. Such approach is supported by France that, in its reservation to the MA, states that it considers the prohibition under Art. 3(2) as nothing but a “reaffirmation” of the principle non-use of force under UN Charter.⁶⁵ Thus, actions qualified as the use of force are in violation of all three of the above-mentioned provisions.

A cyber-operation constitutes use of force when it has necessary *scale and effects*.⁶⁶ The Court used the criterion of “scale and effects” when qualifying actions as an armed attack⁶⁷ and it can be equally applied when qualifying cyber actions as use of force.⁶⁸ Most relevant element for the evaluation of “scale and effects”⁶⁹ is a physical damage to the objects.⁷⁰ Moreover, the level of destruction must be significant.⁷¹ State practice evidences that even when Stuxnet cyber-

⁶¹Art. 2(4) UN Charter

⁶²Art. 3 MA

⁶³Art. IV OST

⁶⁴TM 2.0, p.329 (para 2)

⁶⁵UNTC

⁶⁶Roscini, p.242; Ziolkowsky, p.172-173; TM 2.0, p.330; Lin, p.73

⁶⁷Nicaragua, para 195

⁶⁸TM 2.0, p.331 (para 1)1

⁶⁹Ziolkowsky, p.173; TM 2.0, p.334-336

⁷⁰Roscini, p.242; TM 2.0, p.333 (para 8); Ziolkowsky, p.173;

⁷¹Koh, p.4

operation caused 1000 machines to physically degrade,⁷² no state claimed it was the use of force.

Kalvion's actions locked Neapilian control system,⁷³ rendering it non-functional. Non-functionality cannot be considered as physical damage, since the system's physical condition remained unaltered, whereas physical damage usually consists of destruction of the object or of its part.⁷⁴ Therefore, Kalvion's operation did not meet the main element of physical damage and thus Kalvion's actions do not raise to the level of the use of force in their scale and effects.

ii. Kalvion complied with peremptory norms of general international law, in particular, the non-intervention principle

Kalvion's cyber-operation did not affect its obligations under peremptory norms of general international law.

The Applicant may argue that in particular, the principle of non-intervention was violated.

The principle of the non-intervention prohibits all states to intervene directly or indirectly in internal or external affairs of other states.⁷⁵ The Court stated several times that this principle is of customary nature,⁷⁶ as *opinio juris* in its respect is "numerous and not difficult to find".⁷⁷

Principle of non-intervention constitute peremptory norm of general international law.⁷⁸

Prohibited intervention has two elements: it affects matters of internal or external affairs and it is of coercive nature.⁷⁹

⁷²Stuxnet

⁷³Facts, para 31

⁷⁴Ziolkowsky, p.173; Koh, p.4; Roscini, p.242

⁷⁵Declaration on Friendly Relations, princ.3; Declaration on Rights and Duties; Nicaragua, para 205

⁷⁶Congo, paras 161-165; Nicaragua, para 202; Corfu Channel, p.35; Kohen, p.157

⁷⁷Nicaragua, para 202

⁷⁸Sette-Camara sep.op., p.199; Dupuy, p.8; Macdonald, p.870

⁷⁹Nicaragua, para 205; TM 2.0, p.314 (para 6); Kohen, p.161

Firstly, Kalvion did not intervene in internal or external affairs of Neapilia. “Internal affairs” are affairs “not, in principle, regulated by international law”.⁸⁰ Actions intended “to compel another State into compliance with its international obligations” cannot be qualified as intervention.⁸¹ Neapilia disrupted Mars environment,⁸² which led to the cessation of Kalvion’s mining activities⁸³ in breach of Neapilia’s international obligations under space treaties.⁸⁴ Hence, these affairs are regulated by international, not domestic law. Kalvion’s cyber-operation being intended to compel Neapilia into compliance with its international obligations does not affect matters of internal or external affairs.

Secondly, Kalvion’s actions were not coercive. In order to be coercive an act must deprive the state of its freedom of choice; force the state to act in an involuntary manner⁸⁵ and cause such effects directly.⁸⁶ Even if internal affairs of Neapilia were affected, such impact was not directly caused by Kalvion’s cyber-operation. SalPa Corp. itself made the decision to go bankrupt and the officially stated reason for the suspension of the programme was the fact that mirror technology could not be demonstrated to the satisfaction of the clients,⁸⁷ not the fact that the suspension was forced by Kalvion’s actions. Since there is no direct causal link between Kalvion’s actions and effects on Neapilia’s policies, the element of coercion is absent.

Lacking two necessary elements, Kalvion’s actions do not constitute intervention in violation of peremptory norm of general international law.

iii. Kalvion’s countermeasures did not affect other international

⁸⁰Nationality Decrees, p.24

⁸¹TM 2.0, p.317 (para 15)

⁸²Facts, para 28

⁸³Facts, para 24

⁸⁴Memorial I.B.1

⁸⁵Declaration on Friendly Relations, princ.3; TM 2.0, p.317 (para 18)

⁸⁶TM 2.0, p.320 (para 24)

⁸⁷Facts, para 32

obligations under Art. 50(1) ARS.

Kalvion's countermeasures did not affect obligations for the protection of fundamental human rights and obligations of a humanitarian character prohibiting reprisals, therefore, Kalvion complied with Art. 50(1) ARS.

b. The countermeasures complied with Art. 51 ARS as they were commensurate with the injury suffered

The countermeasures must be commensurate with the injury suffered, taking into account the gravity of the internationally wrongful act and the rights in question.⁸⁸ Rights in question for both, Neapilia and Kalvion, were the rights to conduct their space programmes aimed at resolving the crisis. Neapilia's internationally wrongful act led to the full termination of Kalvion's mining activities on Mars,⁸⁹ thus, Kalvion totally lost the opportunity to solve its resource crisis. Kalvion's cyber-operation locked Neapilia's Trial control system, so that Neapilia also lost the opportunity to resolve the crisis, which can be regarded as commensurate with the injury suffered by Kalvion. Moreover, the functionality of Neapilia's system can be restored.⁹⁰

c. Kalvion complied with Art. 49(3) ARS as its countermeasures are reversible

Countermeasures shall, as far as possible, be taken in such a way as to permit the resumption of performance of the obligations in question.⁹¹ Restoration of Neapilia's control system was possible by the reinstallation of a new control system.⁹² Since the restoration of the functioning

⁸⁸Art. 51 ARS; Air Services para 83; Gabčíkovo-Nagymaros, paras 85,87 Territorial Jurisdiction, p.27

⁸⁹Facts, para 24

⁹⁰Facts, para 31

⁹¹Art. 49(3) ARS; Gabčíkovo-Nagymaros, para 87

⁹²Facts, para 31

is possible, the countermeasures are reversible complying with Art. 49(3).

d. Kalvion complied with the obligation to fulfil procedural requirements under Art. 52 (1) ARS

Before taking countermeasures an injured state shall call upon the responsible state to fulfil its obligations, notify it of the decision to take countermeasures and offer to negotiate.⁹³ However, if countermeasures are urgent and necessary to preserve state's rights, a state has the right not to notify and offer negotiations.⁹⁴ Kalvion called upon Neapilia to fulfil its obligations before taking countermeasures.⁹⁵ However, Kalvion had the right not to notify Neapilia of countermeasures since countermeasures were urgent and necessary to preserve Kalvion's right to use Mars' resources, as environmental intervention had the potential of spoiling Mars' atmosphere to such an extent that mining would be impossible.

Moreover, an injured state has the right not to notify a responsible state when the countermeasures are necessary to preserve the right to take countermeasures themselves.⁹⁶ This exactly applies to the contemporary technologies of communications, when countermeasures undertaken by cyber-means could be also prevented by cyber-means promptly after the notification, which makes the procedure of notification frustrating for the purpose of countermeasures.⁹⁷ Kalvion had the right to undertake urgent cyber-countermeasures since Neapilia could prevent cyber-operation by cyber-means promptly after notification. Thus, Kalvion complied with procedural requirements under Art. 52(1) ARS and its countermeasures were lawful.

⁹³Art. 52(1)(a)(b) ARS; Air Services, paras 91,94-96

⁹⁴Art. 52(2) ARS

⁹⁵Facts, para 23

⁹⁶Art. 52 ARS, Commentary para 6

⁹⁷Art. 52 ARS, Commentary para 6

II. KALVION IS NOT LIABLE FOR ANY DAMAGE RELATING TO THE INTERRUPTION OF THE “50 RAYS” PROGRAMME NOR FOR ANY CONSEQUENCE ON SALPA CORP.

Neapilia has no standing to file the claim against Kalvion (A). Even if Neapilia has standing, Kalvion is not liable under Art. III LIAB (B) and Art. VII OST (C). In any event, Kalvion is not liable under general rules of international law (D).

A. NEAPILIA HAS NO STANDING TO FILE A CLAIM UNDER THE LIAB

The Court may reject to hold the proceedings on a claim irrespective of having jurisdiction.⁹⁸ While the Respondent does not contest the Court’s jurisdiction in the present case,⁹⁹ it submits that Neapilia has no *jus standi*,¹⁰⁰ the link allowing a state to bring a claim on precise legal rule,¹⁰¹ in respect of the loss of “50 Rays” programme (1) and damages of SalPA Corp. (2).

1. The damage to “50 Rays” programme was not caused to Neapilia

States are liable for damage inflicted on space objects elsewhere than surface of the Earth.¹⁰² Enterprises with 50,01% or more of equity stake owned by a state are state-owned.¹⁰³ The owner of the objects within the “50 Rays” programme was private Neapilian company SalPA Corp.¹⁰⁴ Neapilia owned only 49% in SalPA Corp.’s equity stake,¹⁰⁵ thus, the alleged damage was caused solely to SalPA Corp itself. While the damage was not inflicted on Neapilia, it has no standing to bring the claim for liability against Kalvion.

⁹⁸Rosenne, p.589

⁹⁹Facts, para 37

¹⁰⁰Art. 34(1) ICJ Statute; AMERASINGHE, p.117

¹⁰¹Martínez, p.4

¹⁰²Art. III LIAB

¹⁰³Kowalski, p.19-20

¹⁰⁴Facts, paras 8-9

¹⁰⁵Facts, para 14

2. Neapilia cannot invoke diplomatic protection of SalPA Corp.

Jus standi of juridical persons may be exercised by a state of its nationality¹⁰⁶ which is determined by a place of incorporation and state of “permanent and close connection”.¹⁰⁷ However, special rules of Art. XI(2) LIAB entitle juridical persons to pursue a claim directly to an allegedly liable state or via their state of nationality. Therefore, the existence of the juridical person under concern is a prerequisite for filing the claim.

By the moment of filing the claim, SalPA Corp. was liquidated.¹⁰⁸ Thus, Neapilia, that no longer constitutes a state of incorporation or state of close connection to SalPA Corp., lacks standing neither under diplomatic protection nor under Art. XI(2) LIAB.

B. KALVION IS NOT LIABLE UNDER ART. III LIAB

Condiciones sine quibus non of liability under Art. III LIAB are the damage caused in a place other than the surface of the Earth by space object of one launching state to space object of another launching state due to the fault of the latter. The alleged damage to Neapilian space objects was not caused by space objects launched by Kalvion but via a cyber operation (1) and occurred between space objects of one launching state (2). Consequences of Kalvion’s operation did not result in damage within the meaning of Art.III LIAB (3) and Kalvion is not at fault (4). Thus, Kalvion is not liable under Art. III LIAB.

1. Kalvion’s cyber operation does not equal actions of a launching state

While both Parties have ratified the LIAB,¹⁰⁹ it is only applicable to damage to space objects of one launching state by space objects of the other launching state inflicted either on the surface

¹⁰⁶Art. XI(2) LIAB; MCCORMICK, p.259

¹⁰⁷Art. 9 ADP; Commentaries to Art. 9 of ADP, para 3; Barcelona Traction, para 71

¹⁰⁸Facts, para 32

¹⁰⁹Facts, para 37

of the Earth, to the aircraft in the flight or on the place other than the surface of the Earth (as deduced from the preamble, articles, object and purpose under the rules of treaty interpretation).¹¹⁰

Pursuant to the definition of a “launching state” under Art. I(c) LIAB, it is the state “which launches or procures the launching of a space object” or a “State from whose territory or facility a space object is launched”. This definition is identical to the definition for the purposes of national registration of space objects.¹¹¹

The alleged damage occurred in a place other than the surface of the Earth, however, it did not occur due to the interaction of space objects of two launching states, one damaging the other. Proceeding from the ordinary meaning of the term “launching state” under the general rule of treaty interpretation¹¹², a state undertaking a cyber-operation does equal a state registering and launching objects into space. The alleged damage was inflicted by Kalvion’s cyber-operation from the Earth,¹¹³ not by space objects in respect of which Kalvion qualifies as a “launching state”. Thus, Kalvion’s cyber operation does not equal actions of a launching state and falls manifestly outside of the LIAB’s scope of application.

2. The alleged damage was caused by to OptronRay mirrors by “TheosAres” to both of which Neapilia is a launching state

Notwithstanding Rule 60 of the Tallinn Manual 2.0, providing for liability of a state controlling a space object launched by another state and using it to further inflict damage to a space object launched by yet another state, still Kalvion’s alleged control over a space object falls outside of the described space liability regime since both “TheosAres” and OptronRay mirrors were

¹¹⁰Art. 31 VCLT

¹¹¹Art. I(a)(i)(ii) RC

¹¹² Art. 31(1) VCLT

¹¹³Facts, paras 30-31

launched by Neapilia.

Pursuant to the definition of a “launching state” under Art. I(c) LIAB, being the state “which launches or procures the launching of a space object” or a “State from whose territory or facility a space object is launched” and given that these definitions are identical to the definition for the purposes of national registration of space objects,¹¹⁴ Neapilia is the “launching state” of “TheosAres” and OptronRay mirrors since it registered them.¹¹⁵

The damage to OptronRay mirrors was inflicted by “TheosAres”.¹¹⁶ Therefore, the damage occurred between space object of the same, not different launching state’s objects, thus the LIAB is not applicable.

3. Consequences of Kalvion’s actions did not result in damage within the meaning of Art.III LIAB

Kalvion’s actions did not result in the loss of the “50 Rays” programme (a) or consequential damages to SalPA Corp. in the form of loss of profits and liquidation (b). Thus, the criterion of “damage” under Art. III LIAB is not met.

a. Kalvion’s actions did not cause the loss of the “50 Rays” programme

The causal link between acts of a state and damage therefrom is the necessary element to impose liability upon such state.¹¹⁷ The LIAB does not specify the exact contents of “loss”, yet the concept of “loss” may be derived from state practice in the field of space insurance¹¹⁸ of such countries as USA, France and the Netherlands, having the definition in field-specific laws¹¹⁹

¹¹⁴Art. I(a)(i)(ii) RC

¹¹⁵Facts, para 2; Clarification, para 13

¹¹⁶ Facts, para 33

¹¹⁷Commentary to Art. 31 ARS, para 9

¹¹⁸Gaubert, p.911

¹¹⁹Gaubert, p.91814-9201

and some European Union's states resorting to general regulation on products' liability for the definition.¹²⁰ Following the adopted practice, "loss" means *inter alia* the impossibility to control an object by ground stations.¹²¹ "Total" loss of the programme also implies that elements of a programme are to be lost completely, not partially.

In the present case, the possibility to exercise control over OptronRay mirrors was not lost, but "locked"¹²² until the time when a new control system is installed.¹²³ Moreover, the only damage that occurred *in casu* - that is, change in the angle of two smaller OptronRay mirrors deployed for the Technology Trial¹²⁴, is not equivalent to the "total" loss of the "50 Rays" programme as whole. The "indefinite suspension" of the "50 Rays" programme was a strategic corporate decision of SalPA Corp,¹²⁵ not the immediate result of the change of the mirrors' angle. When announcing its decision to suspend the "50 Rays" programme, SalPA Corp. stated the inability to continue the program as the reason for the decision¹²⁶ and made no reference to Kalvion's actions as the cause of the suspension.

While in order to determine whether the programme was lost, the history of contractual arrangements and dealings may be taken into consideration.¹²⁷, contracts with "inherently speculative elements" are not subject to compensation.¹²⁸

In casu none of contracts for HAMS was concluded and some anticipated buyers only

¹²⁰EU Directive 1999/34/EC

¹²¹Gaubert, p.934

¹²² Facts, 31

¹²³ Facts, 31

¹²⁴ Facts, 10, 11

¹²⁵ Facts, 32

¹²⁶ Facts, 32

¹²⁷Commentary to Art. 36 ARS, para 27; WHITEMAN, p.1837

¹²⁸Commentary to Art. 36 ARS, para 27; Amco Asia Corporation 1984, 1986, 1990; AGIP SpA case

approached SalPA Corp., orders and contracts being pending.¹²⁹ Even though Kalvion's actions could have an impact on the "50 Rays" programme,¹³⁰ it was suspended by SalPA Corp.'s decision, as "the technology could not be demonstrated to the satisfaction of clients".¹³¹ That was the reason for cancellation of HAMs contracts.¹³²

Thus, the decision to discontinue the "50 Rays" programme does not flow from Kalvion's actions. The absence of a causal link between Kalvion's actions and the "total loss" of the "50 Rays" programme gives no rise for Neapilian claims towards Kalvion.

b. Kalvion's actions did not cause consequential damages to SalPA Corp.

Damage that does not flow directly and from the act, but from its consequences may be recoverable under LIAB.¹³³ However, the means of qualifying the damage as consequential is evaluation of whether such damage is compensable. Under Art.XII LIAB compensation paid to restore "the condition which would have existed if the damage had not occurred" is determined "in accordance with international law".

Neither loss of profit of SalPA Corp. (i) nor liquidation of SalPA Corp. (ii) qualify as compensable consequential damage to Neapilia.

i. Kalvion is not liable for the loss of profit of SalPA Corp.

Loss of profits is subject to compensation only when sufficient evidence shows that income was anticipated.¹³⁴ The evidence of loss of profit, allowing its recovery, is the existence of

¹²⁹Facts, paras 20, 32

¹³⁰Facts, para 33

¹³¹Facts, para 32

¹³² Facts, para 32

¹³³Christol, p.360; Diamond, p.668; Burke, p.282

¹³⁴Commentary to Art. 36 ARS, para 27

contractual arrangements.¹³⁵

While SalPA Corp. was approached by a number of States and high net-worth individuals willing to purchase HAMs “subject to successful demonstration of the first OptronRay mirrors during the Technology Trial”¹³⁶, the willingness to conclude a contract by no means constitutes a contract itself. Loss of potential buyers’ interest in purchasing any products, HAMs included, is part of market risks any business entity bears, SalPA being no exception.

Thus, evidence showing that income was anticipated and then lost due to Kalvion’s actions, is insufficient to trigger Kalvion’s liability for the loss of profits of SalPA Corp.

ii. Kalvion is not liable for the liquidation of SalPA Corp.

For SalPA Corp. liquidation to be compensated under the LIAB, the Applicant would have to prove that it occurred as a result of Kalvion’s actions. SalPA Corp. was a powerful private Neapolitan company with an historical interest in innovative technology¹³⁷, present in the highly risky space activities market for at least a decade.¹³⁸ Yet it filed for bankruptcy shortly after the change in the angle of two of the OptronRay mirrors¹³⁹, used just for the first stage of the “50 Rays” programme - the Technology Trial.¹⁴⁰ There is no sufficient evidence that such corporate decision of an experienced business entity was the result of Kalvion’s actions. Thus, Kalvion may not be held liable for SalPA Corp.’s liquidation.

¹³⁵ Commentaries to Art. 36 ARS, para 27; Cape Horn Pigeon case, p.63; Yuille Shortridge and Co. case; Sapphire International Petroleums, p.187,189; Factory at Chorzów, p.47-48,53; LIAMCO case, p.140

¹³⁶ Facts, 20

¹³⁷ Facts, 8

¹³⁸ Facts, 9

¹³⁹ Facts, 32

¹⁴⁰ Facts, 10

4. Kalvion is not at fault

The “fault” as a criterion of state liability under Art. III LIAB means an act or omission¹⁴¹ resulting either from intent or negligence.¹⁴² The LIAB was drafted and adopted long before ARS and at that time the notion “fault-liability” was equal to “responsibility”, while the result of an internationally wrongful act was considered to be a legal connection between the guilty, offending State and the injured State.¹⁴³ Understanding of “responsibility” as a consequence of wrongful act and “liability” as compensation for damage from non-prohibited activity came with ARS.¹⁴⁴

Firstly, Kalvion’s intent was to defend its access to space resources¹⁴⁵ by means of countermeasures, not to inflict damage to Neapilia. Secondly, ARS codifies countermeasures as circumstances precluding wrongfulness,¹⁴⁶ thus implying the absence of “international wrongful act” for the purposes of Art. III LIAB. Kalvion committed lawful countermeasures,¹⁴⁷ thus it is not at fault.

C. KALVION IS NOT LIABLE UNDER ART. VII OST

Art. VII OST enshrines liability for damage caused by space objects of one state to space objects of another state, thus constituting *lex generalis* for liability in the space while the LIAB serves as *lex specialis*.¹⁴⁸ If the liability of a state is not entailed under applicable *lex specialis*,

¹⁴¹Mazaroff, p.90

¹⁴²Dunk Liability, p.366; UN Doc A/AC.105/C.2/L.8/Rev.1, Art. II(2)

¹⁴³Ago Second Report, para 22; Ago Third Report, para 35

¹⁴⁴Sucharitkul, p.834; General Commentary to ARS, para 4.c

¹⁴⁵Facts, paras 23, 26, 36

¹⁴⁶Art. 22 ARS

¹⁴⁷Memorial I.D

¹⁴⁸Lachs, p.114; Smith, p.586

including absence of “fault”, no liability arises under Art. VII OST.¹⁴⁹ In such cases parties shall bear their own losses *i.e.* in Irridium-33 and Cosmos 2251 Collision.

Neapilia and Kalvion are parties to LIAB and OST.¹⁵⁰ Kalvion’s liability neither arises under the LIAB nor OST.

Thus Kalvion is not liable neither for the interruption of “50 Rays” programme nor for consequential damages of SalPA Corp under neither LIAB nor OST.

D. IN ANY EVENT, KALVION IS NOT LIABLE UNDER GENERAL INTERNATIONAL LAW

The term “liability” is also used to describe a duty to pay for damages arising from a wrongful act,¹⁵¹ *i.e.* pay compensation. The Respondent admits that a state which committed an internationally wrongful act is obliged to make compensation.¹⁵²

However, Kalvion resorted to countermeasures, which preclude wrongfulness of its actions.¹⁵³

Indeed, Art. 27(b) ARS provides for compensation of material loss caused by an act whose wrongfulness is precluded. Nevertheless, this compensation is strictly limited to direct loss.¹⁵⁴

While Neapilia did not suffer direct damage, but invokes Kalvion’s liability for the damage, caused to its juridical person,¹⁵⁵ compensation under Art. 27(b) ARS may not take place.

Thus Kalvion being not responsible for an international wrongful act¹⁵⁶ and taking lawful countermeasure¹⁵⁷ without direct material loss to Neapilia¹⁵⁸ has no obligation to pay

¹⁴⁹Smith, p.586

¹⁵⁰Facts, para 37

¹⁵¹Commentaries to Art. 31 ARS, para 12 referred to T.Weir “Complex liabilities”; Commentaries to Art. 47 ARS, para 4; Certain Phosphate Lands in Nauru, PO, para. 48

¹⁵²Art.36 ARS; Gabčíkovo-Nagymaros, para 152

¹⁵³Art. 22 ARS

¹⁵⁴Commentary to Art. 27 ARS, para 4; CRAWFORD, p.218

¹⁵⁵Memorial II.A.1.a

¹⁵⁶Memorial I.C

¹⁵⁷Memorial I.D

¹⁵⁸Memorial II.A.1.a

compensation for damage relating to “50 Rays” programme and SalPA Corp.

III. NEAPILIA IS LIABLE FOR THE CESSATION OF KALVION'S MINING ACTIVITIES ON MARS

Kalvion has standing to file the claim (A). Neapilia is liable for the cessation of Kalvion's mining activities on Mars under Art. III LIAB (B). Even if Neapilia is not liable under Art. III LIAB, it is liable under general international law (C).

A. KALVION HAS STANDING TO PRESENT THE CLAIM FOR DAMAGE INFLICTED TO SIENAR

Under general rules of diplomatic protection the criterion of incorporation prevails in determination of the nationality state eligible to exercise it,¹⁵⁹ and is supplemented by "permanent and close connection" criterion,¹⁶⁰ established by considering the place of business activities.¹⁶¹ The LIAB, binding upon Neapilia and Kalvion, is applicable in the present case as *lex specialis* to the rules on diplomatic protection. The LIAB does not prescribe exhaustion of local remedies as a requirement for presentation of claim by a state on behalf of its juridical persons.¹⁶²

SIENAR was incorporated in Kalvion.¹⁶³ For eight years, SIENAR exploited space resources of Mars for domestic purposes¹⁶⁴ under authorization byof Kalvion's national law.¹⁶⁵ Kalvion is a place of SIENAR's business activities. Unlike SalPA Corp., SIENAR continues to exist.¹⁶⁶ Thus while the corporation is functional and the two criteria – incorporation and close connection – are fulfilled, Kalvion has standing to present the claim for cessation of SIENAR's

¹⁵⁹Art. 9 ADP; Commentaries to Art. 9 ADP, para 6

¹⁶⁰Commentaries to Art. 9 ADP, para 3; Barcelona Traction, para 71

¹⁶¹Art. 9 ADP; Commentaries to Art. 9 ADP, para 5

¹⁶²Art. XI(1) LIAB

¹⁶³Facts, para 16

¹⁶⁴Facts, paras 17-18

¹⁶⁵Facts, para 16

¹⁶⁶Facts, para 32; Memorial II.A.I.b)

mining activities on Mars in the current proceedings.

B. NEAPILIA IS LIABLE UNDER ART. III LIAB

The LIAB is applicable to damage to Kalvion’s mining activities on Mars (1). Neapilia is liable as it inflicted damage due to fault (2) and as Kalvion complied with established procedure to file the claim (3).

1. The LIAB is applicable as Neapilia inflicted damage to Kalvion’s space objects

As was stated above,¹⁶⁷ the LIAB is applicable if the damage is caused by space objects of one launching state to space objects of another launching state. Neapilia inflicted damage to Kalvion’s space objects (a) by its space objects (b), thus the LIAB is applicable.

a. Kalvion’s “Aeneas-1” and UMVs-2 fall under the definition of a “space object”

Definition of “space object” is discussed above.¹⁶⁸ Aforementioned allows to define any object launched into space as “space object”. “Aeneas-1” and UMVs-2, being launched into space¹⁶⁹ fall under the definition of “space object” and, thus, Neapilia shall be found liable for the damage caused to them.

b. Neapilia qualifies as the “launching state” of space objects “TheosAres” and OprtronRay mirrors

States launching space objects in outer space and celestial bodies are liable for the damage caused by such objects towards other States.¹⁷⁰ “TheosAres” and OprtronRay mirrors are defined

¹⁶⁷Memorial II.A.2

¹⁶⁸Memorial II.A.2.a)

¹⁶⁹Facts, paras 17-18

¹⁷⁰Art. VII OST; Art.II, Art.III LIAB

as space objects¹⁷¹ in respect of which Neapilia is qualified as launching state,¹⁷² thus the LIAB is applicable.

2. Neapilia is liable under Art. III LIAB for damage inflicted by fault on Kalvion's mining activities on Mars

Art. III LIAB states criteria for the incurrance of the liability: damage and fault. Since the damage was inflicted by Neapilian space objects (a), what led to the cessation of Kalvion's mining activities on Mars (b) due to Neapilia's fault (c), Neapilia is liable for respective damage.

a. Neapilia's space objects inflicted damage to Kalvion's space objects

Launching states are liable for the damage caused to other states' space objects elsewhere than on the surface of the Earth.¹⁷³ Activities of Kalvion's space objects: "Aeneas-1" at the polar orbit, UMs-2 on Mars' surface (i) and flights of cargo ships (ii), taken in conjunction, constitute "Kalvion's mining activities" on Mars that suffered damage.

i. Neapilia damaged the functioning regime of Kalvion's "Aeneas-1" and UMs-2 by conducting "50 Rays" programme

According to Art. I(a) LIAB damage means either damage or loss of property. More detailed definition of damage to a space object can be found in the doctrine¹⁷⁴ introducing notion of indirect damage caused by a space object without direct physical collision,¹⁷⁵ for example, by electronic or laser interference,¹⁷⁶ which may be consequential aspect of space activity.¹⁷⁷ The

¹⁷¹Memorial II.A.2.a

¹⁷²Memorial II.A.2.b

¹⁷³Art.III LIAB

¹⁷⁴Art. 38(1)(d) ICJ Statute

¹⁷⁵Christol, p.362; Carpanelli, p.3; Lalin, p.306

¹⁷⁶Dunk, p.85

¹⁷⁷Carpanelli, p.3

loss of property is damage, which cannot be restored and that is “causally linked to the damage caused by the space object”.¹⁷⁸

Kalvion’s satellite “Aeneas-1” had been deployed in the polar orbit of Mars to communicate with UMVs-2¹⁷⁹ 19 months before the deployment of OptronRay mirrors.¹⁸⁰ The consequent alteration of Mars environment, including modifications in the temperature and pressure on the surface of Mars, led to the interruption of communication between the “Aeneas-1” and UMVs-2.¹⁸¹ Thus rendering UMVs-2 unfitted for their primary tasks.¹⁸² The mentioned alterations could not be eliminated until Neapilian “50 Rays” programme is terminated.¹⁸³ Consequently, Neaplia is liable for damage to Kalvion’s property (“Aeneas-1” and UMVs-2).

ii. Neapilian actions inflicted consequential damage on Kalvion’s natural and juridical persons

Launching states whose actions cause damage to natural or juridical persons, are liable for respective activities.¹⁸⁴ Since the LIAB does not specify what actions and consequences therefrom constitute “damage to persons” the treaty is to be interpreted under Art. 31(4) VCLT.¹⁸⁵ *Travaux préparatoires* for the LIAB show that the scope of “damage” was supposed to include “judicial legal costs and interest”¹⁸⁶ and “loss of profits and moral damage”, if the latter is in conformity with national law of respective liable state.¹⁸⁷ Thus “damage” is not limited to direct damage and may include consequential damages — either damage, loss or

¹⁷⁸Smith, p.587

¹⁷⁹Facts, para 18

¹⁸⁰Facts, para 19

¹⁸¹Facts, para 24

¹⁸²Facts, para 21

¹⁸³Facts, paras 21, 24

¹⁸⁴Art.I, Art.III LIAB

¹⁸⁵Carpanelli, p.5

¹⁸⁶UN Doc A/AC.105/12, An.1, Art. 1(b)

¹⁸⁷UN Doc A/AC.105/C.2/L.10, Art. II

injury flowing from consequences of the act.¹⁸⁸

Kalvion was suffering longer and more severely than other states from the depletion of Earth's non-renewable natural resources.¹⁸⁹ In the search of a solution SIENAR, company established in Kalvion, was authorized to exploit space resources,¹⁹⁰ for the benefit of Kalvion's population. Since the end of 2049 Kalvion cargo spaceships returning to the Earth were provided with necessary space resources.¹⁹¹ The capacity of mining increased in March 2051 providing a long-term viable solution for Kalvion's domestic energy crisis.¹⁹² Neapilia's actions not only damaged Kalvion's space objects, but led to the cessation of all mining activities and delivery of space resources to Kalvion.¹⁹³ Thus loss of profits and moral damage occurred to Kalvion's natural and juridical persons, including SIENAR, for which Neapilia is liable.

b. Damage caused by Neapilia led to the cessation of Kalvion's mining activities on Mars

Causal link between the act of the State and injury suffered by the other State is essential for obligation of reparation to arise.¹⁹⁴ "Damage" for the purposes of Art. III LIAB is understood as "loss of or damage to property".¹⁹⁵

Interference with Kalvion's mining activities on Mars by Neapilia constituted damage which could not be restored and prolongation of mining activities in new Mars' environmental conditions therefrom was impossible and ceased. Respective cessation occurred as Kalvion's UUVs-2 lost the communication with "Aeneas-1", which function was to control UUVs-2'

¹⁸⁸Christol, p.360

¹⁸⁹Facts, para 3

¹⁹⁰Facts, para 16

¹⁹¹Facts, para 17

¹⁹²Facts, para 18

¹⁹³Facts, paras 3

¹⁹⁴Commentaries to Art. 31 ARS, para 9; Commentaries to Art. 34 ARS, para 1

¹⁹⁵ Art.I(a) LIAB

operations and reveal Mars' resources for mining.¹⁹⁶ Despite Kalvion's repeated efforts, the communication was not restored.¹⁹⁷ Moreover, even if Kalvion managed to fix the communication, the prolongation of mining activities was impossible — new Mars environmental conditions created by Neapilia would make U MVs-2 unfit for their function,¹⁹⁸ that has been already proven in practice by the loss of communication between "Aeneas-1" and U MVs-2 at the beginning of the Mars environmental intervention.¹⁹⁹ Therefore, mere restoration of the communication will not re-establish the previous situation. Proceeding with mining activities at the same state²⁰⁰ would still be impossible since Neapilia has expressly refused to stop the process of Mars environmental intervention,²⁰¹ what led to the cessation of Kalvion's mining activities for which Neapilia is liable.

Consequently, Neapilia is liable for cessation of Kalvion's mining activities on Mars.

c. The damage to Kalvion's mining activities was caused due to Neapilia's fault

According to Art. III of the LIAB the fault of the launching state is the vital criterion for the determination of the liability. Nevertheless, the term "fault" is not defined by the LIAB. No cases appeared before judicial bodies where the fault of the launching state was established. Even the case of Iridium 33 and Cosmos 2251 collision²⁰² was not resolved under the LIAB due to conflicting information and difficulty as a matter of actual practice to prove the origin of damage.²⁰³ Thus Kalvion resorts to the definition given in doctrine that "fault" for the

¹⁹⁶Facts, para 18

¹⁹⁷Facts, para 24

¹⁹⁸Facts, para 21

¹⁹⁹Facts, para 24

²⁰⁰"Continuation", Oxford Dictionary

²⁰¹Facts, para 28

²⁰²Iridium 33 and Cosmos 2251 Collision

²⁰³Fasan, p.51

purposes of Art. III as “intent or negligence to cause damage in respect of someone else active in space”.²⁰⁴ “Negligence” in the terms of fault means “full knowledge that the damage will probably result”.²⁰⁵ The standard to determine the damages being covered by liability under the LIAB is the test for the foreseeability of damages.²⁰⁶

Even though Neapilia proclaimed the intent to solve overpopulation crisis,²⁰⁷ it acted negligently. Even if Neapilia could not itself foresee the damage arising from “50 Rays” programme to Kalvion’s space objects, Kalvion, firstly, drew Neapilia’s attention to possible negative consequences namely impossibility for the UVMs-2 to perform their primary function due to the “50 Rays” programme and, secondly, formally requested the cessation of the programme.²⁰⁸ However, Neapilia refused²⁰⁹ and only proposed Kalvion to enter into HAMS’ purchase agreement,²¹⁰ which did not resolve the problem of the loss of the UVMs-2’ functionality.

The criterion of “fault” in terms of Art. III of the LIAB is met since Neapilia acted negligently and, therefore, is liable for the cessation of Kalvion’s mining activities on Mars.

3. Kalvion complied with the requirements of filing the claim

Under the LIAB a claim for damage shall be presented through diplomatic channels (a) and within one year following the date of the occurrence of the damage or of the identification of the liable launching State (b).

a. Kalvion fulfilled the requirement to present a claim through diplomatic

²⁰⁴Dunk Liability, p.366

²⁰⁵Mazaroff, p.94

²⁰⁶Carpanelli, p.6-7; Christol, p.358-359

²⁰⁷Facts, paras 4, 19, 28

²⁰⁸Facts, paras 23; Memorial III.A.4.a

²⁰⁹Facts, paras 23, 28

²¹⁰Facts, para 23

channels

Diplomatic channels are the means to present the claim for compensation for damage to a liable launching state.²¹¹ While Art.X(1) LIAB does not specify what exact diplomatic channels should be invoked, Kalvion’s formal contact to Neapilia, the launching state, with the request of the cessation of the “50 Rays” programme,²¹² shall be considered as appropriate channel. Thus, the requirement to present the claim via diplomatic channels is met.

b. Kalvion complied with the term of filing a claim

A claim for compensation for damage may be presented to a launching state within the term of one year of occurrence of damage (i) or following the identification of the respective liable launching state (ii).²¹³

i. Kalvion filed the claim within one-year after occurrence of the damage

The damage to Kalvion mining activities was continuous and began in November 2052, when the Technology Trial began altering natural Mars environment and thus unfitting UMVs-2 to perform their functions.²¹⁴ Kalvion contacted Neapilia in March 2053 requesting the cessation of “50 Rays” programme in order to cease the damage to mining activities.²¹⁵ Therefore Neapilia was aware of the damage inflicted to Kalvion. Thus, having duly contacted Neapilia soon after occurrence of the damage, Kalvion complied with the requirement to present the claim within one-year term after occurrence of the damage.

ii. Alternatively, Kalvion complied with one-year term following

²¹¹Art. IX LIAB

²¹²Facts, para 23

²¹³Art. X(1) LIAB

²¹⁴Facts, paras 19, 21

²¹⁵Facts, para 23

the identification of the respective liable launching state

The final identification of Neapilia as the liable launching state took place in August 2055 when Neapilian Prime Minister responding to United Nations Security Council Resolution on urging to comply with international space law²¹⁶ declared the continuation of operations on Mars “environmental intervention”.²¹⁷ Kalvion’s claim on Neapilian liability for the cessation of Kalvion mining activities on Mars took place immediately after January 2056,²¹⁸ thus fulfilling the provision of the term “within one year following the date of the identification of the launching State” which would elapse only on August 2056.

C. IN ANY EVENT, NEAPILIA IS LIABLE UNDER GENERAL INTERNATIONAL LAW

Kalvion has already stated that liability as duty to compensate damage may arise not only as liability under the LIAB, but also as a consequence of committing an internationally wrongful act under ARS.²¹⁹

With this Kalvion submits, that the ground for claim for compensation — international wrongful act or damage — is the only difference between ARS and LIAB. Consequently, compensation under ARS and LIAB may be paid in a parallel with each other, if both grounds are met. Otherwise, discharge of compensation under LIAB does not preclude compensation under ARS if the international wrongful act is committed. LIAB and ARS have identical rules on determination of damage and compensation for it,²²⁰ therefore Kalvion’s damage is recoverable in a form of compensation.

²¹⁶Facts, para 27

²¹⁷Facts, para 28

²¹⁸Facts, paras 34, 36

²¹⁹Memorial II.C

²²⁰Memorial II.A.3,III.A.3

Neapilia committed an international wrongful act,²²¹ thus owes to Kalvion an obligation to compensate for the cessation of Kalvion's mining activities on Mars.

²²¹Memorial I.D.1

SUBMISSIONS TO THE COURT

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

- a) Kalvion’s action preventing the operations of the OptronRay orbital mirrors was a lawful, non-aggressive, necessary act to defend its access to space resources and to ensure the protection of Mars’ environment;
- b) Kalvion is not liable for any damage relating to the interruption of the “50 Rays” programme nor for any consequence on SalPA Corp.’s; and
- c) Neapilia is liable for the cessation of Kalvion’s mining activities on Mars.

Respectfully submitted on behalf of the Respondent,

Agents for the Respondent.

