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International Responsibility of an Occupying Power for Environmental Harm: The Case of Estonia

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International Responsibility of an Occupying Power for Environmental Harm: The Case of Estonia

Lisa M. Kaplan*

TABLE OF CONTENTS

I. INTRODUCTION	154
II. THE HISTORY OF SOVIET OCCUPATION IN ESTONIA	160
A. 1918-1940—A Newly Independent Nation Establishing a Strong Economy and Stable Government	163
B. 1940-1989—Soviet Control	165
C. 1991-Today—Cleaning the Environmental Damage From the Soviet-Russian Military Occupation	169
III. TWO CITIES DESTROYED BY RUSSIAN OCCUPATION—AN ENVIRONMENTAL DISASTER	171
A. Paldiski Naval Facility	172
B. Sillamäe's Radioactive Waste Facility	175
IV. GENERAL PRINCIPLES OF INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM	178
A. General Principles of International Law: The Basis of State Responsibility	180
B. State Responsibility to the Environment: Types of Liability for a Breach	182
1. Fault Responsibility (Negligence)	183
2. Objective Responsibility (Strict Liability)	184
3. Responsibility Without a Wrongful Act (Objective and Absolute)	184

* J.D., University of the Pacific, McGeorge School of Law, to be conferred May 2000; B.A., Criminal Justice, Seattle University, 1997. I would like to thank my friends and family who throughout this process provided me the love, support, and inspiration to finish this comment. I wish to especially thank the "journal crew," and our many nights together. Most importantly, I dedicate this comment to the memory of my grandmother. Your lessons in respect, gracefulness, and love will carry on with me through life.

C. <i>Applicability of General Principles as Limited by Rule of Due Diligence</i>	186
D. <i>Responsibility of States to Refrain from Transboundary Harm</i>	187
1. <i>The Stockholm Declaration—Principle 21</i>	189
2. <i>The Rio Declaration—Principle 2</i>	190
V. <i>APPLICABILITY OF GENERAL PRINCIPLES OF INTERNATIONAL RESPONSIBILITY TO THE ENVIRONMENTAL HARM IN ESTONIA</i>	191
A. <i>The Effect of the Troop Withdrawal Agreement (Russia—Estonia)</i>	192
B. <i>Applying General Principles of Responsibility Recognized under International Environmental Law to an Occupying Power for the Environmental Harm of Estonia</i>	195
1. <i>States Sovereign Rights to Exploit and Use Their Own Natural Resources</i>	196
2. <i>States Shall Refrain From Causing Transboundary Harm</i>	197
3. <i>States Duty of Good Faith and Due Diligence to Prevent Transboundary Harm</i>	199
VI. <i>CONCLUSION</i>	200

*They were truly the guests from hell.*¹

I. INTRODUCTION

There are no general principles² of international environmental law³ that require an occupying⁴ power to take responsibility for the environmental harms⁵ suffered

1. See Julian Borger, *Guests from Hell Leave a Huge Clean-up Bill: The Last Russian Troops in Estonia Have Finally Gone But Julian Borger in Paldiski Discovers that It Is Still Much Too Early to Breathe a Sigh of Relief*, The Guardian Foreign Page, Sept. 2, 1994, available in 1994 WL 9289288 (quoting Julian Borger in her reference to 50 years of Russian occupation in Estonia).

2. See EDITH BROWN WEISS ET AL., *INTERNATIONAL ENVIRONMENTAL LAW AND POLICY* 188 (1998) (stating general principles are recognized in Article 38(1)(c) of the ICJ Statute).

3. See *id.* (relating that general principles of international law are not to be confused with general principles of law). General principles is loosely defined as those common elements of all, or nearly all, domestic legal systems. *Id.* Thus, even though general principles of international law refer to the rules of customary international law, general principles may be assumed to also pertain to the international domain. *Id.* Therefore, general principles of international environmental law are those general principles and general principles of international environmental law, that specifically pertain to the customs and norms in respect to the environment. *Id.* at 509-526.

4. See BLACK'S LAW DICTIONARY 1079 (6th ed. 1990). Black's states occupation is "[t]he act or process by which real property is possessed . . . where a person exercises physical control over land." *Id.* Occupation defined in this Comment is when one nation installs their military regime as well as instilling their government upon

by the occupied territory. This is unfortunate because an occupying power often exploits the natural environment of the occupied country. For example, when the Republic of Estonia (Estonia),⁶ declared independence in 1991 from the Union of Soviet Socialist Republic (USSR), severe environmental damage was discovered as a result of their occupation.⁷ Two cities in Estonia provide the best examples of the mass destruction the USSR occupation reaped on their environment. A former Soviet uranium mill in Sillamäe, contains a lake of radioactive waste, which is threatening to leak into the Baltic Sea.⁸ In the city of Paldiski, the land surrounding the former Soviet naval base is inundated with radioactive nuclear waste, oil, and metals.⁹ The damages the USSR caused the Estonian environment is evidence that general principles of international environmental law must be applied to an occupying country to preserve and protect the occupied territory.

General principles gained recognition as a source of law under Article 38(1)(c) of the Statute of International Court of Justice (ICJ).¹⁰ The statute provides the court is to apply general principles of law recognized by civilized nations.¹¹ The definition of "civilized nations" is no longer applicable to general principles of international law today.¹² This statute was created in the early 1900s, when not all nations had governments and laws in place. Today, most countries have

another nation, thus becoming an occupying power of another territory not their own.

5. See BLACK'S LAW DICTIONARY 534 (6th ed. 1990). Environment is defined as the totality of physical, economic . . . factors which surround and affect the desirability and value of property. . . . *Id.* Harm is defined as the existence of loss or detriment in fact of any kind . . . resulting from any cause. *Id.* at 718. Thus, environmental harm is the damage and subsequent loss of any kind that occurs to the physical property or economic value of land.

6. See FEDERAL RESEARCH DIVISION LIBRARY OF CONGRESS, ESTONIA, LATVIA, AND LITHUANIA: COUNTRY STUDIES 3 (Walter R. Iwaskiw ed., 1996) [hereinafter ESTONIA COUNTRY STUDY] (describing Estonia as a country slightly larger than Vermont and New Hampshire combined); see also *Departing Russians Leave Environmental Headaches in Baltics*, CHI. TRIB., Aug. 31, 1994, available in 1994 WL 6480196 (stating Estonia is about the size of Vermont); see also Jon Henley, *Estonia is Left a Toxic Legacy Russian Troops in Baltic Pullout *Scandals taint Chernomyrdin* NATO offers bond*, THE GUARDIAN FOREIGN PAGE, Sept. 27, 1995, available in 1995 WL 9936639 (comparing Estonia's total area of 45,226 square kilometer(s) to the size of Switzerland, with a population of 1.5 million people).

7. See Sections II.B. and III. (detailing the extent of environmental harm to Estonia from the Soviet occupation).

8. See generally notes 185-208 and accompanying text (describing the Sillamäe uranium dump and the radioactive waste pool).

9. See generally notes 154-84 and accompanying text (detailing the extent of damage surrounding the former Soviet naval base in Paldiski).

10. See Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945). For a complete definition of Art. 38(1)(c) see U.N. CHARTER app. 707 (3rd ed. 1969). "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: . . . the general principles of law recognized by civilized nations. . . ."

11. Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945).

12. See REBECCA M. M. WALLACE, INTERNATIONAL LAW 22 (1992) (explaining "civilized nations" is no longer considered applicable in today's international community).

governments and laws in existence, therefore nullifying the term within the statute.¹³ Hence, what is meant by general principles?

General is an arbitrary concept, grasping what is commonly recognized in both international and municipal legal systems and the major legal systems of the world.¹⁴ For example, a state's responsibility not to cause transboundary harm is a commonly recognized principle applied by the ICJ and international tribunals.¹⁵ The ambiguous meaning of "general" allows national laws to change and remain applicable with the times.¹⁶ Therefore, since there is no universal definition of what general principles are their application in international law is not impeded by external restraints.¹⁷

International law¹⁸ has rapidly evolved and reformed in the past couple of decades. Today, nations are inserting recognized general principles of law in their international agreements. These changes in international law and the recognition of general principles are evidenced by the increasing membership in international agreements, treaties and conventions.¹⁹ Countries to these international agreements, are applying their own general principles of law recognized within the international agreement upon their actions. In the United Nations Environmental Programme

13. See BROWN WEISS ET AL., *supra* note 2, at 188 (remarking that "civilized nations" refers to those states which have an organized legal system).

14. See WALLACE, *supra* note 12, at 22-23 (stating what is understood in today's international community as general principles).

15. See *Trial Smelter*, (U.S. v. Canada), 3 R.I.A.A. 1905 (Apr. 16, 1938 & Mar. 11, 1941). Other examples of commonly recognized principles have been established in, *Temple Case*, ICJ. Rep. 1962, p. 6 (recognizing the principle of estoppel) and *Chorzow Factory Case* (Indemnity) (Merits), 17 P.C.I.J. Rep. ser. A, (1928) at 29.

16. See WALLACE, *supra* note 12, at 22 (observing that ambiguity is advantageous in the definition of general principles of law); see also PATRICIA W. BIRNIE & ALAN E. BOYLE, *INTERNATIONAL LAW AND THE ENVIRONMENT* 19 (1992) (discussing the indefinite meaning of general principles).

17. See WALLACE, *supra* note 12, at 22-23 (explaining further the importance of no external restraints in the application of general principles).

18. International law is not subject to a finite black letter rule of law definition, as it changes and conforms meaning with the changing of times. Webster's dictionary has found the exception, see WEBSTER'S SEVENTH NEW COLLEGIATE DICTIONARY 443 (7th ed. 1971) (defining the term of international law as, "a body of rules that control or affect the rights of nations in their relations with each other). For a legal definition, see BLACK'S LAW DICTIONARY 816 (6th ed. 1990). Black's Law Dictionary defines international law as, "[t]hose laws governing the legal relationship between nations." *Id.*; see also RESTATEMENT (THIRD) FOREIGN RELATIONS §101 (1986), codifying international law as: "Rules and principles of general application dealing with the conduct of nations and of international organizations and with their relations inter se as well as with some of their relations with persons, whether natural or juridical." *Id.*

19. See generally notes 301 & 305 (citing several membership agreements, treaties, and conventions recognizing general principles of international law).

(UNEP),²⁰ general principles of good faith²¹ and due diligence²² are acknowledged in the right to a protected and healthy environment from transboundary harm.²³ The application of these principles to an international agreement creates recognizable general principles of international law among all signatory nations. However, since the UNEP is non-binding, the general principles articulated within the agreement are not restricted in their ability to change application and meaning, therefore remaining in touch with the law at the time in question. The principle of not causing transboundary harm was first announced as a general principle of international environment law with the promulgation of Principle 21 of the Stockholm Declaration.²⁴ Principle 21 embodies a State's sovereign right over their own resources, but also the responsibility to ensure that activities within their jurisdiction do not cause transboundary harm.²⁵ Twenty years later, during the Rio Declaration, this principle was reaffirmed.²⁶ However general principles of international law may be defined, their importance in international law can be gauged when they are recognized and applied by nations to their responsibilities regarding the environment.²⁷

Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration have been widely accepted and adopted in numerous treaties, conventions and agreements, leading to their acknowledgment as general principles

20. See Declaration of the United Nations Conference on the Human Environment, June 16, 1972, Principle 21, U.N. Doc. A/C, 48/14 (1972), reprinted in 11 I.L.M. 1416 (1972) [hereinafter Stockholm Declaration].

21. See BLACK'S LAW DICTIONARY 693 (6th ed. 1990) (defining "good faith" as: "... [A]n intangible and abstract quality with no technical meaning or statutory definition, and it encompasses, among other things, an honest belief, the absence of malice and the absence of design to defraud or to seek unconscionable advantage, and an individual's personal good faith is concept of his own mind and inner spirit, and, therefore, may not conclusively be determined by his protestations alone"). *Id.*

22. See P.M. Dupuy, *International Law and Pollution*, in INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 337 (Edith Brown Weiss et al., 1998) (stating that due diligence is "the measure of international responsibility") [hereinafter P.M. Dupuy]; see also BLACK'S LAW DICTIONARY 457 (6th ed. 1990) (defining due diligence as: "such a measure of prudence, activity, or assiduity, as is properly to be expected from, and ordinarily exercised by, a reasonable and prudent man under the particular circumstances; not measured by any absolute standard, but depending on the relative facts of the special case"). *Id.*

23. See Stockholm Declaration, *supra* note 20, at princ. 21 (establishing the principle of refraining from causing transboundary harm).

24. See P.M. Dupuy, *supra* note 22, at 333-34 (articulating the duty not to cause substantial harm through transboundary pollution in the area under the jurisdiction of another State is deemed to have been expressly accepted in many treaties and agreements of States; thus recognizing Principle 21 of the Stockholm Declaration as a general principle of international law).

25. *Id.* at 334 (reporting the obligation of prevention among States exists only to the extent that the risk of causing international environmental damage is reasonably foreseeable).

26. See generally notes 304-14 and accompanying text (analyzing the Rio Declaration as a general principle of international law).

27. See generally note 305 and accompanying text (listing the agreements which have recognized Principle 21); see also P.M. Dupuy, *supra* note 22, at 334 (elaborating on the reaffirmation of the substance of Principle 21 by several international bodies).

of international environmental law.²⁸ The general principles of good faith and due diligence in international law are to be upheld when applying these declarations to the environment. These principles are observed together with a state's duty to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States, or of areas beyond the limits of national jurisdiction.²⁹ Recognition of these general principles creates a responsibility within a state not to cause transboundary harm.³⁰

The duty not to cause transboundary harm was first recognized as a general principle of international law in 1941 in the case of *Trail Smelter*.³¹ Here the Tribunal held that a State owes at all times a duty to protect other States against injurious acts by individuals from within their jurisdiction.³² This holding was adopted in the Stockholm and Rio Declarations as the general principle of international law to refrain from causing transboundary harm.³³ Furthermore, this principle has been adopted in two recent cases by the World Court,³⁴ as well as several recent treaties.³⁵ These recent adoptions lend credibility to the duty not to cause transboundary harm as a fundamental principle of international environmental law. From these decisions and treaties (one may conclude) a responsibility exists for all states to act with due diligence and good faith in not causing transboundary harm.³⁶

28. See generally note 305 and accompanying text (citing the agreements which have adopted the general principle to refrain from causing transboundary harm, recognized in Principle 21 of the Stockholm Declaration).

29. See P.M. Dupuy, *supra* note 22, at 334 (relating that states must take due care in upholding the fundamental principle to refrain from transboundary harm).

30. See BROWN WEISS ET AL., *supra* note 2, at 239 (defining transboundary harm as "where the activities of a state (state of origin) in its territory create pollution that causes damage to the territory of another state" (the affected state)).

31. See *Trail Smelter*, (U.S. v. Canada), 3 R.I.A.A. 1905 (Apr. 16, 1938 & Mar. 11, 1941). This case originated from the damage caused in the State of Washington by sulphur dioxide emitted since 1925 from a smelter plant at Trail on the Columbian River, 10 miles from the United States/Canadian border on the Canadian side. See also BIRNIE & BOYLE, *supra* note 16, at 89-90 (discussing the general holding of the *Trail Smelter* case). The court awarded the U.S. tribunal awards for the damages to the environment resulting from air polluting emissions out of a Canadian smelter. *Id.* at 90. Furthermore, the court concluded that "no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another." *Id.* at 90 & n. 39.

32. See BIRNIE & BOYLE, *supra* note 16, at 90 & n. 39 (restating the holding from the *Trail Smelter* case).

33. See Stockholm Declaration, *supra* note 20, at princ. 21.

34. See The Advisory Opinion for Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. 226 (July 8, 1996); see also Request for an Examination of the Situation in Accordance with Paragraph 63 of The Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France), 1995 I.C.J. 288 (Sept. 22, 1995).

35. See Stephen C. McCaffrey, *International Environmental Law*, reprinted in INTERNATIONAL ENVIRONMENTAL LAW AND POLICY, 504, 504-09 (BROWN WEISS ET AL., 1998) (listing several treaties which have adopted the principle to refrain from causing transboundary harm established in principle 21 of the Stockholm Declaration).

36. See *Trail Smelter*, *supra* note 15, at 1965. [N]o State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence. *Id.*

State responsibility refers to liability of one state to another for the non-observance of the obligations imposed by general principles of international law.³⁷ When due diligence is not observed and transboundary harm occurs, that state has breached its responsibility in observing general principles of international environmental law.³⁸ A breach of this type may occur for injury to the defendant state's nationals or their property. In the case of Estonia, Russia's occupation and subsequent environmental damage upon the land caused severe environmental harm to Estonia, as well as causing transboundary harm throughout the Baltic Sea.³⁹ Thus, because of Russia's occupation of Estonia and subsequent damage to the environment; Estonia and neighboring countries of the Baltic Sea are suffering from environmental harm.⁴⁰ Therefore, Russia as the occupying power of Estonia has breached its responsibility to refrain from causing transboundary harm to another state.⁴¹

A State has the responsibility to ensure that activities within their control do not cause damage to the environment of other States.⁴² Russia controlled Estonia during its fifty years of occupation.⁴³ Therefore, Russia is responsible for the environmental harm they caused by the oil and nuclear material in Paldiski and the radioactive waste lake in Sillamäe, which in return have caused transboundary damage to the Baltic Sea.⁴⁴ Therefore, this principle is applicable to hold an occupying power responsible for causing environmental harm to Estonia and subsequent transboundary damage to the neighboring States of the Baltic Sea.

This Comment focuses on the case of Estonia as an example of why applying general principles of international environmental law is necessary to hold an occupying power responsible for environmental damage. Part II of this Comment reviews the history and policies of the former USSR's occupation of Estonia and the subsequent environmental damage the occupation had to the land and the Baltic

37. See McCaffrey, *supra* note 35, at 504, 505-07 (discussing state responsibility for non-observance of general principles of international law).

38. See Riccardo Pisillo-Mazzeschi, *Forms of International Responsibility for Environmental Harm*, in INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM (Francioni & T. Scovazzi eds., 1991), reprinted in BROWN WEISS ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 511 (1998) (explaining the duty of due diligence as a state responsibility in observing the principle to refrain from causing transboundary harm) [hereinafter Pisillo-Mazzeschi].

39. See *infra* notes 150-90 and accompanying text (explaining how the environmental harm and pollution of Sillamäe and Paldiski is endangering the health of the Baltic Sea).

40. See generally *infra* notes 154-208 and accompanying text (presenting the damage to the environment in the cities of Paldiski and Sillamäe and how they are threatening the waters of the Baltic Sea).

41. See Stockholm Declaration, *supra* note 20, at princ. 21 (establishing the principle to refrain from causing transboundary harm).

42. See generally notes 294-312 and accompanying text (defining the principle to refrain from causing transboundary harm established in principle 21 of the Stockholm and principle 2 of the Rio Declaration).

43. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18, 24 (stating the era of Soviet occupation began in 1940 and ended in 1991, with Estonia's reestablishment as an independent state).

44. See generally *infra* notes 150-190 and accompanying text (laying out the damage to both Paldiski and Sillamäe which both lie on the coast of the Gulf of Finland that turns into the Baltic Sea).

Sea.⁴⁵ Part III examines the impact the USSR's occupation had upon the environment by looking at the destruction, and cost of reparation of two Estonian cities.⁴⁶ Part IV discusses the scope and applicability of general principles of international environmental law and the fundamental duty not to cause transboundary harm. Part V begins by analyzing the enforceability of the Troop Withdrawal Agreement, specifically as to whether Estonia waived its right to hold Russia responsible for the environmental harm. Disregarding the fact that Estonia may have waived its right to hold Russia responsible, this Comment will apply the general principles of environmental law as recognized under the Stockholm⁴⁷ and Rio Declaration⁴⁸ to the environmental damage in Estonia. Specifically, Part V analyzes the responsibility of Russia as an occupying power under the general principle of international environmental law to refrain from causing transboundary harm for the environmental damage of Estonia. Part VI concludes, the application of the duty not to cause transboundary harm under general principles of international environmental law is necessary to hold the occupying power responsible for environmental harm to the occupied territory.

II. THE HISTORY OF SOVIET OCCUPATION IN ESTONIA

World War II (WWII) was the most environmentally devastating war ever. The war brought mass environmental destruction to many countries, including Estonia.⁴⁹ At one point during WWII the Soviet army bombed several cities along the Narva river, in Estonia, destroying everything in sight, while attempting to regain control of Estonia from the Germans.⁵⁰ Compacting the effects from the environmental destruction of WWII, Estonia lost their independence and became an occupied territory of the USSR.⁵¹

45. See generally Enn Otsa, *Military Environment* <http://www.ciesin.ee/ESTCG/NATURE/ENVIRONMENT93/Military_Env.html> (visited Jan. 18, 1999) (copy on file with *The Transnational Lawyer*) (presenting a detailed report of the damage to the Estonian environment from the 50 years of Soviet occupation) [hereinafter Otsa].

46. *Id.*; see generally notes 125-208 and accompanying text (detailing the harm to the Estonian land).

47. See Stockholm Declaration, *supra* note 20, at princ. 21 (establishing the general principle of international environmental law to refrain from causing transboundary harm).

48. See Rio Declaration of 1997 UN Conference on Environment, Principle 2, 31 I.L.M. 874 (1992) (reaffirming the general principle of international law established in principle 21 of the Stockholm declaration)[hereinafter Rio Declaration].

49. See generally Rymn James Parsons, *The Fight to Save the Planet: U.S. Armed Forces "Greenkeeping," and Enforcement of the Law Pertaining to the Environmental Protecting During Armed Conflict*, 10 GEO. INT'L ENVTL. L. REV. 441, 462-466 (1998) (relating the environmental damage which occurs during armed conflict).

50. See *Soviet Occupation (1940-91)*, EST. COUNTRY GUIDE (visited Feb. 21, 1999) <<http://www.ciesin.ee/ESTCG/HISTORY/History3.html>> (copy on file with *The Transnational Lawyer*) (explaining the history of the Soviet - Russian occupation of Estonia from 1940-1991).

51. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18.

Estonia lost their independence in 1939 with the signing of the Nazi-Soviet Nonaggression Pact,⁵² which divided Eastern Europe between Hitler and Stalin.⁵³ The secret protocol within the Pact gave Stalin possession of Estonia.⁵⁴ Stalin, threatening force unless Estonia acquiesced to occupation,⁵⁵ wanted to use the Estonian territory as a buffer to protect mainland Soviet Union from an attack by northern Europe.⁵⁶ By June of 1940, the Soviet forces had completely occupied Estonia.⁵⁷ In their efforts to protect mainland USSR, the Estonian environment suffered massive destruction by the Soviet military preparing for a possible attack. Soviet oppression increased when the Soviet military established blockades on Estonian air space and territorial waters.⁵⁸ As a result of the blockade, more Red Army troops entered Estonia, occupying close to 570 military bases across Estonia.⁵⁹ Briefly from 1941 to 1944, the Soviet occupation of Estonia was interrupted during which the Germans defeated the Soviet forces. But at the end of WWII, the Soviet Union re-occupied Estonia.⁶⁰

During the next 50 years of the USSR occupation, the USSR contaminated Estonian land by using it as a testing ground for nuclear power.⁶¹ Other by-products of the USSR's occupation was its manufacturing of toxic waste,⁶² dumping of jet fuel into the soil,⁶³ and unexploded missiles littered on islands off of the Pakri

52. See *id.* (explaining that the Nazi-Soviet Nonaggression Pact, was also known as the Molotov-Ribbentrop Pact); see also *Estonian History in Brief (1940-1991)*, ARTS & HUMANITIES (visited Feb. 3, 1999) <<http://www.ibs.ee/ibs/history/brief/brief3.html>> (copy on file with *The Transnational Lawyer*) (detailing that the Pact between Hitler and Stalin was signed on August 23, 1939).

53. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18.

54. See *id.*

55. See *Estonian History in Brief (1940-1991)*, *supra* note 52 (claiming after the threat of force by the USSR, Estonia signed an agreement in September, which resulted in 25,000 Red Army soldiers being brought into Estonia); see also ESTONIA COUNTRY STUDY, *supra* note 6, at 18.

56. See *Eastern, Central Europe: Baltics Optimistic Soviet Damage to Environment can be Reversed*, WORLD ENV'T REP., Dec. 21, 1994, available in 1994 WL 2519610 (stating how the Soviet Union used Estonia during WWII as a buffer to protect the mainland).

57. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18 (stating Stalin alleged that Estonia had violated the terms of the mutual assistance treaty, therefore he was justified in occupying Estonia).

58. See *Soviet Occupation (1940-91)*, *supra* note 50 (proclaiming direct aggression by the Soviets against Estonia began with the blockade).

59. See *Environmental Clean Up After 50 years of Soviet Russian Military Occupation Will Cost Over Four Billion USD*, ESTONIA REV. (Aug. 18-21, 1994) <<http://www.vrn.ee/eng/review/1994/94er1921.08e.html>> (visited Feb. 14, 1999) (copy on file with *The Transnational Lawyer*).

60. See generally ESTONIA COUNTRY STUDY, *supra* note 6, at 17-24.

61. See Otsa, *supra* note 45 (detailing the danger of radioactive pollution from the radioactive waste lake at the former uranium facility in Sillamäe and from the two nuclear reactors in Paldiski).

62. See *id.* (accounting that 20 tons of napalm was left unguarded in Männiku and large amounts of smoke bombs, ignition mixtures, and chlorine picrine were left in storage at the Tapa airfield).

63. See *id.* (explaining that the Tapa military airfield has fuel immersed in the soil polluting most of the surface under the town); see also *Environmental Damage From the Soviet-Russian Military Occupation*, ESTONIA TODAY (visited Jan. 18, 1999) <<http://www.ciesin.ee/ESTCG/NATURE/94milenv.09i>> (copy on file with *The Transnational Lawyer*) (detailing the surrounding area of the airfield is contaminated with dumped fuel two to eight meters deep).

Peninsula.⁶⁴ As a result of the USSR's exploitation of the Estonian environment in favor of industrialization,⁶⁵ billions of dollars must now be spent to restore the contaminated land left damaged by Soviet troops.⁶⁶

After Estonia declared its independence in 1991,⁶⁷ the government requested compensation for the cost of cleaning up the environmental damage wrought from the Soviet military occupation.⁶⁸ However, Russia refused to claim responsibility or pay for any clean up costs.⁶⁹ There are several reasons why Russia refused to compensate Estonia⁷⁰. One reason is that Estonia and Russia signed the Troop Withdrawal Agreement in 1994.⁷¹ In this Agreement Russia claims the no-liability clause denounces any responsibility for the environmental disaster on Estonian soil.⁷² A second and more practical reason, is that Russia does not have the financial capacity to pay for the clean up costs.⁷³ Thus, for the next couple of decades Estonia will carry the burden and cost of cleaning up the cities and areas devastated with environmental damage from the Soviet occupation.⁷⁴

64. See Otsa, *supra* note 45 (verifying nearly 1,000 hectares of land on Pakri Island has been denuded by bomb craters). At the Utsala artillery range the bombing has destroyed approximately 500 hectares. *Id.* The flora and fauna surrounding the other artillery ranges has been obliterated by fires, shell and bomb craters, and trenches. *Id.* In addition there are large quantities of unexploded mines surrounding the bases. *Id.*

65. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 18-22 (discussing the Soviet's mission of industrialization).

66. See CIS the Costs of the Soviet Occupation's Environmental Damage Released, ESTONIA REV. (Oct. 25-27, 1993) (visited Jan. 18, 1999) <<http://www.vm.ee/search/oop/afulh.../searcheng.html&CiHiliteType=Full>> (copy on file with *The Transnational Lawyer*) (estimating that in 1993 the cost of the environmental damage cause by the Soviet military as 15.28 billion kroons (US\$1.15 billion) during their fifty years of occupation).

67. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 19-22. In 1989, the USSR broke up into individual Republics. *Id.* The Republic of Russia, retained control of the Baltic States, one of which was Estonia. *Id.* Thus, in 1991, Russian troops were occupying and controlling Estonia. *Id.*

68. See *Estonia Doesn't Expect Russia to Pay for Environmental Damage*, BALTIC NEWS SERV., Dec. 1, 1998, available in 1998 WL 20198615 (acknowledging that Estonian official believe it is unlikely that Russia will compensate for any of the environmental damage). Officials also verify it isn't known if anyone has ever sought officially to have Russia compensate for the environmental damage. *Id.*; see also Borger, *supra* 1 (citing Mart Laar, the Prime Minister of Estonia, who admitted that he did not expect the Russians to pay for the environmental damage).

69. See generally *Estonia Doesn't Expect Russia to Pay for Environmental Damage*, *supra* note 68 (reporting that Russia has neither compensated the other post-socialist countries for the environmental damage after withdrawal of its armed forces).

70. See *Departing Russians Leave Environmental Headaches in Baltics*, *supra* note 6 (proclaiming that Russia has refused to compensate the Baltics for the environmental damage).

71. See *infra* notes 312-41 and accompanying text (discussing the Soviet-Russian & Estonia Troop Withdrawal Agreement).

72. See Borger, *supra* note 1 (stating that the Estonia government plans to send a bill for the environmental damage, even though the Troop Withdrawal Agreement included what appeared to be a waiver on such claims).

73. See generally notes 68-72 and accompanying text (discussing Russia's unwillingness to pay for environmental damage, which also lends to the conclusion that Russia's financial situation can not compensate for all the damage their occupation caused).

74. See *Estonia Drawing up List of Environmental Damages Caused by Russian Troops*, ESTONIA REV. (Sept. 20-26, 1993) (visited Feb. 14, 1999) <<http://www.vm.ee/eng/review/1993/93092026.html>> (copy on file with *The Transnational Lawyer*) (relating that most of the assistance for cleaning up the damage is coming from Finland, Sweden, Norway, Denmark and Germany).

Hypothetically, if the USSR had never occupied Estonia, its government would be focusing largely on maintaining a strong economy and government,⁷⁵ instead of cleaning up the massive environmental destruction left by Soviet military forces.⁷⁶ There are no guarantees that the Estonian environment would be healthy today. But in the 1940's Estonia was still a newly independent nation concentrating primarily on a strong economy and stable environment⁷⁷ when the nuclear reactors were built in Paldiski⁷⁸ and the Uranium facility in Sillamäe.⁷⁹ Therefore, it is more than likely that Estonia would not have had the capital⁸⁰ as a young nation to build such facilities which contributed substantially to the massive environmental devastation within Estonia and to the Baltic Sea.⁸¹

A. 1918-1940—A Newly Independent Nation Establishing a Strong Economy and Stable Government

Estonia shares its eastern border with Russia, its southern border with Latvia, and its northern and western side with the Baltic Sea.⁸² Throughout its history Estonia has been occupied and controlled by its surrounding neighbors.⁸³ At the fall of the tsarist regime in 1917, Estonia had its first glimpse of independence for the

75. See generally ESTONIA COUNTRY STUDY, *supra* note 6 and accompanying text (explaining the history of the Estonian government and their process to create a stable economy after declaring independence in the 1920's).

76. *Id.*

77. See *Estonian History in Brief (1918-1939)*, ARTS & HUMANITIES <<http://www.ibs.ee/ibs/history/brief/brief2.html>> (visited Feb. 3, 1999) (copy on file with *The Transnational Lawyer*) (discussing the Estonian economy, internal politics and culture after independence); see also *Independence (1920-1940)*, EST. COUNTRY GUIDE <<http://www.ciesin.ee/ESTCG/HISTORY/History2.html>> (visited Feb. 21, 1999) (copy on file with *The Transnational Lawyer*) (detailing Estonia's strive to create a strong economy and establish a stable government after declaring independence in the 1920's).

78. See *The Paldiski Nuclear Facilities: A Precedent in International Cooperation*, EST. TODAY (1995) (visited Feb. 21, 1999) <<http://www.vmeeleng/estoday/1995/9509pal.html>> (copy on file with *The Transnational Lawyer*) (reporting that the first nuclear reactor was built in 1964 and the second one in 1979).

79. *Environment Body Puts Sillamäe Radioactive Deposit on 'Hot Spot' List*, BALTIC NEWS SERV., May 25, 1998, available in 1998 WL 8548800 (stating that the uranium plant in Sillamäe was originally built in 1948).

80. See generally *Independence (1920-1940)*, *supra* note 77 (discussing the instability of the Estonian government and economy after their declaration of independence from the Soviet Union).

81. See generally notes 154-214 and accompanying text (summarizing the damage to the environment from the Paldiski and Sillamäe facilities).

82. See *EU/Baltic States: Three More Association Partners for the EU*, EUR. REP., ISSN: 1021-4267, Feb. 7, 1998, available in 1998 WL 8800528.

83. See ESTONIA COUNTRY STUDY, *supra* note 6, at 12 (explaining throughout the 700 years of history, Estonia has been subject to the occupation of many of the surrounding Baltic countries).

first time in over 700 years.⁸⁴ Following the end of World War I, Estonia first declared its independence as a nation on February 24, 1918.⁸⁵

The first twenty years of independence was impacted by the Soviet Union seeking to regain control and occupy Estonian land once again. During the first two years of independence Estonia was constantly at war against both the Russian Bolsheviks and the Baltic German forces.⁸⁶ By the end of 1919, because Estonians had grown weary of the constant struggle for independence approximately two-thirds of Estonia was back under Soviet occupation and control.⁸⁷ In a last effort to retain their independence, Estonians counter-attacked and freed the land the Soviets had re-occupied.⁸⁸ Soviet occupation continued through the autumn of 1919, and on February 2, 1920, the Tartu Peace Treaty was signed, wherein for the first time the USSR recognized the independence of Estonia as a country.⁸⁹ For the next couple

84. See *id.* (detailing the 700 years of foreign rulers). During the 1200's, the Estonians were under control of German crusaders seeking to impose Christianity upon them. *Id.* The Estonians were finally conquered by the Teutonic Knights in 1227. *Id.* Later the Danes moved in and invaded Estonia from the north and together with the Germans they settled down as nobility, and Estonians over time were subordinated as serfs. *Id.* Later in the 1300s Estonians staged an uprising forcing the Danes to relinquish their control to the Germans. *Id.* The Germans ruled Estonia for the next two centuries without much war. *Id.* In the 1500s, Ivan IV (the Terrible) invaded the Baltic region in 1558; engaging Sweden and Poland in a twenty-five year struggle for control. *Id.* at 14. Russians nearly wiped out the forces of the Teutonic Knights, but Swedish and Polish intervention reversed the Russian gains and force Ivan eastward. *Id.* By 1629, Sweden eventually won most of the territory. *Id.* Under Swedish rule the land of Latvia was divided into what is now Estonia and Latvia. *Id.* Northern Estonia was incorporated into the Duchy of Estland, and the southern part into Latvia. *Id.* This division of the countries lasted until 1917. *Id.* During Swedish control the German based nobility retained and strengthened its position, but the Estonian peasants situation worsened. *Id.* In the 1700s, Peter I (the Great) attempted to conquer Estonia, but failed. *Id.* Peter I's second attempt to conquer Estonia ended with victory for Russia in 1710. *Id.* This victory was Russia's acquisition of a "window to the West." *Id.* Tsarist Russia for the next 200 years recognized the rights and privileges for the local German nobility, although under Catherine II (the Great), the Baltic Germans developed a strong loyalty to the Russian tsars and guarantors of their landed privileges. *Id.* at 14-15.

85. See *id.* at 15-20. Estonia's first declaration of independence came around the turn of the twentieth century, when Estonians were fast developing an independent grasp on society and their nation. *Id.* The Estonian culture began awakening in the 1850s and 60s. *Id.* Finally in the early 1900s political demands for Estonian autonomy found strong expression during the Revolution of 1905, which ended with the organization of an All-Estonian Congress. *Id.* In November of 1917 the Bolsheviks took over Petrograd, Russia as well as Estonia, until Germany occupied Estonia in February of 1918. *Id.* at 16. When the Bolsheviks retreated and the Germans entered Tallinn, the Committee of Elders (or standing body) of the Maapaev declared the country independent on February 24, 1918. *Id.*; See also, Amy L. Elson, *Baltic State Membership in the European Union: Developing a Common Asylum and Immigration Policy*, 5 IND. J. GLOBAL LEGAL STUD. 317, 322 (1997); Cord Meyer, *Estonia's critical role in Europe*, THE WASH. TIMES, A; Commentary, Apr. 12, 1996, available in 1996 WL2951817. See also, EU/Baltic States *supra* note 82 (explaining that the former USSR had occupied Estonia since 1780).

86. See *Estonian History in Brief (1918-1939)*, *supra* note 77, at 86. After the collapse of Germany in November 1918, the Estonian provisional government assumed power. *Id.* The former USSR attacked Estonia in an attempt to conceal the aggression of the Estonian people and gain control of the newly independent state. *Id.*

87. See *id.*

88. *Id.*

89. See *id.*; see also Elson, *supra* note 85, at 317. At the end of WWI, the Tartu Peace Treaty was signed. Moscow agreed to relinquish all claims to Estonia in perpetuity. *Id.* Later that year Estonia's first constitution was proclaimed, establishing a parliamentary system. *Id.*; see also *Estonian History in Brief (1918-1939)*, *supra* note 77. In September of 1921 a year after USSR released control of Estonia, it gained international recognition from the Western powers and became a member of the League of Nations, joining all international political

of decades, Estonia struggled to create a strong economy and stable government.⁹⁰ This struggle to create a strong economy, government and environment was upset by the beginning of WWII.⁹¹ Before Estonia could celebrate this new found freedom and establish a strong government, Estonia was annexed by the Soviet Union during WWII.⁹²

B. 1940-1989—Soviet Control

In the beginning of 1939, Estonia began to lose their tenuous grasp on independence. By August of 1939, Nazi Germany and the USSR had signed the Soviet-Nazi Non-Aggression Pact.⁹³ This Pact divided Eastern Europe into spheres of influence.⁹⁴ According to the Pact, Estonia became part of the USSR's sphere of influence.⁹⁵ Pursuant to the Pact, Stalin threatened to take forceful measures against the Estonian people and their land, if the USSR was not allowed to install their military regime upon Estonian land. Reluctantly, the Estonian government signed the Pact with the USSR. As a result of signing the Pact, USSR was given the right

conventions and agreements. *Id.*

90. See *ESTONIAN COUNTRY STUDY*, *supra* note 6, at 16 (explaining that prior to independence, Estonia relied heavily on the Russian market, but Soviet communism closed this channel by 1924, weakening the Estonian economy). Estonia economy began to grow slowly, but was further set back by the onslaught of the Depression, which affected Estonia during the early 1930s. *Id.* By the late 1930s Estonia had expanded its industrial sector employing many Estonians which strengthened Estonia's economy. *Id.* at 16-17. Political parties were divided fairly equal between left and right wings causing many problems. *Id.* at 17. Furthermore, the first Estonian constitution required parliamentary approval of all major acts taken by the prime minister and his government, thus the State Assembly could dismiss the government at any time, without incurring sanctions. *Id.* Furthermore, independence in the early years was characterized by instability and frequent government turnovers. *Id.* A total of twenty-three governments held office from 1918 to 1933. *Id.* Due to Estonians ever changing control and an imbalanced constitution, led to the weakening of their political system. *Id.* In 1934 as the country was gearing for a presidential election, prime minister, Konstantin Päts, organized a preemptive coup d'état on March 12, 1934, because of the prospect of a league victory and possible fascist rule. *Id.* Päts ruled with the army by decree until 1940. To secure his control Konstantin Päts, suspended the parliament and all political parties. *Id.* This period was known as the "Era of Silence." *Id.* By 1936, Päts initiated the election of a new assembly and an adoption of a new constitution. *Id.* Päts kept complete control only allowing his political party, the National Front, while all others remained suspended. *Id.* In 1938, Päts, was elected President by the new parliament. *Id.* at 17-18.

91. See *id.* at 18.

92. See *id.*

93. See *Soviet Occupation (1941-1991)*, *supra* note 50 (stating that the pact is also called the Hitler-Stalin Pact).

94. See *ESTONIA COUNTRY STUDY*, *supra* note 6, at 18. Soon after the pact was signed, the Soviet Union pressured the Baltic States into signing the Pact, which would allow Moscow to station troops in Estonia. *Id.* President Päts, was in ill health at this time and acceded to every Soviet demand. *Id.*; see also *Dates from the history of Estonia*, ARTS & HUMANITIES, (visited Feb. 3, 1999) <<http://www.ibs.ee/ibs.history/dates.html>> (copy on file with *The Transnational Lawyer*) (mentioning that on August 23 of 1939, the Molotov-Ribbentrop pact was signed between the USSR and Germany, dividing Eastern Europe between Hitler and Stalin).

95. *Estonian History in Brief (1940-1991)*, *supra* note 52 (relating that the secret protocol gave USSR control of Estonia).

of occupation.⁹⁶ By June of 1940, the Red Army had completely occupied Estonia.⁹⁷ Under Stalin's regime and political maneuvering, the Estonian people were forced to accept the installation of a pro-Soviet government.⁹⁸

Soviet control of Estonia was short-lived when in July of 1941 the Germans invaded.⁹⁹ From 1941-1944¹⁰⁰ Estonia witnessed further repression under German control.¹⁰¹ Altogether, from 1939 to 1945 Estonia lost over 20 percent of its population due to the turmoil of the Soviet and German expansionism for industrial purposes, deportation of radicals and eradication of the Jewish population.¹⁰² By the end of 1944, with Germany losing WWII, the Soviet Red Army led a successful invasion of Estonia, forcing the German forces to retreat back to Germany.¹⁰³ After the end of WWII, the Sovietization¹⁰⁴ of Estonia resumed with the former USSR occupying and taking control of Estonia.¹⁰⁵

For the next fifty years, the Soviet's single-minded dedication to building up their defense to protect the Soviet Union from an attack¹⁰⁶ resulted in an environmental disaster of epic proportions.¹⁰⁷ All land inhabited by the Soviet

96. See *id.* By signing the agreement with the USSR, 25,000 Soviet Red Army soldiers arrived in Estonia. *Id.* At the time of the Red Army's arrival, Estonia's army was only 15,000 men. *Id.*

97. See *id.* By the summer of 1940, the USSR delivered an ultimatum to the Estonian government demanding that a new government be appointed and more Red Army troops be allowed into Estonia. *Id.*

98. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 18. At this time the Estonian Communist Party emerged from underground and organized a list of eligible candidates to run. *Id.* On July 21, the new parliament declared Estonia a Soviet republic and requested admission into the Soviet Union. *Id.* Admission was granted by Moscow on August 6, 1940. *Id.*; see also *Estonian History in Brief (1940-1991)*, *supra* note 52 (discussing that on July 21, the new parliament proclaimed the formation of the Estonian SSR, and nationalized industry, banks and the land—with no compensation being offered). By forcing a new parliament upon Estonia and implementing their own laws, as part of their totalitarian state, Estonia was no longer able to develop as an independent nation. *Id.* The new parliament ceased all contracts with other States, as well as centralizing the economy leaving Estonia independent upon Moscow. *Id.*

99. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 19.

100. See *Dates from the History of Estonia*, *supra* note 94 (relating that from 1941-1944 approximately 5,000-5,500 Estonians were executed in concentration camps); see also *Estonian History in Brief (1940-1991)*, *supra* note 52.

101. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 19; see also *Estonian History in Brief (1940-1991)*, *supra* note 52. Estonian hopes were dashed when they realized that the Germans were not going to restore the independence of the Republic of Estonia. *Id.* Instead Estonia became part of the Ostland province of the Reich. *Id.* Furthermore, the economy was subjugated to the interests of the Reich, and nationalized property was not returned. *Id.*

102. See *id.*

103. See *Estonian History in Brief (1940-1991)*, *supra* note 52.

104. See *id.* Sovietization, first began in 1940, which ignored the interests of the Estonian society, continued in 1945. *Id.* Specific policies, aimed at restricting the role of Estonians in society, as well as restricting Estonian culture, were soon also implemented. *Id.*

105. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 19.

106. See *Eastern, Central Europe: Baltics Optimistic Soviet Damage to Environment Can Be Reversed*, *supra* note 56.

107. See *id.* (disclosing among the environmental damage visited upon the military sites in Latvia, Lithuania, and Estonia, the dismantling of the two nuclear reactors at the former navy base in Paldiski, Estonia, has the potential of an environmental catastrophe).

military during their occupation of Estonia was catastrophically exploited.¹⁰⁸ For example, the Tapa air force base is so inundated with jet fuel that it has seeped into the ground 25 feet below.¹⁰⁹ This damage to the soil has spread into the water supply of the city making it undrinkable.¹¹⁰ At the scrap metal dump in Tammiku, a man was killed when he uncovered improperly stored radioactive waste after breaking into the dump.¹¹¹ Not only was the environment catastrophically damaged to build the USSR's military, but it was also deleteriously used to build a strong economy.

After the end of WWII, the Soviet Union rebuilt Estonia's war-ravaged economy by exploiting the natural resources and environment for the purpose of industrializing Estonia as a component of their centrally planned economy.¹¹² By the 1980s, Moscow managed more than 90% of Estonian industry.¹¹³ But, due to the Sovietization philosophy of ignoring the environment and land, all possibilities for even more extensive industrial development was exhausted because the environment was destroyed.¹¹⁴ The condition of the environment deteriorated further because of the large-scale production.¹¹⁵ When the last attempt to intensify the economic development failed, the growing shortage of food, industrial goods and services.

During the 1980s, because the environment was virtually exhausted and unable to adequately support continuing industrialization, the USSR's interest in Estonia lessened. This led to the general stagnation of Soviet control over Estonia weakening to such an extent in the late 1980s that Estonia began to see the first

108. See *id.* (discussing the land used by the Soviet Military in Estonia will require full-scale remediation); see also *Uranium Dump Perils Estonian Sea*, CHI. TRIB., May 23, 1993, available in 1993 WL 11073517 (detailing that an iceberg of deadly uranium waste has piled up over the decades in the seaside Estonian lake in Sillamäe, which is enough to cause a disaster in the Baltic Sea).

109. See *Environmental Damage From the Soviet-Russian Military Occupation*, *supra* note 63 (specifying that 16 square kilometers surrounding the Tapa airport has been contaminated by dumped fuel to a depth of two to eight meters).

110. See *id.* The ground is so heavily saturated with dumped fuel that the drinking water is rendered undrinkable. *Id.*; see also Lisa Trei, *No Celebration: As Last Russian Troops Leave, Estonians Turn to Legacy of Problems—Damage to the Environment, Disrupted Fuel, and Trade Top a Challenging Agenda*, WALL ST. J. EUR., August 31, 1994, available in 1994 WL 2037337 (stating the water at the airport is flammable).

111. See also Mark Hibbs, *Estonia Combatting [sic] Wave of Trafficking in Cs-137 Sources*, NUCLEONICS WEEK, Oct. 8, 1998 available in 1998 WL 9822259 (relating that in 1994, one man died from radiation burns after breaking into a scrap metal dump at Tammiku, near Tallinn).

112. ESTONIA COUNTRY STUDY, *supra* note 6, at 19-20. With Stalin's death in 1953, Khrushchev's liberalization of economic reform and consumerism in the 1960s also touched Estonia's environment. *Id.* Agricultural collectivization was enforced, industrialization of all available natural resources was enforced and the Estonian Communist Party was purged and replaced by Russified Estonians. *Id.* at 20.

113. See *Soviet Occupation (1940-1991)*, *supra* note 50.

114. See *Estonian History in Brief (1940-1991)*, *supra* note 52.

115. See *Soviet Occupation (1940-1991)*, *supra* note 50.

glimpses of regaining independence.¹¹⁶ By 1987 Estonia began seizing opportunities to reclaim their independence.¹¹⁷ Protests by Estonian citizens began over a proposed project that would have seriously damaged the environment.¹¹⁸ These protests pressured for economic reform, which led to the 1988 "singing revolution."¹¹⁹ The following year, Estonia had disabled the political sovereignty and economic autonomy of the Soviet Union.¹²⁰

For the next couple of years, Estonia pushed to retake control of their own country and remove the Soviet army from occupying their land.¹²¹ In their effort to regain control, Estonians began to discover the extensive damage and degradation of their environment.¹²² One such example that the environmental damage to the land was causing health problems arose in 1989. In a short period over 300 cases of hair loss and other illness among children in the town of Sillamäe occurred.¹²³ Three years later in 1992, there was still no reason or cause to explain the hair loss.¹²⁴ Four governmental investigating commissions failed to find a cause, but investigators now believe that the uranium enrichment facility, specifically the radioactive waste pool lying outside the facility, in Sillamäe contaminated the water the children drank causing the problems.¹²⁵ Contributing to this belief was a study

116. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 20. In the late 1960s, younger members of the Estonian community began to raise the question of social democratization. *Id.* At the end of the 1970s, in an effort to control the Estonian uprising, the former USSR began to increase the importance of the Russian language, and restrict the use of Estonian. *Id.*

117. See *id.* at 20. With the dawning of *glasnost* (a Russian term for public discussion of issues; accessibility of information so that the public can become familiar with it and discuss it) and *perestroika* (means restructuring) the Soviet Union, under the control of Mikhail S. Gorbachev, began a period of liberalization which they never recovered from. *Id.* Seizing upon this Estonian citizens began protesting against the Soviet run government. *Id.*

118. See *Estonian History in Brief (1940-1991)*, *supra* note 52. The *glasnost* policy together with *perestroika* enabled Moscow to inform the public of their plan to lay the groundwork for new phosphorite mines in Estonia. *Id.* Mining in this areas would have resulted in an ecological catastrophe as well as another influx of migrants. *Id.* These dangers united the Estonian people, creating massive protests, leading to the first political demonstration. *Id.*

119. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 20-24; see also *The Restoration of Estonian Independence*, ARTS & HUMANITIES (visited Feb. 3, 1999) <<http://www.ibs.ee/ib/history/restoration.html>> (copy on file with *The Transnational Lawyer*) (reporting June of 1988 marked the beginning of the "singing revolution"). The singing revolution began at the annual Tallinn city festival when it turned into several all-night songfests in which thousands of people of all ages waved national flags and sang patriotic rock songs composed by Alo Mattiesen and others. *Id.*

120. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 21.

121. See *Soviet Occupation (1940-1991)*, *supra* note 50 (relating that from 1989-1991 after civil society was restored, free press was established, political parties were formed, several formerly prohibited associations and organizations were restored, and society became more open).

122. See *Uranium Waste May Have Caused Estonian Health Problems*, NUCLEAR WASTE NEWS BUS. PUB., May 7, 1992, available in 1992 WL 2677448; see generally, *infra* notes 138-46 and accompanying text (documenting the cost of the Soviet-Russian occupation to the Estonian environment).

123. See *Uranium Waste May Have Cause Estonian Health Problems*, *supra* note 122.

124. See *id.*

125. See *id.* (concluding that the contamination from the uranium enrichment facility in Sillamäe built in 1948 may be causing the problems). Originally, the facility was built to extract uranium from radioactive oil shale. *Id.* The wastes created from the enrichment process were disposed in a pool 20 meters deeps and two miles wide that

showing the air and land surrounding the facility is contaminated by radioactive dust from the pool, with radiation levels near the site reading five times the normal background levels.¹²⁶ This discovery was just a foreboding sign of the environmental damage yet to be realized from the Soviet occupation.

C. 1991-Today—Cleaning the Environmental Damage From the Soviet–Russian Military Occupation

In 1989 with the Soviet Union collapsing, Estonia's trail towards independence began.¹²⁷ Two years later after many political protests and strengthening of the Estonian movement, Estonia regained its independence from Russia in 1991.¹²⁸ The fifty years of occupation and control by the Soviet–Russian military in Estonia has taken its toll on its environment.¹²⁹ When the Russians pulled out, they had instructions to take everything back.¹³⁰ Unable to take everything, or sell it, the military either destroyed or dumped what was left.¹³¹ Thousands of tons of poisonous chemicals and outdated ordinances were dumped in the sea.¹³² The rest of the military-industrial waste that was not sold or destroyed was simply left behind for the Estonian government to clean up.¹³³

The pollution left behind was also poured into the ground.¹³⁴ Examples of this pollution can be found in the damaged ground water in some places so heavily polluted with dumped aircraft fuel¹³⁵ that it is possible to set the earth on fire, to radioactive slurry ponds situated just meters from the Baltic Sea.¹³⁶ The cost of the

contain 9 million metric tons of radioactive material. *Id.*

126. See generally notes 160-90 and accompanying text (describing the environmental damage to the area).

127. See ESTONIAN COUNTRY STUDY, *supra* note 6, at 22.

128. See *id.* at 24-5.

129. See Borger, *supra* note 1 (relating that it could take up to twenty years to clean up the water and remove the waste from the former naval base in Paldiski).

130. See Tom Hundley, *Russia's Departure Leaves Estonia With A Cleanup Tab of \$4 Billion*, THE SALT LAKE TRIB., Dec. 2, 1994, available in 1994 WL 10029327 (quoting a Western diplomat in Estonia).

131. *Id.* (summarizing the missile silos large enough to accommodate two tractor-trailers stand empty, bent and broken radar towers stand like oversized scarecrows, barracks, stripped and burned by vandals, as well as environmental pollution from fifty years of mishandling toxic, poisonous, and nuclear materials).

132. *Id.*

133. *Id.* Dilapidated storage tanks left on the base in Paldiski were left to leak thousands of gallons of heating oil into the ground. *Id.*; see also Borger, *supra* note 1 (stating that the Russians left Estonia with a terrifying mess to clean up).

134. See Hundley, *supra* note 130; see also Borger, *supra* note 1 (reiterating that the radioactive waste, oil and chemicals surrounding Paldiski have also contributed to the desecration of the drinking water).

135. See Hundley, *supra* 130. The absorption of heavy fuel oil and other fuels into the ground and ground water is one of the primary sources of environmental pollution. *Id.* In an area of approximately sixteen square kilometers at Tapa airport and its surrounding area has been contaminated by dumped fuel to a depth of two to eight meters. *Id.* Much of the fuel was dumped by pilots in order to falsify flight records. *Id.* At Amari airport the soil and ground water over 20 hectares has been heavily contaminated to a depth of up to four meters. *Id.*

136. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63. Radioactive waste storage areas at the Sillamäe uranium enrichment plant and the Paldiski nuclear reactors are the main environmental concerns. *Id.* The slurry ponds at Sillamäe are located on the shore of the Baltic Sea. *Id.*

Soviet-Russian occupation will be borne by Estonia for many years to come.¹³⁷ In a 1994 Report from the Estonia's Ministry of Environment the estimated¹³⁸ cost of cleaning up the mess left by the Russian troops was at \$54,752,697,000 Estonian Kroons.¹³⁹ In 1996, the Deputy Director in charge of cleaning up and disposing of the nuclear waste on the base of Paldiski, stated that the clean up project on the base alone would cost over US\$125 million dollars.¹⁴⁰ The total cost to clean up Estonia's environment is an intangible figure that can never be determined.

The cost of cleaning up the environment after the Soviet troops departed from the military bases has increased with every estimate.¹⁴¹ Proving that the decade long concerns and fears over the environmental degradation caused by the carelessness and years of neglect during Soviet occupation were a reality.¹⁴² Although the numbers are hard to determine, the estimates have stated that approximately 132,000 Soviet troops¹⁴³ were based in Estonia—a country of only 1.5 million people.¹⁴⁴ The Soviet military was located on approximately 570 military

137. See Borger, *supra* note 1 (discussing areas of the environment are so badly contaminated that they may never return to their natural state).

138. Since 1992 yearly reports have attempted to estimate the cost to clean up the environment. With each year the estimates of the cost to clean up the damage increases. See ESTONIA COUNTRY STUDY, *supra* note 6, at 29-30. Estonia distributed a preliminary report in 1992 to the United Nations Conference on the Environment and Development (UNED) detailing that the cost of cleaning up the site of a former uranium enrichment plant in Sillamäe, plus the removal of the nuclear reactors left by the Soviet military in Paldiski was going to cost at least 3.5 billion ERK. *Id.*; see also *Environmental Damage from the Soviet-Russian Military Occupation, Estonia*, *supra* note 63. In 1993, the Estonian Ministry of Environment issued a precursory report summing up the preliminary findings of degradation the environment had suffered under Russian control; concluding the cost of damage to the environment was well over 10 billion EKR. *Id.*; see also Otsa, *supra* note 45 (giving another preliminary estimating in the latter part of 1993 detailing the damage to the environment caused by the Soviet military as 15.3 billion kroons).

139. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63 (interpreting that \$54,752,697,000 kroons is over 4 billion US dollars). After the Estonian and Russian President signed the Troop Withdrawal Agreement for the withdrawal of the remaining troops from Estonia, the Ministry created a "Working Group" to produce another preliminary report assessing the extent of environmental damage. *Id.* The "Working Group" estimated in 1994, that the cost of repairing the damage to the Estonian environment at over \$54 billion EKR or roughly 4 billion US dollars. *Id.*; see also Felix Corley, *Estonia: Facing up to Independence*, JANE'S INTELLIGENCE REV., Mar. 1, 1996, available in 1996 WL 9483554.; but see Michael Tarm, *U.S. Outlines Plans for Helping to Clean Up Nuclear Sub Base*, ASSOC. PRESS, MARCH 13, 1995, available in 1995 WL 4368830 (mentioning that the clean up of the nuclear waste in Paldiski could cost as much as four billion dollars).

140. See Ariane Sains, *Estonia Faces Cleanups From USSR Subs, U Processing, With No Funds*, NUCLEONICS WEEK, Aug. 29, 1996, available in 1996 WL 11465671 (citing Henno Putnik, the deputy director of AS Alara who is in charge of cleaning up the base).

141. See *supra* note 139 and accompanying text (detailing the cost of cleaning up the environment).

142. See Treaty Between the Republic of Estonia and the Russian Federation on the Withdrawal of Russian Federation Armed Forces from the Territory of the Republic of Estonia and on the Conditions of Their Temporary Presence, Unofficial Translation, July 26, 1994, Est.-Russ., art. 22, (visited Feb. 21, 1999) <<http://www.vn.ee/eng/govmin/trpwithd.html>> (copy on file with *The Transnational Lawyer*) [hereinafter Troop Withdrawal Agreement]. Final Withdrawal of the Troops, took place on August 31, 1994, pursuant to the Troop Withdrawal Agreement between Russian and Estonia. *Id.*

143. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63 (stating 132,000 Soviet-Russian Troops equals one third of the number based in Easter Germany after WWII).

144. See *id.*

installations of various types and sizes, which covered a total of two percent of Estonian territory.¹⁴⁵ The troops on the bases served a myriad of functions ranging from strategic nuclear bombers to mechanized infantry assault units, to frontier guards who ensured that the local population did not escape.¹⁴⁶ Environmental and ecological damage had been effected on all territory under the jurisdiction of the Soviet military forces.¹⁴⁷ One study showed that three-fourths of all the bases the Soviet's occupied are environmental disasters.¹⁴⁸ The repair and restoration of the environment to its natural state, affected by the Soviet-Russian occupation will take many decades.¹⁴⁹ But this task is necessary to contribute to the quality of life not just in Estonia, but to the Baltic Sea region.

III. TWO CITIES DESTROYED BY RUSSIAN OCCUPATION—AN ENVIRONMENTAL DISASTER

Today, Estonia suffers from massive environmental degradations as a consequence of the Soviet construction of an industrial infrastructure which annihilated Estonia's natural resources.¹⁵⁰ All the exploitation of the environment was done without commensurate planning to mitigate the environmental effects of this development.¹⁵¹ A couple of examples of this massive degradation to the environment can be found in the water surrounding Tapa Airport, the nuclear facility in Paldiski, at the uranium facility in Sillamäe and in the storage areas of Oriküla, Udriku, Pahlka, Keila-Joa and Randalu.¹⁵² The widespread pollution is one of the long lasting hardships that the Soviet era left behind for the Estonian people to clean up.¹⁵³ When the majority of the army left Estonia in 1990, they left widespread destruction to discarded buildings and equipment.¹⁵⁴ Along with the

145. See *Environmental Clean up After 50 years of Soviet Russian Military Occupation will cost over Four billion USD*, *supra* note 59. The total area of this territory was 85,175 hectares, or approximately two percent of the Republic of Estonia. *Id.*; see also Corley, *supra* note 139.

146. See Corley, *supra* note 139.

147. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63.

148. See *Environmental Clean Up After 50 Years of Soviet Russian Military Occupation Will Over Four Billion USD*, *supra* note 59 (presenting that 85 percent of the area under the control of the Soviet-Russian military has either ground water or soil damage).

149. See Hibbs, *supra* note 111; see also Borger, *supra* note 1 (estimating that it will take 20 years to clean up the area surrounding Paldiski).

150. See *Estonian History in Brief (1940-1991)*, *supra* note 52.

151. See *id.*

152. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63 (detailing that poisonous residue fuel and oxidisers have remained in tanks or poured into the ground).

153. See *ESTONIA COUNTRY STUDY*, *supra* note 6, at 29 (relating the widespread pollution came from military installations covering more than 80,000 hectares of Estonian territory). Examples of polluted substance dumped on Estonian land include hundreds of thousands of get few into the ground, improperly disposed toxic chemicals, and discarded outdated explosives and weapons in coastal and inland waters. *Id.*

154. See Isobel Montgomery, *Europe: Russia's Toxic Retreat Tread Carefully in Estonia. You Never Know What the Kremlin Has Left Behind*, *GUARDIAN EURO PAGE*, Friday, April 8, 1994, available in 1994 WL 9705596 (stating that the Russian Armed Forces left Estonia with bitterness and spite upon departure smashing windows,

structural damage, Soviet troops left behind significant environmental pollution as well the bill for clean up costs.¹⁵⁵ As evidenced, enormous amounts of environmental pollution was left behind in nearly all the territories taken over from the Soviet military units.¹⁵⁶ The most hazardous military objects are the airfields containing the fuel tanks and the nuclear waste.¹⁵⁷ At the Tapa and Amari air bases, the land is contaminated with fuel oil and kerosene to a depth of 20 feet.¹⁵⁸ The two cities which, involved and to this day have the most damage to the environment and are considered a threat to mankind are Paldiski and Sillamäe.¹⁵⁹

A. Paldiski Naval Facility

The half-century of Soviet military presence¹⁶⁰ in Paldiski, inflicted environmental damage¹⁶¹ that will take years and cost billions of dollars to clean up.¹⁶² The former Russian naval facility is situated on the base of the Pakri Peninsula.¹⁶³ The facility is 4 km¹⁶⁴ from the small town of Paldiski and 46 km¹⁶⁵

ripping out electrical wiring and carting away everything moveable from the hundreds of military installations located across Estonia).

155. See *Slants & Trends*, REPORT ON DEFENSE PLANT WASTES, August 19, 1994, available in 1994 WL 2508085 (noting areas of arable land so contaminated with land mines, unexploded bombs, shrapnel and other hazards that they are closed to citizens).

156. See generally *Environmental Damage From the Soviet-Russian Military Occupation*, *supra* note 63 (noting the pollution is from oil products, chemicals, ruins, and domestic and toxic wastes).

157. See Otsa, *supra* note 45 (explaining that fuel from the territory of Tapa military airfield has immersed in the soil and polluted most of the surface under the town). *Id.* Groundwater is undrinkable on an area of 16 square kilometers. *Id.* At the fuel tank of the military airfield of Sillaotsa, Tartu there have been major environmental accidents (in 1968, 1971, 1981, twice in 1988, 1990, 1991) when thousands of tons of fuel leaked out of the tank. *Id.* The upper surface layer in the region is saturated with oil products on a territory of 20 hectares. *Id.*

158. See Henley, *supra* note 6; *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63; Otsa, *supra* note 45 (citing statistics supporting the fact that Tapa military airfield's soil is saturated with fuel).

159. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63.

160. See Trei, *supra* note 110 (documenting that Estonians marked the pullout of an estimated 150,000 troops by ringing church bells and lighting candles). Officials canceled plans for celebrations, mindful that the country's problems won't disappear along with the Russian military. *Id.*

161. See *Estonia Doesn't Expect Russia to Pay for Environmental Damage*, *supra* note 68 (detailing the cost of cleaning up Paldiski's nuclear waste from the reactor and the water and soil surrounding the base, which have been polluted with oil and heavy metals); see generally Montgomery, *supra* note 154 (discussing that the forest and coastline on the Baltic Sea have been destroyed, and land and water supplies have been contaminated all over the country).

162. See *Environmental Damage from the Soviet-Russian Military Occupation*, *supra* note 63 (indicating in a recent Environment Ministry report, the Soviet Army caused 54.7 billion kroons (\$4.43 billion) of damage to 84,000 hectares of Estonian land); Trei, *supra* note 110.

163. See *Russian Forces Toll in Estonia Runs Into 5 BLN Dollars*, BAL TIC NEWS SERV., Nov. 25 1998, available in 1998 WL 20198293.

164. See BLACK'S LAW DICTIONARY 534 (3d ed. 1971). One kilometer is 1,000 meters and .62 of a mile. Four km is just under 2.5 miles.

165. *Id.* 46 km is roughly 32.5 miles.

west of Tallinn, the capital of Estonia.¹⁶⁶ Prior to the Soviet occupation, the city of Paldiski was a pre-war tourist resort.¹⁶⁷ During the occupation by the USSR, Paldiski was the secret location¹⁶⁸ used for training crews on nuclear powered submarines.¹⁶⁹ The town was closed to Estonian citizens until 1994, home only to Soviet soldiers and their families during occupation.¹⁷⁰ Today, Paldiski resembles a ghost town¹⁷¹ containing approximately 4,000 inhabitants whom are mostly unemployed retired Soviet military personnel.¹⁷²

In 1994 after Soviet troops departed from Estonia, the Paldiski naval facility was opened to Estonians for the first time in fifty years. Left behind on the base were two nuclear reactors.¹⁷³ As a separate part of the Troop Withdrawal Agreement,¹⁷⁴ two hundred Soviet specialists were brought in to dismantle the two training nuclear reactors and clean up the surrounding environment.¹⁷⁵ Tension

166. See Leonid Levitsky, *Military Base in Paldiski Has Ceased to Exist*, RUSS. PRESS DIG., July 23, 1994, available in 1994 WL 9144485.

167. See Trei, *supra* note 110; see also *Russian Forces Toll in Estonia Runs Into 5 BLN Dollars*, *supra* note 163 (describing Pakri's Peninsula as unique nature with steep bluffs and beautiful sandy beaches).

168. See Montgomery, *supra* note 154 (explaining that there is no indication to tell you that you are entering a forbidden zone, because the entrance to Paldiski is unmarked and there are no road signs). This is a place "so secret that during the Soviet occupation it was left off the map." *Id.* Paldiski was one of the Russian military's last secret testing grounds for nuclear weapons before Estonia declared its independence. *Id.*; see also Levitsky, *supra* note 166.

169. Levitsky, *supra* note 166. (explaining that Paldiski is just one of 570 former Soviet bases in Estonia); see also, *The Paldiski Nuclear Facilities: A Status Report*, ESTONIA REV., 1995, (visited Jan. 18, 1999) <<http://www.vm.ee/eng/estoday/1995/9509pal.html>> (copy on file with *The Transnational Lawyer*) (relating until 1993, the town of Paldiski, was a closed town with restricted access available only to the Russian Navy); *Finland's IVO Wins Paldiski Clean-up Project*, WATER BRIEFING, THE FINANCIAL TIMES, Feb. 22, 1995, available in 1995 WL 8684576 (stating the two nuclear submarine reactors at Paldiski were used as part of the training of Soviet navy marines, until Estonia declared its independence in 1991).

170. See Henley, *supra* note 6. During occupation Paldiski was populated with 11,000 Soviets since the town was closed to Estonian citizens for security reasons. *Id.*

171. See Trei, *supra* note 110 (declaring after the Russian forces departed, all that was left in Paldiski was a decaying town of crumbling apartments and pot-holed streets).

172. See Andrew Mueller, *Altered States*, SUNDAY TIMES-LONDON, Features, March 15, 1998, available in 1998 WL 8044734 (describing that today Paldiski is a ghost town of 4,000 locals who are largely unemployed). The town now called a village consists only of the rubble jerry-built tenement blocks. *Id.* "Children and dogs play in the deserted buildings awaiting demolition; men stand around in silent, shiftless groups on corners, as if engaged in beard-growing contests. Paldiski is an above-ground cemetery." *Id.*; see also Henley, *supra* note 6 (detailing the town's dilapidated state of disrepair). The windows on most of the town's building are boarded up, roofless, and contain leaking fuel pipes. *Id.*

173. See Henley, *supra* note 6 (relating that the Estonians are most worried about the two nuclear reactors the Russian's left behind, one of them from the 1960s).

174. See Agreement Between the Government of the Republic of Estonia and the Government of the Russian Federation on Procedures and Deadlines for the Decommissioning of the Nuclear Reactors and the Guarantee of Nuclear and Radiation Safety on the Pakri Peninsula of the Republic of Estonia, July 30, 1994, Est.-Russ., (visited Feb. 21, 1999) <<http://www.vm.ee/eng/govmin/paldiski.html>> [hereinafter Agreement for Decommissioning of the Nuclear Reactors] (copy on file with *The Transnational Lawyer*).

175. See Yuri Maloverian, *Dismantling of Russian Nuclear Reactors at Paldiski is Underway*, RUSS. PRESS DIG., Aug. 24, 1994, available in 1994 WL 9141839 (stating that the job was completed by two hundred Russian Military experts who extracted the spent nuclear rods encasing them in concrete and then sent to Russia); see also *Eastern, Central Europe: Baltics Optimistic Soviet Damage to Environment Can Be Reversed*, *supra* note 56,

surrounded the dismantling process because this was a unique situation with one country dismantling the reactors in another territory.¹⁷⁶ The dismantling of the Paldiski nuclear reactors was finished by September 30, 1995.¹⁷⁷

Estonia began the process of cleaning up the radioactive waste, oil, and material contaminating the environment surrounding the facility that remained after the Soviets withdrew upon completion of the dismantling of the reactors. The Soviet military left behind numerous sources of dangerous pollutants. For example, 4,100 hectares¹⁷⁸ of oil-polluted soil, 158,000 tons of waste steel, iron and heavy metals, 5,080 tons of waste oil, more than 170 tons of used batteries, 2,080 tons of waste chemicals and 2,900 tons of plastic and rubber waste were found surrounding the Paldiski naval base.¹⁷⁹ In December of 1998, Rein Ratas, the state secretary of the Ministry of Environment, stated the environmental damage caused by the Soviet military had been estimated at roughly four times the size of Estonia's national budget.¹⁸⁰

The cost of decommissioning the two nuclear reactors was estimated to cost Estonia ten million dollars.¹⁸¹ Russia was estimated to spend seventeen billion rubies (US\$3.4 million) on dismantling the nuclear reactors and cleaning up environmental damage.¹⁸² Estonia received five million dollars from abroad including two million dollars from the United States, Sweden pledged three million kronor (US\$428,000), and Finland two million markkaa (US\$400,000).¹⁸³ In 1995, after the Soviets departed, a Finnish state energy group, signed an agreement with the Estonian government to decontaminate the radioactive wastewater on

(relating the time it would take to decommission the reactors and the cost to clean up the surrounding land); Henley, *supra* note 6.

176. See Henley, *supra* note 6 (stating tension surrounded the decommission of the two reactors, not because of skill or willingness on the part of Estonia or Russia, but on their skepticism of working together).

177. *Agreement to Dismantle Russian Nuclear Reactors in Paldiski Signed*, ESTONIA REV., July 30, 1994, volume 4, Number 30.2, July 28-31 (Jan. 18, 1999) <<http://www.vm.ee/eng/review/1994/94er2831/07e.html>>. "This is a unique agreement in international law, since it provides for the dismantling of a reactor on another country's territory," said Estonian Foreign Ministry Depute Under-Secretary Raul Mälik.*Id.*

178. See WEBSTER'S SEVENTH NEW COLLEGIATE DICTIONARY 534 (7th ed. 1971). One hectare equals 2.47 acres. Thus, 4,100 hectares equals 10,127 acres.

179. See *Russian Forces Toll in Estonia Runs Into 5 BLN Dollars*, *supra* note 163. The list does not end, Russian forces also polluted Pakri's soil and subsoil water with crude oil and heavy metals. A spokesperson for the Environment of Ministry stated that today there is still high levels of calcium, ionic sulphate and iron in the water. *Id.*

180. See *Estonia Doesn't Expect Russia To Pay For Environmental Damage*, *supra* note 68.

181. See Levitsky, *supra* note 166; see also *Eastern Central Europe: Dec. 21, 1994*, *supra* note 56. The Estonian government estimates at least \$4 billion in remediation will be needed in Estonia. *Id.* Remediation will include work for removal of underground storage tanks and unexploded weapons to treatment of contaminated groundwater and mixed waste. *Id.*

182. See *Estonia: Government Begins Clean-Up of Russian Nuclear Legacy*, INTER PRESS SERV., May 18, 1995, available in 1995 WL 2261181.

183. *Id.* The total cost of decommissioning and clean-up is expected to cost US\$25 million. *Id.*; see also *IVO Discharges First Treated Effluent From Soviet Naval Base*, WATER BRIEFING, Apr. 19, 1995, available in 1995 WL 8684650.

Paldiski.¹⁸⁴ The project was funded by the Estonian and Finnish governments.¹⁸⁵ Arvo Niitenberg, the head of the state-owned company responsible for clearing up the rest of the site estimated that the operation could cost up to 48 million pounds.¹⁸⁶ Reaffirming this view, Teofil Grochowski the project leader from the U.S., stated that the total cost of the operation could run up to between US\$60 and US\$80 million dollars.¹⁸⁷

The treatment for cleaning the radioactive water was under speculation for breaching the law and causing environmental harm in the Baltic Sea.¹⁸⁸ After the radioactive waste water is treated by IVO, it is released into the Baltic Sea.¹⁸⁹ This process brings up the issues of which international norms apply to the treatment of radioactive water when it is being released into the Baltic Sea, creating the potential to causing transboundary harm.¹⁹⁰ This problem also raises the issue of whether Russia could be held liable since their military forces polluted the Paldiski naval base while occupying Estonia. Whether Russia is liable or not under general principles of international environment law is discussed in Section V of this Comment.

B. Sillamäe's Radioactive Waste Facility

In the city of Sillamäe, which is located in northeast Estonia on the Baltic Sea, is another former Soviet Military plant.¹⁹¹ Sillamäe was a formerly closed town on the northern coast that refined uranium for the Soviet military to be shipped to Paldiski for consumption.¹⁹² The Sillamäe facility was originally opened in the late 1940's, when it was used to extract uranium from local ore.¹⁹³ For several decades

184. See *Finland's IVO Wins Paldiski Clean-up Project*, *supra* note 169 (explaining the process of how to clean up and filter radioactive liquids to render them non-hazardous). The company decontaminated 120,000 liters of radioactive water the first two months, and finished within six months with the rest of the 730 cubic meters of contaminated radioactive water. *Id.*

185. See *id.* (conveying that the Estonian government provided 80% of funds for the first clean up, but that they had no guarantees that additional funding will be available to pay for the treatment of the radioactive waste water).

186. See Henley, *supra* note 6.

187. See *IVO Discharges First Treatment Effluent From Soviet Naval Base*, *supra* note 183.

188. See *id.* (stating the method of how the radioactive waste water is discharged). After the radioactive water is treated and processed it is being released into the Baltic Sea. *Id.*

189. See *id.*; see also *Finland's IVO Wins Paldiski Clean-up Project*, *supra* note 169. The process IVO uses claims it is capable of filtering radioactive liquids to render them non Hazardous. *Id.*

190. See *Finland's IVO Wins Paldiski Clean-up Project*, *supra* note 169. IVO also states that there is absolutely no danger to the environment, and fit for human consumption. *Id.*

191. See *Estonian Minister Meets Deputy Secretary of State, New US Ambassador in Washington*, BALTIC NEWS SERV., Oct. 20, 1998, available in 1998 WL 20195243. A closed-town, is another word for off limits except by those who have a permit to reside there. *Id.*

192. See Trei, *supra* note 110.

193. See *Environment Body Puts Sillamäe Radioactive Deposit on 'Hot Spot' List*, *supra* note 79. The deposit was set up in 1959, but began laying radioactive waste from the plant's production cycle in the area as soon as 1948. *Id.*; see also Julian Isherwood, *International: Uranium Fear for Baltic*, THE DAILY TELEGRAPH - LONDON,

the town was declared an off-limits area for residents and to the rest of the country, accessible only to the workers and Soviet military.¹⁹⁴

Today, the Sillamäe waste dump holds a large green lake filled with radioactive waste just sitting 10 yards from the Baltic Sea.¹⁹⁵ It is about 33 hectares (81.5 acres)¹⁹⁶ in area and 25 meters (82 feet)¹⁹⁷ high.¹⁹⁸ A preliminary report¹⁹⁹ estimates that the pool contains approximately eight million cubic meters of liquid radioactive waste spreading two miles wide.²⁰⁰ Included within the lake is 1,200 tons of uranium.²⁰¹

The deposit of radioactive waste lying just outside the former Soviet military industry plant in Sillamäe is one of the most environmentally dangerous sites²⁰² in Europe.²⁰³ One of the main risk factors at the Sillamäe plant is the underwater

Sept. 3, 1992, available in 1992 WL 9058164 (reporting the Soviets set up the plant in Sillamäe soon after World War II to extract rare earth metals from ore brought in from Russia. *Id.*; see also *Russian Radioactive Waste Threatens Estonia*, ENVTL. WATCH E. EUR., Oct. 1, 1992, available in 1992 WL 2657372.

194. See *Environment Body Puts Sillamäe Radioactive Deposit on 'Hot Spot' List*, *supra* notes 79.

195. See *US Nuclear Experts Concerned About Sillamäe Dump*, BALTIC NEWS SERV., Oct. 2, 1998 available in 1998 WL 20194808 (observing that the industrial waste dump lies just a few dozen meters from the Gulf of Finland); see also *Departing Russians Leave Environmental Headaches in Baltics*, *supra* note 6.

196. See WEBSTER'S SEVENTH NEW COLLEGIATE, *supra* note 178, at 534. The lake contains 200,000 cubic meters of wastewater covering 33 hectares, which is roughly 81.5 acres.

197. See *id.* One meter is 39.37 inches, or roughly 3 and 1/3 feet.

198. See *US Nuclear Experts Concerned About Sillamäe Dump*, *supra* note 195 (explaining in PHARE's expert opinion, the Sillamäe waste dump is one of the worst environmental hazards in Europe).

199. See *Trei*, *supra* note 110 (stating that unverified reports have suggested that some of the containers holding 3,000 tons of radioactive waste are leaking into the Baltic Sea).

200. *Conference on Sillamäe Radioactive Waste Dump to be Held in Tallinn*, BALTIC NEWS SERV., Sept. 24, 1998, available in 1998 WL 20194287; see also *Sains*, *supra* note 140 (explaining that of the eight million cubic meters of liquid radioactive waste, 6.3 million tons is of U processing residue and 150,000 cubic meters of uranium mill tailings); see also *generally Uranium Waste May Have Caused Estonian Health Problems*, *supra* note 122 and accompanying text (explaining the level of environmental damage surrounding the Sillamäe facility).

201. See *Securing of Radioactive Waste Deposit At Estonia's Sillamäe To Cost 200 MLN Kroons*, BALTIC NEWS SERV., December 11, 1998, available in 1998 WL 23387328.

202. See *Judith Perera, International Estonia Plans for Cleanup of Sillamäe Radioactive Waste Site*, NUCLEAR WASTE NEWS, Vol. 17, No. 48, December 11, 1997, available in 1997 WL 13045239 (examining the March 1989 report that children at a nearby Sillamäe kindergarten were ill and reporting hair loss). Experts were sent in to investigate when more than 20 children at the kindergarten began losing their hair. *Id.* As a result of this incident the school was closed and local residents moved from the area. *Id.*; see also *Mark J. Porubcansky, The Soviet Union's Pollution Bill Comes Due: Water, Air Fouled, Even Mothers' Milk*, THE SAN DIEGO UNION-TRIB., July 2, 1989, available in 1989 WL 2974517 (criticizing the fact that by July of 1989, the cause was still unknown, but the ailment was apparently caused by the dirty environment). Furthermore by July, more than 90 children had lost their hair since this mystery illness had first appeared. *Id.* (Population at this time was 20,000 people); see also *Isherwood*, *supra* note 193 (reporting by 1992, over 200 people, including an entire high school class had gone bald). For a report of a similar occurrence, see *Estonian Kids' Hair Loss Probed*, THE SAN DIEGO UNION-TRIB., Mar. 12, 1989, available in 1989 WL 2974517 (explaining this same mystery disease, struck children in the Ukrainian town of Chernovtsy in 1988). Doctors in Chernovtsy blamed acid rain containing thallium and other toxic agents for the outbreak. *Id.* There more than 120 children in the town began to lose their hair and suffer irritation and fever. *Id.* Hair began to grow back on children from Chernovtsy after six weeks to two months. *Id.*

203. See *Sillamäe Waste Deposit One of the Most Dangerous in Europe*, BALTIC NEWS SERV., July 9, 1998, available in 1998 WL 13516213. [A] spokesman at the Environmental Ministry in Tallinn reported that, "a recent survey in Europe which covered over 800 deposits, mines and other facilities in eastern Europe, showed the

uranium waste lake²⁰⁴ located immediately on the seashore and the danger that the dam setting it off from the sea might give way.²⁰⁵ The radiation inside the lake is five hundred times above accepted limits with no safety measures to control the possibility of leaks into the soil surrounding the lake or the Baltic Sea.²⁰⁶ A thick layer of watertight clay is the only protection that lies between the uranium and the surface of the shallow pool.²⁰⁷ Early calculations of the toxicity of the lake estimate that the liquid and solid radioactive objects contain radiation equal to 0.2 percent of that released by Chernobyl.²⁰⁸ A report by the Swedish Radiation Protection Institute, who helped the Estonian government measure the risk, found roughly one hundred to one thousand times more radium than normal in samples of local soil taken from the lake's wall.²⁰⁹ Two samples taken outside the wall, which has been rebuilt many times over the years, measured two-thousand times more than normal.²¹⁰

The annual estimated cost of cleaning up and reducing the toxic hazards tentatively has been estimated at nearly three million kroons (US\$235,000).²¹¹ In December of 1997 Estonian officials stated, remediation of the Sillamäe reservoir of liquid radioactive waste will cost an estimated \$212 million kroons (US\$15 million).²¹² This figure was reiterated in December of 1998, when the Estonian government stated it will need at least \$200 million kroons to make the lake of

Sillamäe waste deposit as fourth in terms of environmental hazards among uranium industry facilities in the former communist bloc, behind potential sources of pollution in Romania and Hungary."

204. See Isherwood, *supra* note 193 (identifying that there is about 1,000 tons of radium, 500 tons of thorium and a couple of million tons of calcium sulphate, calcium fluoride and ash). The uranium was deposited under 15 feet of water in an artificial lake and is more than 20 yards deep and 60 feet above sea level. *Id.*; see also Perera, *supra* note 202.

205. See Isherwood, *supra* note 193 (explaining not only is the waste located very close to the Baltic Sea, but the dam separating it from the sea is not very secure); see also *Conference on Sillamäe Radioactive Waste Dump to be Held in Tallinn*, *supra* note 200; see also *Estonian Company To Map Elimination of Sillamae Waste Dump*, BALTIC NEWS SERV., July 13, 1998, available in 1998 WL 13516557.

206. See *Buildup of Uranium Waste in Estonian Pond Threatens Gulf of Finland, Baltic Sea*, AM. METAL MARKET, June 8, 1993, available in 1993 WL 3118384 (warning that the concentration of radioactive substances in the sea along the narrow coastal strip had been detected). Over the years four million tons of uranium was processed at the plant. *Id.*

207. See *id.*

208. See *id.*

209. See Elif Kaban, 'Hot' Iceberg Poses Nuclear Threat to Baltic, THE TORONTO STAR, May 29, 1993, available in 1993 WL 7260110 (postulating that an overflow could send a stream of deadly waste into the Gulf of Finland and the Baltic Sea, which is already the most polluted in Europe).

210. See *id.*; see also *Environment Body Puts Sillamäe Radioactive Deposit on 'Hot Spots' List*, *supra* note 79 (citing scientist from HELCOM who estimate that the waste deposit in Sillamäe accounts for half of the Baltic Sea pollution coming from the Estonian territory).

211. See *U.S. Nuclear Experts Concerned About Sillamäe Dump*, *supra* note 195 (detailing that the work is to be financed by the Finnish, Swedish, Danish, Norwegian and U.S. governments, the Nordic investment bank and international organizations).

212. Perera, *supra* note 202 (reporting three sources will finance the remediation effort: the plant's present owner, AS Silmet; the state budget; and international aid).

radioactive waste environmentally safe.²¹³ Scientists estimate that the waste deposit accounts for half of the Baltic Sea pollution coming from the Estonian territory.²¹⁴ Thus, until this facility is environmentally safe, it will continue polluting the Baltic Sea possibly leading to responsibility for the transboundary harm caused to the neighboring states.

IV. GENERAL PRINCIPLES OF INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM

General principles of international law are derived from developed international and municipal legal systems.²¹⁵ The elements which are common within the major legal systems throughout the world, evolve into general principles of international law.²¹⁶ Recognizing the applicability of general principles to international law is article 38(1)(c) of the ICJ.²¹⁷ Most commonly, general principles are inserted into undeveloped areas of international law to avoid undermining a judgment from an insufficiency in the law.²¹⁸ Therefore, general principles derive authority in international law when they are employed in decisions by international tribunals and courts.²¹⁹ Despite recognition that general principles of international law exist, no definite definition of the scope or extent to which general principles apply has been universally accepted.²²⁰

General principles of international law are also known as the rules of customary international law.²²¹ International customary law generally consists of norms

213. See *Securing of Radioactive Waste Deposit At Estonia's Sillamäe To Cost 200 MLN Kroons*, *supra* note 201 (observing that the biggest mistake made by the military was not securing the ground under the deposit before dumping waste in an area of 33 hectares by the Gulf of Finland).

214. See *Environment Body Puts Sillamäe Radioactive Deposit on "Hot Spot" List*, *supra* note 79.

215. See WALLACE, *supra* note 12, at 22. It is not clear whether general principles refer to those of the international legal system or those of municipal legal systems. *Id.* This ambivalence is desirable as it imposes no restriction on the principles which may be implied. *Id.*

216. See Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945), *supra* note 10 (verifying general principles of law as those recognized by civilized nations.); see also WALLACE, *supra* note 12, at 7,8, 20-22 (discussing Article 38(1)(c)).

217. See Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945), *supra* note 10.

218. See WALLACE, *supra* note 12, at 21-22 (explaining international law as a legal system would be inefficient if application of general principles of law were not "plugged in" to fill the gaps where the International Court of Justice would be unable to give a decision based on law); see also BIRNIE & BOYLE, *supra* note 16, at 21-24 (discussing general principles of international law).

219. See WALLACE, *supra* note 12, at 8 (stating Article 38 is regarded as an authoritative statement on the sources of international law).

220. See *id.* at 23.

221. See Johathan I. Charney, *International Agreement and the Development of Customary International Law*, WASH. L. REV. 971 (1986) (explaining customary international law); see also MCCAFFREY, *supra* note 35, at 188-89. A customary norm is one that can be shown to be generally followed by the states concerned. *Id.* Contrasting with an international principle, general principles of law are said to be recognized by civilized nations. A civilized nation in this context applies to states with an organized legal system. See also, Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945), which is briefly explained in, BIRNIE & BOYLE, *supra* note 16, at 15 (discussing Article 38(1)(c), which instructs the Court to apply "international custom, as evidence of a general practice accepted

derived from the actual practice of states undertaken in the belief that such practices are required by international law.²²² Customary law may lay the groundwork for persuasive evidence of the existence of a norm for the determination by a senior court.²²³ By laying the ground work, the court can determine the existence (or not) of some alleged customary norm.²²⁴ The determination of whether the normative nature of a practice is necessary in international law, must be based on a belief by the state organs concerned that recognition of the norm is required.²²⁵ Therefore, determination of whether a customary norm is recognized in international law is determined by looking at the practices of both states concerned and whether such a norm is practiced by both states.²²⁶

International law²²⁷ traditionally involves law governing relationships between sovereign states.²²⁸ This idea of sovereignty has developed a territorial basis recognized in the principles of international environmental law.²²⁹ This territory

as law."); see also WALLACE, *supra* note 12, at 8-18. Customary law is not to be confused with general principles of international law. *Id.* Customary law is similar to general principles but customary law is a practice followed by those concerned because they feel legally obliged to behave in such a way; where general principles are those such as justice and equity. *Id.* at 22.

222. See MCCAFFREY, *supra* note 35, at 173-74 (describing that to identify norms it is necessary to study how states actually behave). Customary international law is perceived to exist when a practice is exercised by states, over an extended period of time, by a state with the conception that the action it takes is valid under international law, and with the acquiescence of other states. *Id.*; see also ALEXANDRE KISS & DINAH SHELTON, INTERNATIONAL ENVIRONMENTAL LAW 144 (1991) (interpreting customary international law requires establishing two elements: (1) a general practice nations; and (2) the acceptance of the practice as binding international law).

223. Once a customary law comes into being, it is normally binding on all states concerned. See MCCAFFREY, *supra* note 35, at 173-74 (qualifying though that a customary law will not become binding if a state from the beginning objects to the norm, exempting itself from being bound by it); see also *Libya v. Malta Continental Shelf Case*, 1985 ICJ Rep 13, at 29-30. In this case decided by the ICJ, it stated that the material of customary international law is to be looked for primarily in the actual practice and *opinio juris* of the states. *Id.* Thus, before a custom is to become law both conduct and conviction on the part of the state are required. *Id.*

224. See MCCAFFREY, *supra* note 35, at 173-74 (explaining similar effects may be determined by legal scholars; e.g. members of the International Law Commission or members elected to the UN General Assembly, of the existence of a norm).

225. See *id.* at 174 (clarifying that norms may not be based on merely a normal courtesy, a clearly advantageous act, a means of seeking favor, creating good will, or of escaping a threat). This norm is also called *opinio juris*; defined below. *Id.* at 150. Most customary international law is generally created by involuntary and inchoate processes that persuade states that they should behave in a particular way, but occasionally devices are used to induce states to consider that acting in a particular way is legally required. *Id.*; see also BIRNIE & BOYLE, *supra* note 16, at 15. *Opinio juris sive necessitatis*, shortened to *opinio juris* is "the conviction that conduct is motivated by a sense of legal obligation, not merely of comity provides the evidence necessary to establish a customary rule." *Id.*

226. See BIRNIE & BOYLE, *supra* note 16, at 15 (supporting the determination of how customary international law becomes binding).

227. See generally note 18 and accompanying text (codifying the many and constantly changing definition of international law).

228. See WALLACE, *supra* note 12, at 12 (defining international law as something of a misnomer); IAN BROWNLEE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW (1990); M. N. SHAW, INTERNATIONAL LAW (1991).

229. See *Declaration on the Right to Development*, G.A. Res. 41/128, U.N. GAOR, 41st Sess., Supp. No. 53, at 186-187, U.N. Doc. A/41/53 (Dec. 4, 1986) (commenting on the concept of a state's sovereignty over its natural resources is rooted in the old principle of territorial sovereignty). But the United Nations General Assembly has

basis in international environmental law has developed between two apparently contradicting principles.²³⁰ First, states have sovereign rights over their own natural resources.²³¹ Second, states should not cause damage to the environment.²³² Furthermore, these two principles have been accepted by tribunals as a reflection of international customs²³³ and affirmed in international agreements in regards to international environmental law.²³⁴

A. *General Principles of International Law: The Basis of State Responsibility*

States both in law and practice, are in fact publicly responsible for their actions. Responsibility to states for any action creating environmental damage that harms another state, or the interests of the international community as a whole, is guided by principles and norms of the international legal order.²³⁵ Responsibility is invoked when a state violates an international obligation. This responsibility recognizes that all rights of an international character involve international responsibility.²³⁶

General principles of international environmental law can be broken down into two categories. Primary rules, which relate to the substantive obligations of States, and secondary rules which apply as a consequence of breaching an obligation.²³⁷ One such example of an important general principle, is the primary obligation of a state to its territory, to carry out activities thereon as it wishes, but only to the extent that no harm is caused thereby to other states.²³⁸ The primary obligation establishes

further encouraged that the right of nations to permanent sovereignty over their natural resources must be exercised in the interest of their national development. *Id.*

230. See generally Max Valverde Soto, Note & Comment, *General Principles of International Environmental Law*, 3 ILSA J. INT'L & COMP. L. 193 (1996) (discussing sovereignty and responsibility in international environmental law).

231. See generally *Declaration on Permanent Sovereignty over Natural Resources*, G.A. Res. 1803 (XVII), U.N. GAOR, 17th Sess., A/5217 (Dec. 14, 1962) (supporting the theory of a State's sovereign right over their natural resources).

232. See *id.*; see also *Declaration of the Right to Development*, *supra* note 229, at 186-87 (reiterating that states have the responsibility not to damage the environment).

233. See generally *Texaco Overseas Petroleum Co. and California Asiatic Oil Co. v. Libya*, 53 I.L.R. 389 (Mar. 24, 1982) (accepting the sovereign right of a state over its natural resources, plus the responsibility not to harm the environment).

234. See *Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal*, Mar. 22, 1989, art. 12, 28 I.L.M. 649, 668; see also United Nations Education, Scientific and Cultural Organization Convention for the Protection of the World Cultural and Natural Heritage, Nov. 16, 1972, art. 15, 11 I.L.M. 1358, 1363; see also United Nations Conference on Environmental Development: Convention on Biological diversity, June 5, 1992, princ. 2, 31 I.L.M. 818; see, e.g., United Nations Conference on Environmental Development: Framework Convention on Climate Change, May 9, 1992, art. 14, 31 I.L.M. 849, 867.

235. See MCCAFFREY, *supra* note 35, at 504-07, 510.

236. See *Spanish Zone of Morocco Claims (Spain v. U.K.)* 2 R.I.A.A. 615, 641 (1923).

237. For a discussion of the distinction between primary and secondary rules see Teresa A. Berwick, *Responsibility and Liability for Environmental Damage: A Roadmap for International Environmental Regimes*, 10 GEO. INT'L ENVTL. L. REV. 257, 259-260 (1998); see also MCCAFFREY, *supra* note 35, at 504-05.

238. See *Stockholm Declaration*, *supra* note 20; see also *Rio Declaration*, *supra* note 48 (explaining the principle of refraining from causing transboundary harm).

a general principle of responsibility upon one state to not conduct activities upon its state that cause transboundary harm to another. By breaching this primary obligation, the state incurs liability.

State responsibility in international law refers to liability—that of one state to another for the non-observance of the obligations imposed by the international legal systems.²³⁹ An example of state responsibility arises when conditions in one state lead to the infliction of harm on other states.²⁴⁰ Therefore, by breaching an international obligation the state subjects itself to responsibility.²⁴¹ This is also referred to as a “primary rule”²⁴² of international law.²⁴³ When a breach occurs, the primary rule entails the breaching country to take responsibility for the legal consequences of the breach of an international obligation.²⁴⁴ Secondary rules relate to the legal consequences of the failure to comply with international environmental law.²⁴⁵ Examples of secondary rules are the taking of responsibility by repairing the harm (restitution)²⁴⁶ or, where this is not possible, to provide monetary compensation (indemnity)²⁴⁷ to the injured country.²⁴⁸ Both obligations contribute

239. See WALLACE, *supra* note 12, at 166 (discussing as an absolute principle all states are equally responsible under international law for their illegal acts); see generally *State Responsibility: Eighth report on State Responsibility*, Y.B. INT'L L. COMM'N 3 (1979) (summarizing the ILC's thirty-five articles indicating when responsibility may be incurred, which has been adopted by the Commission).

240. See BROWNIE, *supra* note 228, at 397 (stating that a state may not use its territory in a manner that causes harm to another state).

241. See Pisillo-Mazzeschi, *supra* note 38, at 509-11 (explaining that primary rules relate to environmental obligations under international law); see also Francisco Orrego Vicuna, *Final Report Prepared for the Eighth Committee of the Institute of International Law by the Rapporteur on the Subject of Environmental Responsibility and Liability*, 10 GEO. INT'L ENVTL. L. REV. 279, at 279, 281-2 (1998) [hereinafter Vicuna Report-1998].

242. See Riccardo Pisillo-Mazzeschi, *supra* note 38, at 510-11 (noting the differences between primary and secondary rules).

243. *Id.* (explaining the obligation not to cause transboundary pollution harm to another country, is an example of a primary rule).

244. See Part I of the draft articles on State Responsibility adopted by the International Law Commission on first reading in 1980, entitled, *The Origin of International Responsibility*, Y.B. INT'L L. COMM'N 30, 30 (1981). Once a breach has occurred secondary rules deal with the legal obligation. *Id.* Secondary rules also concern whether an international wrongful act has been committed in the first place. *Id.*; see also Vicuna Report-1998, *supra* note 241, at 281-2; see also Willem Riphagen, Special Rapporteur, *Preliminary Report on the Content, Forms and Degrees of International Responsibility* (Part 2 of the Draft Articles on State Responsibility), Y.B. INT'L L. COMM'N 107 (1982) (describing that secondary rules specify the content, forms and degrees of international responsibility).

245. See BROWN WEISS ET AL., *supra* note 155, at 505.

246. See *Chorzow Factory Case*, P.C.I.J. (Ser. A) No. 17, at 47 (1928). The purpose of restitution is to “wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed.” *Id.*

247. See Eduardo Jiménez de Aréchaga, *International Responsibility*, in *MANUAL OF PUBLIC INTERNATIONAL LAW* 531, 567-68 (Max Sørensen ed. 1968) (defining indemnity from the *Chorzow Factory* case as the “payment of a sum corresponding to the value which a restitution in kind should bear”). Indemnity is also generally referred to as a form of reparation. *Id.*

248. See E. Jiménez de Aréchaga, *International Law in the Past Third of a Century*, 159 *Rec. Des Cours* 9, 285 (1978-I). Reparation is the generic terms which describes the various methods available to a State for discharging or releasing itself from [international] responsibility. *Id.* The forms of reparation may consist in restitution, indemnity or satisfaction. *Id.*

to the continuing development of environmental rules, even though States have been rather reluctant to simultaneously agree on the pertinent rules of responsibility.²⁴⁹

B. State Responsibility to the Environment: Types of Liability for a Breach

One of the manners in which states may be held accountable in interstate claims under international law for environmental harm, is the principle of state responsibility,²⁵⁰ or as it is sometimes referred to as international liability.²⁵¹ When a state breaches a principle of state responsibility, claims may be brought before international tribunals, the ICJ, or alternatively settled by negotiation or diplomatic means.²⁵²

The basis of responsibility usually lies in the breach of obligations undertaken by states or imposed on them by international law.²⁵³ In environmental cases, responsibility most frequently arises either because of the breach of one or more of the customary obligations recognized between states or because of a breach of a treaty.²⁵⁴ Generally, principles of international law governing the states and their

249. See generally *Developments in the Law: International Environmental Law*, 104 HARV. L. REV. 1484 (1991) (criticizing in part that international liability remains an empty abstraction).

250. See E. Jiménez de Aréchaga, *supra* note 248, at 267-68 (establishing elements of international responsibility). Aréchaga sets forth three elements which are "essential" to the establishment of international responsibility:

- (i) The existence of an act or omission which violates an obligation established by a rule of international law in force between the State responsible for the act or omission and the State injured thereby.
- (ii) The unlawful act must be imputable to the State as a legal person.
- (iii) Loss or damage must have resulted from the unlawful act.

Id.; see also J. Barboza *International Liability*, 247 REC. DES COURS 301, 305-06 (reiterating the meaning of international responsibility); see generally Vicuna Report-1998, *supra* note 241, at 283-85 (discussing that State responsibility refers to the consequences of a state's failure to exert sufficient regulatory control over activities within its jurisdiction to meet its international obligations).

251. See Pisillo-Mazzeschi, *supra* note 38, at 509-12. For a distinguishing discussion on the difference between State responsibility and international liability; see also generally Vicuna Report-1998, *supra* note 241, at 283-86 (contrasting international liability and state responsibility). International liability reeferes more generally to mechanisms for compensating and otherwise remedying harm caused by states or other actors, whether or not the harm resulted from the breach of an international obligation. *Id.*

252. See BIRNIE & BOYLE, *supra* note 16, at 139.

253. See IAN BROWNLIE, *SYSTEM OF THE LAW OF NATIONS*, 37, 60-62 (1992); see also BIRNIE & BOYLE, *supra* note 16, at 139; see also Statute of the ICJ, Art. 38(1)(c), 59 Stat. 1055 (1945) (stating that the ICJ lists Article 38 as one of the sources of international law to be applied by the Court is "the general principles of law recognized by civilized nations"); see MCCAFFREY, *supra* note 35, at 545 (suggesting in theory that if a norm is generally recognized by states, it is also another way, in appropriate circumstances, to be drawn upon in regulating their relations *inter se*).

254. See generally Julio Barboza, *Sixth Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited By International Law*, U.N. GAOR, 42nd Sess. U.N. Doc A/CN. 4/428 (Mar. 15, 1990) (detailing a state's responsibility not to cause transboundary harm); see also *Report of the International Law Commission: International Liability for Injurious Consequences Arising Out of Act Not Prohibited By International Law*, U.N. GAOR, 45th Sess., Supp. No. 10, U.N. Doc. A/45/10 (1990) (commenting on the responsibility of a state

responsibility also apply to the breach of obligations relating to environmental protection.²⁵⁵

A violation of international environmental law results when activities within a state's jurisdiction or control cause damage to the environment of other states or areas beyond the limits of their national jurisdiction.²⁵⁶ Under international environmental law liability for a breach of this principle is recognized by several different principles of responsibility for a wrongful act and a principle of state responsibility attaching liability without a wrongful act.²⁵⁷

1. Fault Responsibility²⁵⁸ (Negligence)

One principle of responsibility for a wrongful act is that of fault responsibility.²⁵⁹ Under the traditional view, this principle is characterized by the fact that the victim State has to prove, in addition to the breach of an international obligation, the psychological fault (willful or negligent conduct) of the organ of the State accused of the wrongful act.²⁶⁰ The plaintiff also has the burden to prove the negligent behavior and the consequentially provoked damage.²⁶¹ Another view places emphasis on the content of a particular category of primary obligations of the State.²⁶² This responsibility is based on due diligence.

for breaching the obligation to not cause transboundary harm).

255. See Vicuna Report-1998, *supra* note 241, at 283. Thus in general the breach of an international legal obligation is an internationally wrongful act that gives rise to state responsibility. *Id.*

256. See Stockholm Declaration, *supra* note 20, at princ. 21; see also Rio Declaration, *supra* note 48, at princ.

2.

257. For a full discussion see Pisillo-Mazzeschi, *supra* note 38, at 509-12. The distinction between state liability and civil liability establish the main difference in types of liability. *Id.* State liability refers to the liability of international subjects, State or any other international organization, whereas civil liability refers to liability of any legal or natural person. *Id.* Both State and civil liability can be subdivided into fault based and strict liability. *Id.*

258. See E. Jiménez de Aréchaga, *supra* note 248, at 269-71 (establishing the basis of fault responsibility).

259. See BIRNIE & BOYLE, *supra* note 16, at 141-42. Sometimes 'fault' in regards to the law of state responsibility is confusing because the term can be used subjectively, requiring intent, recklessness, or negligence on the part of the state or its agents, or it can be used objectively, meaning simply the breach of an international obligation. *Id.*

260. See Pisillo-Mazzeschi, *supra* note 38, at 509-12.

261. See generally Eduardo Jiménez de Aréchaga, *supra* note 247, at 534 (commenting on fault as an element of international responsibility, where the plaintiff generally has the burden of proof, just like a general negligence tort action).

262. See Pisillo-Mazzeschi, *supra* note 38, at 509-12. (explaining under this view, one must speak of the principle of responsibility for breach of due diligence obligations, therefore due diligence should be considered as an objective and international standard of behavior). The conduct to be expected of a good government has been defined with greater precision by means of the enactment of internationally agreed standards. *Id.*; see also Vicuna Report-1998, *supra* note 241, at 283 nn. 23 & 24 (citing to other sources which supports the generalization of fault-based responsibility stated in terms of the due diligence test).

2. Objective Responsibility²⁶³ (Strict Liability)

Objective responsibility,²⁶⁴ contrasts with fault responsibility.²⁶⁵ Under the traditional view, objective responsibility is characterized by the fact that responsibility does not require fault, but arises from the mere breach of an international obligation²⁶⁶ and is not normally a necessary condition of responsibility.²⁶⁷ Also referred to as strict liability, this principle operates on the basis of the objective face of harm, generally involving an obligation of result, but also allows for appropriate exemptions and limitations.²⁶⁸ In some cases this may imply a reversal of the burden of proof, wherein the state's diligence or state of mind remains relevant.²⁶⁹ In the alternative, strict liability may imply that a failure of due diligence or subjective fault are not required because liability attaches without requiring the proof of fault, unless there is a valid defense.²⁷⁰

3. Responsibility Without a Wrongful Act (Objective and Absolute)

International environmental law also applies another variation of strict or absolute liability, which directly attaches to the defendant without regard to fault.²⁷¹

263. See J. Barboza, *supra* note 250, at 307 (discussing the meaning of objective liability); see also E. Jiménez de Aréchaga, *supra* note 248, at 271-73 (defining objective liability as absolute).

264. See Pisillo-Mazzeschi, *supra* note 38, at 511-12. (expressing that objective responsibility is also referred to as responsibility without fault).

265. See BIRNIE & BOYLE, *supra* note 16, at 142. Used in the subjective sense, 'fault' is almost never the basis of responsibility in environmental disputes, although it is not inappropriate to use the term to describe the reckless or intentional infliction of avoidable injury in situations such as the Russian Armed forces testing nuclear missiles off the coast of Estonia, outside the Naval Base at Paldiski.

266. For a discussion on international obligations regarding objective responsibility, see Pisillo-Mazzeschi, *supra* note 38, at 509-11.

267. See Eduardo Jiménez de Aréchaga, *supra* note 247, at 534-37 (explaining that "the decisive consideration is that unless the rule of international law which has been violated specifically envisages malice or culpable negligence, the rules of international law do not contain a general floating requirement of malice or culpable negligence as a condition of responsibility"). *Id.*

268. Vicuna Report-1998, *supra* note 241, at 286. Illustrative of this approach is the Convention of the Council of Europe on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, June 21, 1993, 32 I.L.M. 1228 (1993); see also BIRNIE & BOYLE, *supra* note 16; see also IAN BROWNLEE, SYSTEM OF THE LAW OF NATIONS, STATE RESPONSIBILITY, Part I, at 44 (1983).

269. BIRNIE & BOYLE, *supra* note 16, at 142 (noting that the reversal of the burden of proof usually requires that the defendant state bear the responsibility of showing that it was negligent or otherwise at fault).

270. Pisillo-Mazzeschi, *supra* note 38, at 509-12; see also Vicuna Report-1998, *supra* note 241, at 286 (stating that although different standards have been established by treaties and Conventions, the main trend of current international practice points in the direction of strict liability); WALLACE, *supra* note 12, at 167 (listing consent, reprisal, distress, necessity and self-defense as some examples of recognized defense pleas which may be utilized by a state to deny responsibility). For examples of valid defenses see also ILC, Draft Article on State Responsibility; Article 29-33., II YEARBOOK ILC (1980) (citing lawful countermeasures, consent, distress, necessity, and self-defense as example which may preclude wrongfulness in international law).

271. See Barboza, *supra* note 254 (explaining another example of responsibility exists which is not based on any breach of obligation by states, but arises independently through general principles of law and equity). This theory of non-wrongful liability has been adopted by the ILC as a basis of its topic 'International Liability for

Such a principle is characterized by liability arising from lawful activities on the basis of the mere causal link between these activities and the damage done.²⁷² Therefore, the plaintiff does not have to prove anything except a casual connection between the activity in question and the damage suffered.²⁷³ Liability without fault has been generally used to deter dangerous activities while not entirely prohibiting benefits they may have. Thus, the rationale of strict liability is that whoever engages in activities that might have an inherent risk of injury—such as those classified as hazardous activities—is liable for injuries caused to third parties, even without evidence of negligence or breach of international law.²⁷⁴ For this reason, such form of liability is, by its own nature, objective and absolute.²⁷⁵

Today a general rule of international law exists that binds the States to oversee activities within their jurisdiction or control so that such activities do not cause significant environmental harm, either to the territory or resources of other States, or to common spaces or resources.²⁷⁶ The breach of this rule may occur either

Injurious Consequences Arising out of Acts Not Prohibited by International Law.' *Id.* The underlying thesis for the Commission's work is that an alternative conceptual basis is needed in order to accommodate strict or absolute liability for lawful activities which cause environmental harm without any failure of due diligence, and to allow for the continuation of such harmful but socially useful activities. *Id.* Many critics believe that this is not an alternative theory but is based on responsibility for a breach of obligation. *Id.*; see also Pisillo-Mazzeschi, *supra* note 38, at 509-12. Strict Liability for dangerous activities is present in national legal systems all over the world, as well as in a number of international treaties. See Barboza, *supra* note 254. A strict liability regime is provided in the oil pollution conventions; in both the Paris and Vienna conventions on nuclear damage; in the draft protocol of the Basel Convention. *Id.*

272. See Pisillo-Mazzeschi, *supra* note 38, at 509, 510-12; see generally, A.E. Boyle, *State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?*, 39 INT'L & COMP.L.Q. 1, 1-26. (1990); see also International Law Commission, *Survey of Liability Regimes Relevant to the Topic of International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law*, U.N. GAOR, 47th Sess., U.N.Doc. A/CN.4/471.

273. See Soto, *supra* note 230, at 203. In some instances absolute liability states no cause of justification is possible, and a state would be liable even for an act of God. *Id.*

274. See Convention on International Liability for Damage Caused by Space Objects (Sept. 1, 1972), reprinted in (visited Mar. 1, 1999) <<http://www.tufts.edu/fletcher/multi/texts/BH595.txt>> (copy on file with *The Transnational Lawyer*). The sole example with a clear rule of State's absolute liability is the 1972 Convention on International Liability for Damage caused by Space Objects, article 11 of which provides that "a State which launches a space object is liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight." *Id.*

275. See A.E. Boyle 1990, *supra* note 272 and accompanying text (discussing objective liability); see also C. Tomuschat, *International Liability for Injurious Consequences Arising Out of Acts Not Prohibited By International Law: The Work of the International Law Commission*, in INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM, (Francioni Francioni & Tullio Scovazzi eds. 1991) reprinted in BROWN WEISS ET AL., *supra* note 2, at 150 (citing C. Tomuschat explaining that the concept of responsibility without fault has been much debated and not generally accepted because it's been made abundantly clear that the governing element in an environmental regime providing for international liability attributable to the State shall be the objective fact of harm having occurred).

276. Pisillo-Mazzeschi, *supra* note 38, at 509-12.

directly²⁷⁷ or indirectly.²⁷⁸ However, in both cases, the obligation of the State appears limited by the rule of due diligence.²⁷⁹

C. Applicability of General Principles as Limited by Rule of Due Diligence

There exists in general international law, real and binding primary obligations of the States on the protection of the environment whose breach involves responsibility for a wrongful act.²⁸⁰ These real and binding obligations are limited by the due diligence rule.²⁸¹ This is particularly evident in a State's responsibility to prevent damage from transboundary pollution.²⁸²

However, even in the most uncommon situation of wrongful acts directly committed by State organs, or by agencies or bodies dependent on the State, responsibility of the state for its own conduct occurs for breach of due diligence obligations.²⁸³ International law does not place a negative obligation on the States to refrain, but rather a positive obligation to protect.²⁸⁴ But the active measures that the State must adopt cannot guarantee a certain result. Objective elements are strongly unpredictable.²⁸⁵ Therefore it is logical that international law place only on the State the obligations to "make every effort" to reach this result.²⁸⁶

There are several basis where international responsibility is applicable in all circumstances, the nature of how it applies depends upon the particular obligations in question.²⁸⁷ The obligation of due diligence, approaches the arena of strict

277. Directly means owing to wrongful behavior of State organs, or of dependent agencies and bodies of the State. See MCCAFFREY, *supra* note 35, at 504-09 (discussing state responsibility).

278. *Id.* at 504-09. Indirectly means owing to the State's breach of the obligation to prevent and repress the polluting activities of private persons.

279. See Pisillo-Mazzeschi, *supra* note 38, at 509-12 (explaining that one should consider due diligence as an objective and international standard of behavior). The enactment of internationally agreed standards has been defined with greater precision, as conduct that is expected of a good government. *Id.*

280. See *id.* at 510-11 (stating responsibility follows a breach of international law); see also Eduardo Jiménez de Aréchaga, *supra* note 247, at 531, 561 (noting due diligence is a state responsibility in regards to their conduct).

281. See Pisillo-Mazzeschi, *supra* note 38, at 509-12; see also *Report of the International Law Commission, The Law of the Non-Navigational Uses of International Watercourses* U.N. GAOR, 46th Sess., Supp. No. 10, at 236-37, U.N. Doc A/49/10 (1994) (defining due diligence as "a diligence proportioned to the magnitude of this subject and to the dignity and strength of the power which is exercising it . . . and such care as governments ordinarily employ in their domestic concerns"); BIRNIE & BOYLE, *supra* note 16, at 92-94 (addressing due diligence with the duty to not cause transboundary harm).

282. See Pisillo-Mazzeschi, *supra* note 38, at 510-12 (commenting on due diligence in regards to state obligations and liability); see also BIRNIE & BOYLE, *supra* note 16, at 141-42 (describing the law of state responsibility, fault and due diligence).

283. See Pisillo-Mazzeschi, *supra* note 38, at 509-12.

284. See *id.*

285. See *id.*

286. For further reading on general rules of international responsibility for environmental harm, see generally INTERNATIONAL RESPONSIBILITY FOR ENVIRONMENTAL HARM (Francesco Francioni & Tullio Scovazzi eds. 1991).

287. See Soto, *supra* note 230, at 203 (commenting on the lack of a general rule for liability when engaging in ultra-hazardous activities); see also 1 L. OPPENHEIM, INTERNATIONAL LAW 509 (1955) (supporting the theory of no general rule in international law when engaging in ultra-hazardous activities).

liability when the state is handling inherently dangerous material that has a substantial likelihood to cause irreparable damage to the environment.²⁸⁸ Nuclear material present an extremely dangerous and potentially deadly threat to the environment and humans. Therefore, strict liability for extremely dangerous activities can be considered a general principle of law since it is found in municipal legislation and treaties.²⁸⁹

D. Responsibility of States to Refrain from Transboundary Harm

The possession of rights involves the performance of corresponding obligations.²⁹⁰ The basis of this obligation is explained as *maxim sic utere tuo, et alienum non laedas*²⁹¹ which is considered to be the international principle that places an obligation on states to prohibit activities within their territory that are contrary to the rights of other states which, could harm other states or their inhabitants.²⁹² The obligation of all states to protect the rights of other states, was first elaborated in the case of *Trail Smelter*.²⁹³ The court held that under the principles of international law no state has the right to use or permit the use of territory in such a manner as to cause injury by fumes in or to the territory of another of the properties or persons therein, when the case entails serious consequences and the injury is established by clear and convincing evidence.²⁹⁴ A

288. See Soto, *supra* note 230, at 203-04 (noting the level of liability for ultra-hazardous activities).

289. See *Report of the International Law Commission, The Law of the Non-Navigational Uses of International Watercourses*, U.N. GAOR 46th Sess., Supp. No. 10, U.N. Doc. A/49/10 (1994); *International Convention for the Prevention of the Sea by Oil*, May 12, 1954, 327 U.N.T.S. 3, (1954), reprinted in (visited Mar. 1, 1999) <<http://www.tufts.edu/fletcher/multi/texts/tre-0130.txt>> (copy on file with *The Transnational Lawyer*); see generally notes 227-317 and accompanying text (discussing international environmental law as well as the treaties, agreements, and court decisions which have upheld the duty not to cause transboundary harm as approaching strict liability).

290. See generally *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276 (S. Afr. v. Namib.)*, 1971 I.C.J. 16 (Advisory opinion of June 21).

291. The latin phrase translates: "So use your own property as not to injure that of another." *BALLETINE'S LAW DICTIONARY* 1178 (3d ed. 1969).

292. The maxim was invoked as a rule by the I.C.J in the Case Concerning the Gabčíkovo-Nagymaros Project (Hung v. Slov.), 1997 I.C.J. 3. See Eva M. Kornicker, *State Community Interests, Jus Cogens and Protection of the Global Environment: Developing Criteria for Peremptory Norms*, 11 GEO. INT'L ENVTL. L. REV. 101, 125-28 (1998) (discussing the Gabčíkovo-Nagymaros Case). The principle not to cause transboundary harm was also adopted in Corfu Channel (U.K v. Alb.), 1949 I.C.J. 4 at 22 (Apr. 9); see also *Lac Lanoux Arbitration* (Spain v. Fr.), 12 R.I.A.A. 285 (Nov. 16, 1957); see also *Stockholm Declaration*, *supra* note 20; *Rio Declaration*, *supra* note 48 (recognizing the duty not to cause transboundary harm as a general principle of international environmental law); see generally *BROWN WEISS ET AL.*, *supra* note 2, at 270-88 (fully discussing the Lac Lanoux case).

293. *Trail Smelter*, (U.S. v. Canada), 3 R.I.A.A. 1911, 1965 (Apr. 16, 1938 & Mar. 11, 1941).

294. *Id.* The *Trail Smelter* rule has also been increasingly widely accepted as a statement of customary international law generally applicable to cases of pollution, including media other than air. See, e.g., 2 RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS OF LAW OF THE UNITED STATES §601 *reps. note* 1 (1987); KISS & SHELTON, *supra* note 222, at 125 (asserting *Trail Smelter* decision as affirming existence of rule of international law forbidding transfrontier pollution); see also Gunther Handl, *International Liability of States for Marine*

more general version of the harm preventing principle was adopted by the ICJ in its 1949 *Corfu Channel* decision.²⁹⁵ In this case the court concluded that every state has an obligation not to knowingly allow its territory to be used for acts contrary to the rights of other states.²⁹⁶ This principle was further developed in 1961 when the United Nations General Assembly declared that the fundamental principles of international law impose a responsibility on all states concerning actions which might have harmful biological consequences for the existing and future generations of peoples of other states, by increasing the levels of radioactive fallout.²⁹⁷ This duty to avoid environmental damage is internationally recognized and accepted in numerous treaties²⁹⁸ as well as in other international practices.²⁹⁹ The first step in

Pollution, 21 CAN. Y.B. INT'L L. 85, 90 n.25 (1983) (affirming *Trail Smelter's* decision as establishing a customary international legal obligation that pollution not interfere significantly with other state's uses of seas); see also Gunther Handl, *Territorial Sovereignty and the Problem of Transnational Pollution*, 69 AM. J. INT'L L. 50, 60-66 (1975) (summarizing the debate over whether the *Trail Smelter* tribunal adopts a negligence or strict liability standard); but see Oscar Schachter, *The Emergence of International Environmental Law*, 44 J. INT'L AFF. 457, 462 (1991) (expressing a contrasting opinion that *Trail Smelter* is accepted as a statement of customary international law, is not universally held). "[T]o assert categorically that (international environmental) principles have become customary law would require the evidence of general state practice and opinio juris. Such evidence is only fragmentary. Principle 21 of the Stockholm [D]eclaration is, at best, a starting point. On its own terms, it has not become state practice: States generally do not ensure that the activities within their jurisdiction do not cause damage to the environments of others. Nor have governments give any significant indication that they regard this far-reaching principle as binding customary law." *Id.*

295. *Corfu Channel* (U.K. v. Alb.), 1949 I.C.J. 4 at 22 (Apr. 9).

296. See *id.* This case is different from *Trail Smelter*, in that *Corfu Channel* dealt with a nation's obligation to warn other nations that mines existed in its territorial waters. *Id.* Several conflicting views have been expressed as to whether the principle announced in *Corfu Channel* applies to state's responsibility not to cause transboundary pollution. See also BIRNIE & BOYLE, *supra* note 16, at 90 (arguing that the principle in *Corfu Channel* does not apply to the principle announced in *Trail Smelter*); but see Pierre-Marie Dupuy, *Overview of the Existing Customary Legal Regime Regarding International Pollution*, in INTERNATIONAL LAW AND POLLUTION 63-64 (Daniel Barstow Magraw ed., 1988) (strongly endorsing the argument that the principles announced in the *Trail Smelter* arbitration are supported by the *Corfu Channel* decision).

297. See *Report of the United Nations Scientific Committee on the Effects of Atomic Radiation*, G.A. Res. 1629 (XVI), U.N. GAOR, 15th Sess., Supp. No. 16A, at 241-242, U.N. Doc. A/4684/Add.1 (1961) (recognizing "fundamental principles of international law impose a responsibility on all States concerning actions which might have harmful biological consequences for the existing and future generations. . ."); see also *Development and Environment*, G.A. Res. 2849 (XXVI), U.N. GAOR, 26th Sess., Supp. No. 29, at 71, U.N. Doc. A/8429 (Dec. 20, 1972) (noting the right of permanent sovereignty over natural resources).

298. See generally *Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water*, Aug. 5, 1963, art. I(1)(b), 480 U.N.T.S. 43, reprinted in (visited Mar. 1, 1999) <<http://www.tufts.edu/fletcher/multi/texts/BH454.txt>> (copy on file with *The Transnational Lawyer*) (prohibiting nuclear testing); see also United Nations Convention on the Law of the Sea, Dec. 10, 1982, art. 193, 21 I.L.M. 1245 (1982) (stating that the obligation to prevent environmental harm is not only a negative obligation; there should also be positive actions towards environmental protection). *Id.*; see also Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, Nov. 12, 1981, art. 3(5), reprinted in (visited Mar. 1, 1999) <<http://www.tufts.edu/fletcher/multi/texts/bh809.txt>> (copy on file with *The Transnational Lawyer*) (establishing that all Parties to the Convention must take "all measures necessary to ensure that activities under their jurisdiction or control are so conducted that they do not cause damage by pollution to others or to their environment").

299. See generally *International Responsibility of States in Regard to the Environment*, G.A. Res. 2996 (XXVII), U.N. GAOR, 27th Sess., Supp. No. 30, U.N. Doc. A/8730 (1972) (discussing principle 21 of the Stockholm Declaration as laying down the principle of international responsibility of states in regard to the

acceding the responsibility to refrain from transboundary harm³⁰⁰ was internationally recognized as a general principle of international environmental law with the Stockholm Declaration.

1. The Stockholm Declaration—Principle 21

International law has been developed to provide protection for the environment. The evolution of international environmental law is represented by the Stockholm Declaration. Even though the Stockholm Declaration is a non-binding text,³⁰¹ it serves as a basis for the development of international environmental law in the form of numerous conventions, bilateral as well as mutual.³⁰² Moreover, certain principles articulated in the Declaration are considered by scholars to reflect rules of customary international environmental law.³⁰³ Article 21 represents the fundamental principle which the commentators of the Declaration consider part of customary international law.³⁰⁴ The principle sets forth the obligation that States in accordance with the principles of international law, have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.³⁰⁵

Although this principle reaffirms the fundamental principles of international law of state sovereignty over natural resources, it combines with the equally

environment); *Charter of Economic Rights and Duties of States*, G.A. Res. 3281, U.N. GAOR, 29th Sess., Supp. No. 31, art. 30, at 55 (1974) (establishing all States have the responsibility to preserve, protect and enhance the environment for the present and future generations); Final Act of the Helsinki Conference on Security and Cooperation in Europe, 14 I.L.M. 1292 (1975).

300. See Stockholm Declaration, *supra* note 20, at princ. 21 (discussing Transboundary Pollution as the transmission of a physical agent from the territory of one state that causes harm in the territory of another or in the areas beyond national jurisdiction).

301. See Louis B. Sohn, *The Stockholm Declaration on the Human Environment*, 14 HARV. INT'L L.J. 423, 515 (1973) (giving an analysis of the drafting history of the Stockholm Declaration).

302. See Note by Executive Secretary, UNEP Conference of the Parties to the Convention on Biological Diversity (visited Jan. 18, 1999) <<http://www.biodiv.org/cop4/4-20/COP4-20e.html>> (copy on file with *The Transnational Lawyer*); see also *Charter of Economic Rights and Duties of States*, G.A. Res. 3281, U.N. GAOR, 29th Sess., Ch. III., Art. 30, at 48 (1974), reprinted in 14 I.L.M. 25 (1975); see also *Preparatory Committee for the United Nations Conference on Environment and Development, Principles on General Rights and Obligations. China and Pakistan [on Behalf of the Group of 77]: Draft Decision, Rio de Janeiro Charter/Declaration on Environment and Development*, at 1, Principle 21, U.N. Doc. A/CONF. 151/PC/WG.III/L.20/Rev. 1 (1992).

303. This is the particular case with Principle 21 relating to the responsibility of States for transboundary pollution, a topic discussed in this section in more detail. See KISS & SHELTON, *supra* note 222, at 40; see also BIRNIE & BOYLE, *supra* note 16, at 89-92.

304. See *supra* note 301-02 and accompanying text (setting forth Principle 21 as a fundamental principle of international environmental law).

305. See Stockholm Declaration, *supra* note 20; see also KISS & SHELTON, *supra* note 222, at 40-45 (providing analysis of this principle, which KISS & SHELTON characterize as a "fundamental principle" of the "international common of the environment").

fundamental principle of environmental responsibility of States, which qualifies the exercise of their sovereignty over their natural resources.³⁰⁶

Since its affirmation, Principle 21 has been adopted in numerous treaties, conventions, and agreements in international law.³⁰⁷ Its prodigious acceptance within international environmental law only lends weight to its acquired force as a substantive rule of customary international law.³⁰⁸ Today, Principle 21's focus on international environmental law has expanded from an emphasis on bilateral, transboundary pollution to include resource problems in areas completely under national jurisdiction and threats to the global commons other than purely transboundary pollution.³⁰⁹ Cumulation of the twenty years of expansion in international environmental law from the Stockholm Declaration was synthesized by Principle 21's reaffirmation with Principle 2 of the Rio Declaration.

2. The Rio Declaration—Principle 2

A general duty not to cause environmental damage to the environment of other states, or to areas beyond a state's national jurisdiction, promulgated in Principle 21 of the Stockholm Declaration³¹⁰ was affirmed in the 1992 Rio Declaration.³¹¹ The principle of responsibility is found in second place among the twenty-seven principles of the Declaration, no longer in twenty-first as in the Stockholm Declaration.³¹² This may lead to the conclusion that the principle of international responsibility of the states to refrain from causing transboundary pollution acquired greater weight in the Rio Declaration.³¹³ Unfortunately, one discovers more

306. See WALLACE, *supra* note 12, at 188-89. Principle 21 from the Stockholm Declaration, encompasses two fundamental principles of international environmental law. *Id.* First, states have sovereign rights over their natural resources. *Id.* Second, states must not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction. *Id.*; see also Stockholm Declaration, *supra* note 20, at princ. 21 (adopting duty not to cause transboundary harm as a general principle of international environmental law).

307. See David A. Wirth, *The Rio Declaration on Environment and Development: Two Steps Forward and One Back, or Vice Versa?*, 29 GA. L. REV. 599, 620 n. 57 (1995) (providing a thorough and comprehensive research on the adoption of Principle 21 in international Conventions and Treaties).

308. See *infra* notes 323, 333 and accompanying text (supporting the duty not to cause transboundary harm as a principle of customary law).

309. See generally Wirth, *supra* note 307 (noting the expansion of Principle 21 of the Stockholm Declaration).

310. See *id.* (providing for a comparative analysis of the Stockholm and Rio Declarations); see also Rancee K.L. Panjabi, *From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law*, 21 DEN. J. INT'L L. & POL'Y 215, 289 (1993).

311. See Rio Declaration, *supra* note 48, at princ. 2.

312. See Marc Pallemarts, *International Environmental Law in the Age of Sustainable Development: A Critical Assessment of the UNCED Process*, 15 J.L. & COM. 623, 636-41 (1996) (inquiring whether the jump from principle 21 in the Stockholm Declaration to principle 2 in the Rio Declaration, means that the principle of international responsibility of the states for transboundary pollution has acquired greater importance?).

313. See *id.* (proclaiming that instead of acquiring greater importance, Principle 2 actually contains a regression skillfully disguised under the appearance of an upgrading); see also *infra* notes 316-17 (arguing both sides).

questions than answers upon analyzing Principle 2 of the Rio Declaration. One argument states that Principle 2 represents the modification that potentially authorizes states to depart from the development of the Stockholm Declaration.³¹⁴ On the opposite side, others argue that Principle 2 changes nothing except for a recognition of the needs of developing countries.³¹⁵

Principle 2 declares, states have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.³¹⁶ The text is identical to Principle 21 in the Stockholm Declaration, with one very significant difference. The Rio version stipulates that "States have the sovereign right to exploit their own resources" not only "pursuant to their own environmental policies" which already was included in the Stockholm version but also according to their "developmental policies."³¹⁷

Therefore, the only thing the Rio Declaration adds along with analyzing the sovereign rights of State over their resources in the ecological context, the Rio Declaration includes a developmental policies analysis.³¹⁸ Thus, Principle 2 of the Rio Declaration has not changed the fundamental principle to refrain from causing transboundary harm, but has adapted with the times, by recognizing the importance of a State's developmental policies.

V. APPLICABILITY OF GENERAL PRINCIPLES OF INTERNATIONAL RESPONSIBILITY TO THE ENVIRONMENTAL HARM IN ESTONIA

Responsibility arises from the simple fact that the environment is an important aspect of a healthy life. Without a healthy environment there can be no healthy people, economy, or government.

314. See Wirth, *supra* note 307, at 623-24 (arguing that the revision of Principle 21 is "an abrupt discontinuity in the development of law in this perennially sensitive area, a modification that at least potentially authorizes states to depart from the Stockholm Declaration"); see also Pallemmaerts, *supra* note 312, at 636-42 (noting the differences between Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration).

315. See generally Pallemmaerts, *supra* note 312, at 636-41 (asserting that "the modification of Principle 21 does not materially change its meaning or effect," but "simply states that which was previously unstated but universally accepted").

316. See Rio Declaration, *supra* note 48, at princ. 2.

317. See Note by Executive Secretary, UNEP Conference of the Parties to the Convention on Biological Diversity, *supra* note 302 (reproducing in its Article 3, under the neutral-sounding title of "principle," Principle 21 of the Stockholm Declaration in its original version).

318. See Pallemmaerts, *supra* note 312, at 637-38 (discussing the addition of "developmental" policy to principle 21 of the Stockholm Declaration, which establishes the duty not to cause transboundary harm).

This section of the Comment explores the applicability of general principles of international responsibility for environmental harm;³¹⁹ specifically between Estonian and Russia explained above.³²⁰ An analysis of the Troop Withdrawal Agreement signed between Estonia and Russia is discussed first for the purpose of determining if Estonia waived their right to hold Russia responsible for the environmental harm to their land.³²¹

A. *The Effect of the Troop Withdrawal Agreement (Russia—Estonia)*

The Troop Withdrawal Agreement between the Republic of Estonia and the Russian Federation was signed at Moscow July 26, 1994.³²² An important factor in the signing of the agreement was the significance of the preamble, which stated that both parties were guided by internationally recognized principles and norms of international law.³²³ General principles and norms of international law may be inserted into undeveloped areas of the treaty to avoid undermining its principle objective.³²⁴ Therefore, where situations arise and the treaty does not cover the actions that may be taken, general principles and norms of international law may be used in creating a solution.

Article 19 states that when disputes arise damages are to be reviewed by a joint commission formed on the basis of Article 21.³²⁵ To resolve disputes the joint commission is to operate on the regulations established by the commission itself.³²⁶ Furthermore, the agreement aspired to establish a contractual basis for which the resolution of issues relating to the withdrawal of Soviet military forces from Estonia

319. See generally P. M., Dupuy, *The International Law of State Responsibility: Revolution or Evolution?*, 11 MICH. J. INT'L L. 105 (1989) (expanding on the evolving principles governing responsibility under international law).

320. This comment does not explore the ability of Russia to pay any compensation to Estonia for the environmental damage to their land, but advocates the application of general principles of international environmental law to the occupying power of one state upon another, when the occupying power harms the environment of the state they are occupying.

321. See Borger, *supra* note 1 (discussing the possibility of Estonia waiving all claims against Russia in the Troop Withdrawal Agreement); see also Trei, *supra* note 110 (stating Estonia waived all rights against Russia in the Troop Withdrawal Agreement).

322. See Troop Withdrawal Agreement, *supra* note 142 (providing a copy of an unofficial translation of the agreement between Estonia and Russia).

323. See Troop Withdrawal Agreement, *supra* note 142, at preamble.

324. See WALLACE *supra* note 12, at 21-22 (supporting the theory of "plugging in" general principles of international law where the law is deficient).

325. See Troop Withdrawal Agreement, *supra* note 142, at art. 19(4). Article 19(4) states, "[d]isputes arising between the Parties related to compensation of damages shall be reviewed by a joint commission which shall be formed on the basis of Article 21 of the present Treaty." *Id.*

326. See *id.* at art. 21. Article 21 states, "[a] joint commission to which each Party shall designate an equal number of representatives shall be formed to resolve matters related to the present Treaty and to its application. *Id.* The joint commission shall operate based on regulations established by the commission." *Id.*

could be based.³²⁷ During the withdrawal of Soviet military forces, no disputes arose, therefore application of these articles do not apply to the damages of the environment that the Soviet military effectuated during their fifty years of occupation.

An important determination of whether Estonia maintains a cause of action to hold Russia responsible for the harm of the environment under the treaty is how long it was to remain in effect. The agreement states that it was to remain in effect until such time as the Soviet military forces had been completely withdrawn from the territory of the Republic of Estonia.³²⁸ All Armed Forces of the Soviet military departed from Estonia on August 31, 1994, except for approximately two thousand whom had retired from the military and chose to remain.³²⁹ If this is so, any contractual binding clauses waiving Estonia's right to seek indemnification for violation of international environmental law would be inapplicable for a claim brought today. This is an easy argument, opening the door to Estonia's right to hold Russia responsible for the environmental harm. But if the treaty is found to apply to a claim brought today, did Estonia waive their right to hold Russia responsible under Article 8 of the treaty?

Article 8 of the Troop Withdrawal Agreement states that at the time the Treaty enters into force all claims related to the presence of the Soviet military forces in Estonia and damage caused ecologically or other, shall be considered settled in full.³³⁰ But Article 9(2), states that the Armed forces shall transfer all military sites to the Republic of Estonia cleared of explosive, poisonous and other environmentally polluting substances.³³¹ Both Parties to this Treaty knew "shall" within the meaning of law and treaties predicates that the Armed Forces must transfer all military sites to Estonia cleared of explosive, poisonous and other environmentally polluting substances. Upon departure of the Armed Forces from the Sillamäe Uranium dump, Paldiski Naval base, and numerous other bases, severe and massive amounts of environmental damage were discovered and remained on the site to be cleaned by the Republic of Estonia.³³² This is a clear breach of Article

327. *See id.* at preamble. The relevant section of the preamble postulates the Parties, "endeavoring to establish a contractual basis for the resolution of issues related to the withdrawal of the Armed Forces of the Russian Federation from the territory of the Republic of Estonia and conditions for their temporary presence until such time as the withdrawal has been completed. . . ." *Id.*

328. *See id.* at art. 22. Article 22 (establishing that "[t]he present Treaty . . . shall remain in force until such time as the Armed Forces have been completely withdrawn from the territory of the Republic of Estonia").

329. *See* Trei, *supra* note 110 (stating that several hundred Russians chose to remain in Estonia after the majority of the troops withdrew).

330. *See* Troop Withdrawal Agreement, *supra* note 142, at art. 8. Article 8 (stating all monetary, property and other claims by the Parties related to the presence of Armed Forces on the territory of the Republic of Estonia, including ecological and other damage caused by the Armed Forces, shall be considered to be settled in full as of the moment the present Treaty enters into force).

331. *See id.* at Article 9(2.1). Article 9(2.1) (establishing that "[t]he Armed Forces shall transfer all military sites to the Republic of Estonia cleared of explosive, poisonous and other environmentally polluting substances").

332. *See supra* Sections II.B.C. and Section III. (discussing the damage to Paldiski).

9(2.1), because the Russian Federation agreed to transfer all military sites to Estonia cleared of environmentally polluting substances.³³³ Sillamäe has a uranium lake lying just 10 meters from the Baltic Sea.³³⁴ Paldiski had two nuclear reactors which the Russian Federation did clear away, but left the land surrounding the base polluted by tons of waste from operating the nuclear reactors.³³⁵ Therefore, by breaching Article 9(2.1), which was an absolute requirement according to the Treaty, render Article 8's waiver for the environmental damage inapplicable?

The waiver clause under Article 8 also includes the term "shall."³³⁶ The "shall" refers to all claims to be considered in full as of the moment the Treaty enters into force.³³⁷ Russia obviously breached Article 9(2.1), but since the waiver inserted into Article 8 is laid out before Article 9(2.1), does this preclude any claim brought under Article 9(2.1)? Clearly, arguments can be articulated for both sides.³³⁸ The Russians would argue that since Article 8 was laid out before Article 9(2.1), the Estonians are precluded from bringing a claim under the Treaty for breach of Article 9(2.1). The Estonians would indubitably expatiate on the fact that Article 9(2.1) required the Russian military forces to vacate all military bases cleared of explosive, poisonous and other environmentally polluting substances, otherwise this Article would not have been inserted into the Treaty. Furthermore, they would contend that full compliance with Article 9(2.1), qualifies Article 8's waiver of all claims against Russia during their period of occupation, therefore they can bring a claim for breaching the Article. Arguments could go back in forth as to whether Estonia waived its right to hold Russia responsible for the environmentally polluting substance remaining on the bases after they withdrew from Estonia under Article 8, or whether Russia can be held responsible for breaching the Treaty under Article 9(2.1).

This Comment is not concerned with the answer to these questions as to whether Estonia waived their right to bring a claim for breach of the Treaty under Article 8, or whether Article 9(2.1) allows a claim to be brought. The existence of the Treaty had to be acknowledged, because if Estonia brought a claim against Russia seeking to hold them responsible for the environmental damage the above arguments would surely be put forth. Acknowledging the existence of the Treaty, but disregarding the debates that Estonia may have waived its right to hold Russia responsible, this Comment will apply the general principles of environmental law

333. See Troop Withdrawal Agreement, *supra* note 142, at art. 9(2.1).

334. See *supra* Section III.B. (detailing the environmental damage to the land surrounding the Sillamäe uranium waste plant).

335. See *supra* Section III.A. (reporting the extensive damage left behind on the former naval base in Paldiski).

336. See Troop Withdrawal Agreement, *supra* note 142, at art. 8.

337. See *id.*

338. See Ann MacLachlan, *Estonia To Take Title To Cleaned Ex-Soviet Nuclear Training Site*, NUCLEONICS WEEK, Sept. 7, 1995, available in 1995 WL 7929144 (articulating arguments that may be brought on both sides).

as recognized under the Stockholm³³⁹ and Rio Declaration³⁴⁰ to the environmental damage of Estonia.³⁴¹ Therefore, even though the agreement may not be enforceable against any claim Estonia has against the Russian Federation, it does leave open the door to apply general principles of accountability and responsibility to the environmental damage the Armed Forces inflicted upon Estonian land.

B. Applying General Principles of Responsibility Recognized under International Environmental Law to an Occupying Power for the Environmental Harm of Estonia

Applying general principles of international environmental law is necessary to deter an occupying power from causing environmental harm to the occupied territory. Furthermore, holding the occupying power responsible under the general principle to refrain from causing transboundary harm to the environment is essential to protect the surrounding countries from environmental harm.

On the basis of a broad comparison of treaty law, international resolutions, and regional practice, it seems possible to define the well-established principle not to cause transboundary pollution as follows:³⁴² (1) States, in the exercise of their sovereign right, pursuant to their developmental policies, may exploit and use their natural resources.³⁴³ (2) However, States shall take into account the impact of actual or anticipated activities in areas placed under their jurisdiction or control on the environment situated national frontiers.³⁴⁴ (3) Furthermore, States shall take, in good faith and with all due diligence, appropriate measures to prevent transboundary pollution by establishing, rules and procedures adapted to the requirements of the protection of the environment, and see the laws effectively applied.³⁴⁵

The principle to further refrain from transboundary harm in international environmental law can be broken down into three general elements.³⁴⁶ First, states

339. See Stockholm Declaration, *supra* note 20, at princ. 21; see also BIRNIE & BOYLE, *supra* note 16, at 91 (setting forth that many conventions at Principle 21 was announced, point to international acceptance of the proposition that states are now required to protect global common areas). Principle 21 as applied to subsequent lawmaking and judicial precedents requires states to do more than make reparation for environmental damage. *Id.* at 92.

340. See Rio Declaration, *supra* note 48, at princ. 2

341. See *supra* Sections II.C. and III.A.B. (detailing examples of the environmental damage the Russian occupation had upon Estonia).

342. See P.M. Dupuy, *supra* note 22, at 333; see also WALLACE, *supra* note 12, at 188-90 (noting several treaties and resolutions which have adopted the fundamental principle not to cause transboundary harm).

343. See *id.*

344. See *id.*

345. See P.M. Dupuy, *supra* note 22, at 333.

346. See generally Soto, *supra* note 230 (discussing sovereignty and responsibility in international environmental law).

have sovereign rights over their own natural resources.³⁴⁷ Second, states shall refrain from causing transboundary harm.³⁴⁸ Third, states in good faith and with all due diligence, should undertake appropriate measures to prevent transboundary harm and enforce these measures.³⁴⁹ These three principle elements have been accepted by tribunals as a reflection of international customs³⁵⁰ and affirmed in international agreements in regards to international environmental law.³⁵¹

1. *States Sovereign Rights to Exploit and Use Their Own Natural Resources*

Estonia was an independent nation when the USSR volitionally occupied Estonia under the threat of severe retaliation from the Soviet military if they did not acquiesce.³⁵² Thereafter the USSR occupied Estonia for the next fifty years, exploiting and using Estonia's natural resources.³⁵³ But, did the USSR establish a sovereign right to exploit and use Estonia's natural resources?³⁵⁴

A sovereign right is a right which the state alone can possess, and which it possesses in the character of a sovereign, for the common benefit, and to enable it to carry out its proper functions.³⁵⁵ Estonia's argument would be the former USSR was not a sovereign, therefore never gained the right to exploit and use Estonia's natural resources. Sovereignty is the supreme, absolute and uncontrollable power by which any independent state is governed.³⁵⁶ Estonia was not an independent state during the USSR occupation, therefore the USSR never established itself as a sovereign power. In the alternative, if the former USSR established itself as a

347. See *Declaration on Permanent Sovereignty over Natural Resources*, G.A. Res. 1803 (XVII), U.N. GAOR, 17th Sess., AJ5217 (Dec. 14, 1962); see also BROWNIE, *supra* note 228, at 512-13 (detailing the principle of permanent sovereignty over natural resources is supported by the body of *jus cogens*). *Jus Cogens* is the attempt to form a body of law which classifies rights as fundamental or inherent. *Id.*

348. See Stockholm Declaration, *supra* note 20, at princ. 21; see also Rio Declaration, *supra* note 48, at princ. 2.

349. See P.M. Dupuy, *supra* note 22, at 332-33.

350. See generally *Texaco Overseas Petroleum Co. and California Asiatic Oil Co. v. Libya*, Arab Republic 53 I.L.R. 389.

351. See Stockholm Declaration, *supra* note 20; see also Rio Declaration, *supra* note 48; P.M. Dupuy, *supra* note 22, at 333 (declaring that the principle to refrain from causing transboundary harm, is a fundamental principle which seems to have been accepted by the actual world community of States); BIRNIE & BOYLE, *supra* note 16, at 91 (stating that principle 21 has had influence within United Nations resolutions, in UNEP principle, and in multilateral treaties such as the London Dumping Convention, the Geneva Convention, or the Basel Convention on the Transboundary Movement of Hazardous Wastes).

352. See *supra* Section II.B. (detailing the hostile occupation of Estonia).

353. See generally *ESTONIA COUNTRY STUDY*, *supra* note 6, at 18-23.

354. See BROWNIE, *supra* note 228, at 109-10 (discussing sovereignty and territory). Sovereign rights generally tend to refer to the power to take title to territory and the rights accruing from exercise of the power. *Id.* at 289.

355. See BLACK'S LAW DICTIONARY 1396 (6th ed. 1990) (elaborating that a state's sovereign right is distinguished from such "proprietary" rights as a state, like any private person, may have in property or demands which it owns).

356. See *id.* (defining sovereignty).

sovereign, Estonia would claim their right was not exercised for the common benefit. To rebut the USSR's counter argument that they exercised their sovereign right for the common benefit, Estonia would contend the former USSR failed to adhere to the will of the people, which created the common benefit.³⁵⁷ Therefore, the USSR exercised their sovereign right for the common benefit of their nation and not the for the common benefit of the people of Estonia.³⁵⁸ Thus, breaching the requirement of state's responsibility to adhere to the fundamental right of exercising one's sovereign right to exploit and use its natural resources to the will of the people.³⁵⁹

2. States Shall Refrain From Causing Transboundary Harm

The world community seems to have accepted the fundamental principle of a State's responsibility to refrain from causing transboundary pollution.³⁶⁰ This principle has been accepted in many States, among which, Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration are the most important. These principles establish the international duty to not cause substantial harm through transboundary pollution in the jurisdiction of another state.³⁶¹

The obligation of a state to refrain from causing transboundary pollution was first found in the *Trail Smelter* case,³⁶² and later adopted by the ICJ in the *Corfu Channel* case.³⁶³ The decision in the *Trail Smelter* case was finally announced in 1941.³⁶⁴ The USSR had completely occupied Estonia by 1941, therefore they were on notice that a duty to refrain from causing transboundary pollution existed in

357. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18-22 (detailing once the USSR established occupation within Estonia, they reformed their government to the will of the USSR).

358. See *id.*

359. See BIRNIE & BOYLE, *supra* note 16, at 89 (relating that states are required by international law to take adequate steps to control and regulate sources of serious global environmental pollution or transboundary harm within their territory or subject to their jurisdiction).

360. See P.M. Dupuy, *supra* note 22, at 333 (noting that the duty not to cause substantial harm through transboundary pollution in the area under the jurisdiction of another State may be deemed to have been explicitly accepted in many collective statements of States).

361. See Stockholm Declaration, *supra* note 20, at princ. 21; Rio Declaration, *supra* note 48, at princ. 2; see also P.M. Dupuy, *supra* note 22, at 334.

362. See *Trail Smelter*, (U.S. v. Canada), 3 R.I.A.A. 1905, 1965 (Apr. 16, 1938 & Mar. 11, 1941) (holding the duty to not cause transboundary harm as a general principle of international law; see also BROWN WEISS ET AL., *supra* note 155, at 246-50 (detailing the general holding of the *Trail Smelter* arbitration); see also WALLACE, *supra* note 12, at 189.

363. See *Corfu Channel* (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Apr. 9) (establishing international responsibility for explosion of mines in territorial waters); see also BROWN WEISS ET AL., *supra* note 155, at 263-67 (explaining the case and holding of the *Corfu Channel* case); WALLACE, *supra* note 12, at 189 (noting *Corfu Channel* establishes international responsibility on every state "not to allow knowingly its territory to be used for acts contrary to the rights of other states").

364. See *Trail Smelter*, (U.S. v. Canada), 3 R.I.A.A. 1905, 1965 (Apr. 16, 1938 & Mar. 11, 1941); see also BROWN WEISS ET AL., *supra* note 155, at 246-50.

international law.³⁶⁵ During the next fifty years of occupation, the USSR explicitly ignored this fundamental obligation. This is evidenced by looking at the environmental disaster situated on the former military bases within Estonia.³⁶⁶ Specifically, the greatest amount of damage to the environment is on the former naval base in Paldiski and the uranium waste facility in Sillamäe.³⁶⁷ Estonia declared independence from Russia in 1991. Eight years later in 1999, Estonia is still cleaning up the damage to the surrounding environment from the Soviet occupation.³⁶⁸

The USSR had a duty to refrain from causing transboundary pollution upon Estonia. Since they ignored this fundamental principle, they should be held responsible for the cleanup.³⁶⁹ Principle 21 of the Stockholm Declaration, establishes that States have a duty in their jurisdiction and to those under its control³⁷⁰ to refrain from causing transboundary pollution.³⁷¹ During occupation, Estonia was under the control of the USSR. Therefore, the fundamental principle of prevention implies that the USSR must consider what can or could be the eventual interferences of present and anticipated activities on the environment situated in the territory of other States.³⁷² Obviously, from the environmental damage to the Estonia land and surrounding Baltic Sea,³⁷³ the USSR never observed nor took into consideration the harm their actions would cause to the environment. The USSR while controlling Estonia never gained sovereign rights to use and exploit Estonia's natural resources. Therefore, the USSR is responsible for their actions that created transboundary environmental damage upon Estonia's land.

365. See ESTONIA COUNTRY STUDY, *supra* note 6, at 18 (stating that the USSR had completely occupied Estonia by 1941, but later in the year the German's attacked and took control of Estonia, which after WWII in 1944, the Soviets re-occupied Estonia).

366. See Section III.A.-B. (describing the environmental damage left behind from the Soviet occupation).

367. See *id.*

368. See *supra* notes 127-49 and accompanying text (detailing the cost of cleaning up the environmental damage left behind from the Soviet-Russian occupation).

369. See Stockholm Declaration, *supra* note 20, at princ. 21 (establishing the general principle to refrain from causing transboundary harm).

370. See McCaffrey, *supra* note 35, at 321 (noting the precise legal definition of control in Principle 21, is not entirely clear and the reasonableness test must be applied); see also RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES §403 (1986) (citing the reasonableness test). Some of the relevant factors in determining whether the exercise of jurisdiction over an activity is the link of the activity to the territory of the regulating state; "the connections, such as nationality, residence, or economic activity, between the regulating state and the person principally responsible for the activity to be regulated, or between that state and those whom the regulation is designed to protect; the character of the activity to be regulated; the existence of justified expectations that might be protected or hurt by the regulation; the importance of the regulation to the international political, legal, or economic system; the extent to which another state may have an interest in regulating the activity; and the likelihood of conflict with regulation by another state." *Id.*

371. See Stockholm Declaration, *supra* note 20.

372. See P.M. Dupuy, *supra* note 22, at 335 (noting international customary law has not developed sufficiently to define precisely what kind of procedures should be enforced by States to apply their general obligation to prevent transboundary harm).

373. See Section II.B.-C. and III.A.-B. and accompanying text (explaining the Soviet disregard for the environment and the resulting damage they wrought upon Estonia).

Transboundary pollution is generally defined as any intentional or unintentional pollution whose physical origin is subject to, and situated wholly or in part within the area under, the national jurisdiction or control of one State and which has effects in the area under the national jurisdiction of another State.³⁷⁴ There is an abundance of evidence establishing severe environmental damage to Estonian land as a result of the Soviet occupation.³⁷⁵ The environmental damage to the land occurred in Estonia, while it was under the control and jurisdiction of the USSR. Before occupation Estonia was an independent nation, during occupation it was under the control and subject to jurisdiction of the USSR by force. After occupation, Estonia reestablished itself as an independent nation. Therefore, since the USSR controlled Estonia by force, any resulting damage by the USSR on Estonian land causes transboundary pollution. Thus, the USSR breached the fundamental principle to refrain from causing transboundary harm unless they can raise a valid defense.

3. States Duty of Good Faith and Due Diligence to Prevent Transboundary Harm

International law recognizes a norm providing that states are to "exercise their best efforts," use "all appropriate means" or "the best practicable means at their disposal and in accordance with their capabilities"³⁷⁶ or "exercise due diligence"³⁷⁷ to bring about a certain state of affairs.³⁷⁸ These general principles of international law are applicable to the fundamental duty to refrain from causing transboundary pollution. Due diligence only requires States to take the necessary measures to ensure that such activities, which in themselves are generally lawful, do not create significant environmental harm.³⁷⁹

374. See McCaffrey, *supra* note 35, at 239 (defining the OCED's definition of "transfrontier pollution").

375. See *supra* Section III.A.-B. and accompanying text (describing the severe environmental damage to the cities of Paldiski and Sillamäe as a result of the Soviet occupation).

376. See Third United Nations Conference on the Law of the Sea: Final Act, Oct. 21, 1982, art. 194(1)(2) 21 I.L.M. 1245, 1308 (1982). Article 194(2), establishes the duty not to cause transboundary harm to another state. *Id.* Specifically, this article adds that States have a duty to prevent pollution arising from incidents or activities under their jurisdiction or control from spreading beyond the areas where they have exercised their sovereign rights. *Id.*

377. See BIRNIE & BOYLE, *supra* note 16, at 93 (citing flexibility as an advantages of due diligence as a standard of conduct). Such factors as the "effectiveness of territorial control, the resources available to the state and the nature of specific activities may all be taken into account and justify differing degrees of diligence." *Id.*; see generally *Report of the International Law Commission on the Work of its forty-sixth session*, U.N. GAOR 46th Sess., Supp. No. 10, U.N. Doc A/49/10 (1994) (discussing the Draft Articles on the Law of the Non-Navigational Uses of International Watercourses, which supports the exercise of due diligence). Article 7 establishes the obligation not to cause significant harm, which States must exercise with due diligence in their utilization of international watercourse. *Id.* at 236.

378. See P.M. Dupuy, *supra* note 22, at 336 (establishing the standard of international due diligence to be the measure of international cooperation). Furthermore, due diligence is both counterpart to the exercise of territorial jurisdiction and the limiting factor on international responsibility flowing from failure to act in accordance with international norms. *Id.*

379. See Pisillo-Mazzeschi, *supra* note 38, at 511; see also BIRNIE & BOYLE, *supra* note 16, at 92-4.

The measure of due diligence by a state is a subjective principle determined by looking at the surrounding facts of a situation. In both the cities of Sillamäe and Paldiski ultra-hazardous activities were conducted.³⁸⁰ The general rule on the flexibility of due diligence regarding high degree of damage requires the States to exercise a particularly high degree of diligence in prevention.³⁸¹ Prevention was not exercised by the USSR, as evidence by the nuclear waste surrounding the former naval base in Paldiski and the radioactive lake outside of the former uranium plant in Sillamäe.³⁸² In such a case as this, the due diligence obligation approaches the obligation of result.³⁸³ That is, to create a situation of presumption unfavorable to the damaging state, approaching the standard of strict liability.³⁸⁴ The damage to the Estonia environment from radioactive waste has already taken place. Therefore, Russia is responsible for breaching its obligation of due diligence (a.k.a. good faith) to refrain from causing transboundary harm.

VI. CONCLUSION

The duties of nations to responsibly control and regulate activities within their borders, is the basis of the fundamental principle to refrain from causing transboundary harm.³⁸⁵ In return, these responsibilities within the principle develop into specific principles of national responsibility in international environmental law. Therefore, international environmental law establishes a general duty to make sure that an occupying powers' activities on the occupied nation's soil does not cause serious environmental harms to that country. Thus, establishing a territorial responsibility principle.³⁸⁶

The assignment of specific national responsibility of an occupying power not to harm the environment of the occupied country is consistent with the basis of a

380. See *supra* Section III.A.-B. (detailing the extent of radioactive waste surrounding both Paldiski and Sillamäe).

381. See Pisillo-Mazzeschi, *supra* note 38, at 511-12 (explaining the due diligence obligations tend to approach an obligation of result, when the State are handling ultra-hazardous materials).

382. See *supra* Section III.A.-B. (showing that after the departure of the Soviet military, nuclear waste was found to have cause severe environmental damage in both Sillamäe and Paldiski).

383. See Pisillo-Mazzeschi, *supra* note 38, at 512. The obligation of result is to create a situation of presumption unfavorable to the damaging State. *Id.*

384. See *id.*

385. See Rio Declaration, *supra* note 48, at princ 2 (providing a sovereign the right to use their land and resources as long as the activities within their jurisdiction or control do not cause transboundary pollution). *Id.*; see generally BROWN WEISS ET AL., *supra* note 155, at 173-74 (historically, customary international law has provided that a sovereign state has jurisdiction to prescribe and enforce its laws within its territorial borders).

386. See *Trial Smelter Arbitration (U.S v. Can.)*, 3 R.I.A.A. 1911 (1938) (holding Canadians liable and ordered to pay damages for pollution caused by privately owned smelter); *id.*, at 1966 (establishing pollution control regime for the same smelter); see also *Stockholm Declaration*, *supra* note 20, at princ. 21 (providing that states must ensure that activities within their own jurisdiction do not damage areas beyond their jurisdiction); see generally Arthur K. Kuhn, Comment, *The Trial Smelter Arbitration-United States and Canada*, 32 AM. J. INT'L L. 785 (1938).

territorial responsibility principle. Upon recognition of this general principle nations assume responsibility for preventing environmental harm to an occupied country as if it was their territory. By establishing this idea as a general right among nations, a general principle of international environmental law is born.

It is necessary to protect the rights of an occupied territory to a healthy environment. Extending the application of the fundamental principle to refrain from causing transboundary harm to an occupying nation is essential to protect the environment of the occupied territory. Furthermore, applying this principle upon the occupying nation reenforces the duty of an occupying power to respect the environment of the occupied territory. Thus, establishing a positive principle to protect and preserve the environment. Even though an occupying power does not respect the rights of a once independent nation, the rights to a healthy environment is universal. Therefore, not only should the general principle of international environmental law to refrain from causing transboundary harm extend to cover the actions from one state to another, but also of an occupying power to the occupied nation.

The atrocity to the Estonian environment is magnified by the fact that Russia has not been held responsible for the environmental damage. As Julian Borger³⁸⁷ stated, "they were truly guests from hell." The Russian occupation of Estonia, is surely the epitome of guests from hell. Therefore should they not be responsible for the damage they wrought upon the Estonian environment during occupation?

387. See Borger, *supra* note 1.

