

Road to Stockholm+50 (2022) and Beyond

Environmental Terrorism: Not Yet an International Crime

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Abstract. The ease with which severe harms can be deliberately inflicted upon the natural environment to coerce political behaviour pose real and current threats to both nature and to social stability. There is a serious lack of international law to criminalise environmental terrorism. This lacuna could be remedied in part by the formulation and adoption of a new treaty to define and criminalise acts of terror against the natural environment. The outline of such a treaty is described in this article.

Keywords: Environmental terrorism, crimes, international law

1. Introduction

Scorched earth tactics can be effective to destroy enemy societies. In ancient and medieval military campaigns, armies burned down fields and forests.¹ In the 21st century, deliberate destruction of natural resources is a paramilitary tactic that has returned, in a decentralised and privatised form, as environmental terrorism. The objective of this article is to raise awareness of environmental terrorism and the lack of an international legal framework to suppress it. A step to fill this lacuna in the international legal framework would be a new convention, that might be endorsed by the United Nations Environment Assembly and located within the suite of United Nations counterterrorism treaties, to define environmental terrorism and to promote law enforcement cooperation to suppress it.

Terrorism is ‘the deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change’.² It deploys fear to coerce a desired political behaviour by public or private agencies

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1 *Vastatio*, meaning devastation, was a military campaign tactic used, for example, by Romans during the Gallic and Punic wars to ravage enemy territory, such as by burning crops, destroying herds, and poisoning water sources. The contemporary law of war crimes against the environment is discussed below.

2 Bruce Hoffman *Inside Terrorism* (Columbia University Press 2006) 40.

or organisations, or international institutions.³ As recognised in international law, it excludes violence in armed conflict,⁴ instead targeting non-military persons, property, or public infrastructure.⁵

Eco-terrorism and environmental terrorism are often confused but the terms refer to different phenomena. Eco-terrorism refers to acts of violence to coerce behaviour in support of environmental policy causes, such as protection of natural forests from logging.⁶ It is more common than might be expected,⁷ and it uses sabotage⁸ tactics that are recognised as criminal activities. An internationally-controversial example is the sabotage of Japanese whaling vessels by the Sea Shepherd fleet.⁹ Eco-terrorism is not the focus of discussion in this article.

Environmental terrorism, in contrast, deliberately and specifically targets the natural environment to damage or destroy environmental assets. Attacks can take the form of pollution inputs, such as poisons, or resources extractions, such as burning. Such attacks target environmental assets to coerce a desired political behaviour. Environmental terrorism is distinguishable from incidental collateral damage to environmental assets caused by political violence.

[A] distinction must be made between acts of terrorism in which the use of the environment is merely incidental (e.g. when pipelines or dams are targeted), and acts of terrorism in which the terrorist is explicitly attempting to create concern over the environment . . . the term ‘environmental terrorism’ should be reserved for incidents in which the environment itself is disrupted or threatened by the perpetrator as a symbol that elicits trepidation in the larger population over the ecological consequences of the act.¹⁰

Incidental collateral damage to the environment often occurs during armed conflict. Such damage might constitute war crimes, depending on whether those acts occur during armed conflict, are committed by armed forces, and are disproportionate to a military objective to be gained. The distinct nature of war crimes against the environment is discussed in detail below, under that heading, to elaborate the difference between them and acts of environmental terrorism.

2. Case Study – Israel

Anti-Israel terrorism provides a useful case study of the emergence of environmental terrorism in the 21st century. This case study describes the phenomenon without political colouring or ethical judgements concerning the multiple conflicts in the Middle East involving Israel. The history of terrorism demonstrates a pattern of

- 3 The most generalised definition of terrorism accepted in international law is found in the *International Convention for the Suppression of the Financing of Terrorism*; (1999) 2178 UNTS 197. Art 2.1(b) defines terrorism as an act ‘when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organisation to do or to abstain from doing any act’.
- 4 Thus, the *Convention for the Suppression of the Financing of Terrorism* Art 2.1(b), *id.*, defines a terrorist act as ‘intended to cause death or serious bodily injury to a civilian, or to any other person not taking an active part in hostilities in a situation of armed conflict’.
- 5 The *International Convention for the Suppression of Terrorist Bombings*, (1997) 2149 UNTS 284, prohibits the unlawful delivery, placement, discharge or detonation of an ‘explosive or other lethal device in, into or against a place of public use, a State or government facility, a public transportation system or an infrastructure facility with the intent to cause death or serious bodily injury; or with the intent to cause extensive destruction of such a place, facility or system, where such destruction results in or is likely to result in major economic loss’. Notably, this definition does not apply to attacks on component parts of the environment.
- 6 For a defence of eco-terrorism, see: Lawrence Buell ‘What is called ecoterrorism’ 16 *Journal of Theory and Criticism* 2009, 153-166.
- 7 The Federal Bureau of Investigation in the USA reports 2000 acts of eco-terrorism in 30 years, 1979- 2008, ‘FBI—Using Intel Against Eco-Terrorists’ (June 2008); available at: https://archives.fbi.gov/archives/news/stories/2008/june/ecoterror_063008, (accessed 15 March 2022).
- 8 Sabotage tactics include tree spiking to stop logging, and damage to construction and farm machinery to stop development, which were adopted by Earth First! and Earth Liberation Front. The tactics are popularly termed ‘monkeywrenching’ (Edward Abbey *the Monkey Wrench Gang* 1975).
- 9 Joseph Elliott Roeschke ‘Eco-Terrorism and Piracy on the High Seas: Japanese Whaling and the Rights of Private Groups to Enforce International Conservation Law in Neutral Waters’ 20.1 *Villanova Environmental Law Journal* 99.
- 10 Daniel M Schwartz ‘Environmental Terrorism: Analysing the Concept’ 35 (4) *Journal of Peace Research* 1998, 483-496.

tactics used in the Middle East, including tactics of aircraft and ship hijacking,¹¹ suicide bombing,¹² and car ramming.¹³ These tactical terror innovations were replicated in other places around the world and contemporary acts of environmental terrorism committed there are similarly likely to occur elsewhere.

The methods of environmental destruction of Israeli environmental resources in the case study typically take the forms of burning of forests or of pollution by discharge of effluent. Deliberate ignition of forest fires for political purposes has become common during hot dry summers. In November 2016, a wave of wildfires from the north to the south of Israel struck dozens of towns and forests and destroyed hundreds of homes. The national fire investigation report found that, of the 80 fires investigated, 71 resulted from arson.¹⁴ Although 10% were naturally occurring, 90% had been ignited by arsonists who came from areas under Palestinian Authority, apparently for purposes of political coercion against Israel's Jewish population.¹⁵ More widely known, as a result of international photographic journalism, is that incendiary devices attached to helium balloons or kites are released from Gaza, under the Hamas administration, intended to be borne inland to Israel by offshore winds. These have destroyed over 7000 hectares of forests and fields in Israel.¹⁶ On 10 July 2018, 678 fires were started this way, burning 910 hectares of woodland and 610 hectares of agricultural crops.¹⁷

Deliberate air pollution by burning of thousands of tyres at the Gaza border to carry dense toxic smoke into Israeli towns was a similar persistent feature of the Hamas 'Great Return March' campaign in 2018.¹⁸ Over 70,000 tyres have been burned also in the West Bank, for example, by the Arab village of Beita to target Jewish Evyatar with toxic air pollution carried by prevailing breezes.¹⁹ Similarly, pollution in the form of untreated factory effluent and human sewage flows into the valleys of the Israeli coastal plain from Palestinian towns in the Judean Hills that decline connections to Israeli sewage treatment works for political reasons.²⁰ A similar phenomenon occurs at the Gaza-Israel border, where untreated Gaza sewage floats north causing occasional shutdown of the nearest desalination plant in Israeli waters.²¹

A major national environmental pollution catastrophe in February 2021 was a marine oil slick that polluted the entire Israeli Mediterranean coast. An intent to contaminate desalination plants, which currently provide most of the country's potable water, and to attack the natural environment that supports beach culture and well-being would be consistent with recent operations against Israeli fresh water supplies by means of cyber-attacks on Israel's Water Authority in 2020 and psychological campaigns to demoralise the population.²²

11 In 1968, Popular Front for the Liberation of Palestinian operatives hijacked *El Al* flight 426. In 1988, the Palestine Liberation Organisation hijacked the *Achille Lauro* cruise liner in the Mediterranean Sea.

12 In 1981, in Lebanon, suicide bombings began, directed against American and French military forces, killing 362 in 1983.

13 Car ramming also began in Lebanon in 1981, directed against Israeli and Western forces.

14 Kalman Liebskind 'Report on wave of fires states that almost all were caused by arson' *Maariv* 13 January 2017; available at: <https://www.maariv.co.il/news/israel/Article-570132> (accessed 15 March 2022); citing Tafser Ran Shelef 'Fire Investigation Department report' (13 January 2017).

15 Gilad Zwick 'Head of Fire Investigation Department: "November Fires – Terror"' *Mida* 4 April 2017; <https://mida.org.il/2017/04/04/%D7%A8%D7%9C%D7%95%D7%AA-%D7%9E%D7%A8%D7%95%D7%A0-%D7%A8%D7%91%D7%A8%D7%95%D7%A0-%D7%90%D7%A9%D7%A8%D7%95%D7%A0/> (accessed 15 March 2022).

16 Michael J Armstrong 'Gaza's fire kites and balloons ignite tensions', *The Conversation* (4 July 2018), <https://theconversation.com/gazas-fire-kites-and-balloon-bombs-ignite-tensions-99341>; Taz Ali 'Israeli airstrikes in Gaza: what are incendiary balloons? How they work and when have they been used in conflicts' *iNews* (16 June 2021), <https://inews.co.uk/news/world/israel-air-strikes-gaza-what-are-incendiary-balloons-how-they-work-when-used-in-conflicts-1054947> (accessed 15 March 2022).

17 Tzuri Matan 'Kite balloon terrorism continues scorching Israel's land' *Ynet* (10 July 2018); available at: <https://www.ynetnews.com/articles/0,7340,L-5307517,00.html> (accessed 15 March 2022).

18 Elior Levy and Yoav Zitun 'Israel warns of ecological damage following tyre burning in Gaza border protests' *Ynet* (4 April 2018); available at: <https://www.ynetnews.com/articles/0,7340,L-5220575,00.html> (accessed on 15 March 2022).

19 'The Beita model: Palestinian's lead 'new form of resistance' at Evyatar outpost' *Times of Israel* (25 August 2021); available at: <https://www.timesofisrael.com/the-beita-model-palestinians-lead-new-form-of-resistance-at-evyatar-outpost/> (accessed on 15 March 2022).

20 Aryeh Savir 'Palestinian Authority make ecological assault on Nahal Alexander' *Regavim* (4 November 2021); available at: <https://www.regavim.org/palestinian-authority-make-ecological-assault-on-nahal-alexander/> (accessed on 15 March 2022).

21 Fares Akram and Daniella Cheslow 'Gaza sewage poisoning Strip's residents, threatening Israel' *Times of Israel* (3 May 2016); available at: <https://www.timesofisrael.com/gaza-sewage-poisoning-strips-residents-threatening-israel/> (accessed on 15 March 2022).

22 Oved Lobel 'Israel and Iran: "Cyber winter is coming"' *The Strategist* 26 Jun 2020; available at: <https://www.aspistrategist.org.au/israel-and-iran-cyber-winter-is-coming/> (accessed 15 March 2021). A comparable attack on fresh water by the Arab League in 1964 was the Jordan River Headwater Diversion Plan, to dam and divert waters of the Hasbani and Banias rivers in the Golan Heights to prevent them from reaching the Sea of Galilee, where freshwater was drawn by Israel's National Water Carrier.

The suspect vessel in that case was identified as the *Emerald*, a crude oil tanker built in 2002 with 112,679 deadweight tons carrying capacity and with International Maritime Organisation (IMO) registration number 9231224. On 1 February, the *Emerald* transited the Suez Canal and proceeded north through Israeli waters towards Syria where it met with another vessel, the *Lotus*, to which it transferred its cargo at sea, ship-to-ship, on 14 February.²³ Prior, on 2 February, the *Emerald* discharged some of its crude oil cargo into Israeli waters 50 km from the coast. Over 1,200 tons of tar washed onto Israeli beaches,²⁴ about 1% of the cargo, being perhaps a tenth of the full discharge. The *Emerald* continued travelling for nearly two weeks without suffering accident or other incident, suggesting that the large oil discharge was not accidental. The inshore location of the crude oil discharge, 50 km from the coast, amidst currents of predictable direction and speed, suggested intention to pollute the coast.

The *Emerald*, previously named the *Ebn Batuta*, is said to have been purchased by an Iranian individual in December 2020 from Libya's General National Maritime Transport Company.²⁵ According to *Lloyd's List Maritime Intelligence*, the *Emerald* was bought at that time by a one-ship shell company called Emerald Marine located in Majuro, Marshall Islands.²⁶ The owners of Emerald Marine were traced to Oryx Shipping Ltd, a company based in Piraeus that is owned by the Malah family, in Syria.²⁷ However, according to *Lloyd's*, the likely beneficial owner through the Malah family is in fact Iranian, as indicated by the source of the vessel's protection and indemnity insurance, which is the Islamic P&I Club, based in the United Arab Emirates, which is 'solely used by Iranian shipowners that cannot find cover elsewhere' as a result of international sanctions.

In January 2021, the month after purchase by Emerald Marine, the *Emerald* docked at the oil terminal on Kharg Island, Iran, loading with a cargo of 90,000 tons of Iranian crude oil.²⁸ Chemical analysis of the oil on Israel's beaches indicated that it was Iranian oil. On its northward voyage along the eastern Mediterranean coast, the *Emerald* sailed far closer to the Israeli coast, as indicated by satellite images of the oil discharge, than on its return voyage, as indicated by its tracking of its Automated Identification System (AIS).²⁹ Also on its northward voyage in Israeli waters, the *Emerald* 'travelled dark', meaning that it had illegally switched the AIS off, to avoid being tracked.³⁰ Thus, any possible attribution of the oil discharge to the Iranian government was cloaked by covert travel and layers of corporate veils.³¹

23 'Investigation of the EMERALD (9231224)' *TankerTrackers* 4 March 2021; available at: <https://tankertrackers.com/news/discoveries/investigation-of-the-emerald-9231224-tanker> (accessed on 15 March 2022).

24 'Over 70 tons of tar cleaned from Israel's beaches since oil spill' *Jerusalem Post* (24 February 2021); available at: <https://www.jpost.com/breaking-news/over-70-tons-of-tar-cleaned-from-israels-beaches-since-oil-spill-660062> (accessed on 15 March 2022); Karin Kloosterman 'Iran Accused of Eco-Terrorism As Oil Coats the Mediterranean Seashore' *Green Prophet* 4 March 2021; available at: <https://www.greenprophet.com/2021/03/iran-accused-of-eco-terrorism-as-bitumen-coats-the-mediterranean-sea/> (accessed on 15 March 2022).

25 Richard Meade, Michelle Weise Brockmann and Nigel Lowry 'Iran tanker oil spill in Israeli water is "deliberate"' *Lloyd's List Maritime Intelligence* 4 March 2021; available at: <https://lloydslist.maritimeintelligence.informa.com/LL1136016/Iran-tanker-oil-spill-in-Israeli-waters-deliberate> (accessed on 15 March 2022).

26 Ibid.

27 An Indian ship management company called Frontline manages most of Oryx's purported fleet of Supramax and cargo vessels; ibid. See also: 'Israel says tanker suspected of oil spill off coast has Syrian owners' 14 March 2021; available at: <https://www.timesofisrael.com/israel-says-tanker-suspected-of-oil-spill-off-coast-has-syrian-owners/> (accessed 15 March 2022).

28 *TankerTrackers*, n 23.

29 Richard Meade, Michelle Weise Brockmann and Nigel Lowry, n. 25.

30 Michael Forsyth and Ronan Bergman 'To Invade Sanctions on Iran, Ships Vanish in Plain Sight' *The New York Times* 2 July 2019; available at: <https://www.nytimes.com/2019/07/02/world/middleeast/china-oil-iran-sanctions.html> (accessed on 15 March 2022).

31 Alex Yacoubian 'Iran's tankers and its smuggling tactics' in *The Iran Primer*, 2 October 2019, United States Institute of Peace; available at: <https://iranprimer.usip.org/blog/2019/oct/02/irans-tankers-and-its-smuggling-tactics> (accessed 15 March 2022). USA Department of the Treasury, Department of State, United States Coast Guard 'Guidance to Address Illicit Shipping and Sanctions Evasion Practices' 14 May 2020; *Sanctions Advisory for the Maritime Industry, Energy and Metals Sectors, and Related Communities*; available at: https://home.treasury.gov/system/files/126/05142020_global_advisory_v1.pdf (accessed on 15 March 2022).

Iran and Israel are engaged in pattern of ‘grey zone’ hostile operations or skirmishes, below overt armed conflict.³² A publicly articulated national policy of Iranian authorities is destruction of Israel as a polity.³³ However, as Iran and Israel are not in an overt international armed conflict, the crude oil discharge was not part of war hostilities. Further, due to its corporate veils, the oil discharge could be attributed directly only to private actors. Thus, the discharge cannot be categorised as a war crime but perhaps as terrorism.

Environmental terrorism by means of catastrophic crude oil pollution is suspected in this case but unproved beyond a reasonable doubt. There is strong circumstantial evidence of deliberate discharge and of intended pollution damage for political purposes, including the precision of the distribution of the slick across the entire Israeli coast³⁴ and the catastrophic scale of the event and its consistency with related attacks. This matched with the catastrophic scale of the event warrant its inclusion as an example of contemporary environmental terrorism.

3. Criminal Responsibility for Environmental Terror

International law does not provide effective procedures to deliver criminal culpability for transnational environmental crimes. Nor do international laws provide substantive culpability for environmental terrorism or ‘grey zone’ hostile operations against the environment. As acts of terrorism directed against elements of the natural environment emerge, it is concerning that frameworks for international legal cooperation to suppress environmental terrorism are so entirely lacking.

Currently, the suite of global conventions to suppress terrorist acts are designed to address violence directed against people or certain objects, being aviation and shipping, diplomats and public infrastructure.³⁵ They aim to suppress murder, injury, kidnapping and bombings but do not address harm directed specifically against the natural environment. For example, the *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation*³⁶ has the objective of protection of ships from attack rather than addressing environmental attacks by ships. Even the most general and widely applicable global counterterrorism treaty does not encompass harm to the natural environment.³⁷ Indeed, counterterrorism treaties neglect altogether acts of terrorism directed against the highly vulnerable natural environment.

This grave shortcoming should be addressed. A treaty for suppression of acts of environmental terrorism might be formulated using as its basis the commonly used model in United Nations treaties for the suppression of terrorist acts. Thus, it would define acts of environmental terrorism, require that such acts be criminalised under the national laws of the parties to the treaty, specify the scope of parties’ national criminal jurisdiction

32 John Schauss and Lindsey Sheppard ‘Case Study Israel’s Competition with Iran: 1991-2015’ *Gray Zone Project* 13 August 2019, Centre for Strategic and International Studies; available at: <https://www.csis.org/grayzone> (accessed on 15 March 2022). In relation to grey zone warfare more generally, see: Michael Mazarr *Mastering the Gray Zone: Understanding a changing era of conflict* 2015 United States Army War College Press; available at: <https://publications.armywarcollege.edu/pubs/2372.pdf> (accessed on 15 March 2022).

33 Amir Vahdat and Jon Gambrell ‘Iran leader says Israel a ‘cancerous tumour’ to be destroyed’ *Associated Press* 23 May 2020; available at: <https://apnews.com/article/a033042303545d9ef783a95222d51b83> (accessed on 15 March 2022).

34 The oil slick reached shore at the most southern point of the Israel coast, just north of Gaza, and extended northward just beyond the border with Lebanon. Al Jazeera ‘Lebanon begins cleaning beaches after oil spill’ (27 February 2021); available at: <https://www.aljazeera.com/news/2021/2/27/lebanon-begins-cleaning-beaches-after-oil-spill> (accessed on 15 March 2022).

35 Aviation: *Convention on Offences and Certain Other Acts Committed on Board Aircraft* (1963), *Convention for the Suppression of Unlawful Seizure of Aircraft* (1970), *Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation* (1971), *Protocol on the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation* (1988). Maritime: *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation* (1988), *Protocol for the Suppression of Unlawful Acts against the Safety of Fixed Platforms Located on the Continental Shelf* (1988). Hostages: *Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons, including Diplomatic Agents* (1973), *International Convention against the Taking of Hostages* (1979). Explosives: *Convention on the Physical Protection of Nuclear Material* 1980, *Convention on the Marking of Plastic Explosives for the Purpose of Detection* (1991), *International Convention for the Suppression of Terrorist Bombings* (1997). Financing: *International Convention for the Suppression of the Financing of Terrorism* (1999).

36 *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation* (1988) 1678 UNTS 201.

37 The *Convention for the Suppression of Financing of Terrorist Acts*, n 3, Art.2(1)(b) covers merely ‘Any other act intended to cause death or serious bodily injury to a civilian, or to any other person . . . , when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing any act.’

over environmental terrorism acts, require that the parties enforce criminal laws against persons under their jurisdiction, and require that the parties also cooperate to assist each other with law enforcement against offences under the treaty. The following section of this article undertakes a preliminary study of considerations in the formulation of a treaty to suppress environmental terrorism, drawing upon existing counterterrorism treaties such as the *Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation*.

4. A New Treaty to Suppress Environmental Terrorism?

The first step in formulating the new treaty is to define acts of environmental terrorism. This involves defining the components of the environment, and which acts against it are considered harmful, and distinguishing ordinary criminal acts from those acts which are terrorist acts. The major environmental vulnerability is that of the natural biosphere, comprised of biodiversity and its habitats on land, in oceans and waters, in the air, and its supporting processes and systems. There are broader definitions of the environment, but the primary concern and essential focus remains on protection.³⁸

Acts harmful to the environment to be considered for inclusion as acts of environmental terrorism could be qualified as those that cause ‘significant’ damage, degradation or destruction. ‘Significant’ harmfulness can be defined by national courts in accordance with national environmental social and legal circumstances.³⁹ In addition, acts that deliberately attempt, conspire, support or finance environmental terrorism would ordinarily be included within the category of defined acts.

The element of political motive is an essential factor that distinguishes ordinary criminal acts from those acts which are terrorist acts. Most ordinary and deliberately caused environmental harms are driven by motives of personal gain in material form. These are to increase profits or convenience, or to avoid environmental stewardship costs. For example, dumping of building wastes in public nature reserves, discharges of factory effluents into public waters, hunting of protected wildlife, and destructive harvesting of marine living resources are harms inflicted to increase personal gain.

In contrast, terrorist acts are committed for political coercive effects, which are public political purposes. Political coercion is what makes terrorism distinctive and threatening to public safety, as it seeks to subvert democratic processes, dominate a political body, or undermine a social order. Inevitably, within an individual psyche, private motives mix with public purposes, but a political intent is essential. The United Nations counterterrorism conventions explicitly recognise the public political purpose of terrorist acts.⁴⁰

A common feature of the counterterrorism conventions is that they carve out for exclusion from their scope certain specified circumstances not intended to be encompassed. As war crimes are a separate class of international offences in circumstances of armed conflict already proscribed under other treaties, customs and mechanisms of international law, they should not be conflated with terrorism. Accordingly, a distinction is made in counterterrorism treaties to confine their scope to attack directed against ‘a civilian, or to any other person not taking an active part in hostilities in a situation of armed conflict’.⁴¹ Similarly, it would be appropriate to explicitly exclude war crimes against the environment from the scope of an environmental terrorism treaty.

Further, acts of State protected by immunities from foreign national jurisdiction under international law could be explicitly excluded. The reason for exclusion would be that, if immunities apply, then the culpable State acts are not clearly susceptible to criminal jurisdiction in another country’s national courts. Nevertheless, the application of immunity is complex in circumstances of international crimes and this matter could be left to the

38 A broader and more abstract scope for the treaty might provide that, for its purposes, ‘the natural environment’ means all that exists naturally, including the ‘dynamics, composition or structure of the earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space’. This definition is set out in the *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1976) 1108 UNTS 151*, Art. 2.

39 ‘War crimes define the threshold of harm as severe, or widespread, or long-term damage’, see, STOP Ecocide Foundation Independent expert panel for the legal definition of ecocide: commentary and context (2021), Art. 8ter ‘Ecocide’.

40 E.g., *International Convention for the Suppression of the Financing of Terrorism*, n. 3.

41 Ibid, Art 2.1(b).

ordinary operation of the international law in national courts.⁴² States perpetrating environmental terror could instead be liable under the doctrine of State responsibility or individuals could be held culpable in international criminal courts if the environmental terror met the circumstances and reached the threshold of ‘crimes against humanity’.⁴³

In accordance with the specifications and exclusions described above, a treaty for suppression of acts of environmental terrorism might define acts of environmental terrorism as:

Acts that cause any significant degradation or destruction of the environment when the purpose of such act, by its nature or context, is to intimidate a population, or to compel a government or an international organization to do or to abstain from doing any act.

This treaty does not apply to hostile acts conducted during armed conflict.

The second step necessary to formulate a treaty to suppress environmental terrorism is to require that the defined acts of terror against the environment be defined as offences. It is unnecessary that an environmentally harmful act be previously proscribed as illegal for it to be included within the category of terrorist acts, as the treaty itself requires that those acts be proscribed under the national laws of the parties to the treaty as offences. Thus, the treaty might provide that:

Any person commits an offence if that person intentionally commits an act of environmental terrorism, defined above.

A person also commits an offence if that person attempts to commit an act of environmental terrorism, abets the commission of environmental terrorism, is an accomplice thereto, finances or supports environmental terrorism, or threatens to commit an act of environmental terrorism.

Third, counterterrorism treaties require that their parties enact and enforce criminal laws against persons under their jurisdiction who are reasonably suspected of committing the defined terrorist acts. Thus, an environmental counterterrorism treaty would, in a standard formulation, require that:

Parties shall enact laws to criminalise the offences defined under this treaty within their national laws.

Party shall make the offences proscribed under this treaty punishable by appropriately severe penalties that correspond to the grave nature of those offences.

Parties shall take measures necessary to establish an exercise criminal jurisdiction over the offences proscribed under this treaty, in cases where the alleged offender is present in its jurisdiction and it does not extradite that person to another state that has jurisdiction over the offender and the offence.

Fourth, an environmental counterterrorism treaty must specify the scope of parties’ national criminal jurisdiction over the proscribed acts. The geographic scope of the exercise of national criminal jurisdiction varies across different legal systems, but counterterrorism treaties allow for maximal exercise of jurisdiction. Criminal jurisdiction is exercisable by every State extends throughout its national territory, as well as over vessels under the State flag and through waters under categories of national maritime jurisdiction. Most States also extend criminal jurisdiction extraterritorially, over their own citizens and residents wherever in the world they are located, although only for specified crimes and in limited circumstances. Thus, an environmental counterterrorism treaty could specify the scope of parties’ national criminal jurisdiction as extending across the following circumstances:

Each party shall take measures necessary to establish its jurisdiction over offences under this treaty throughout its territory and marine jurisdiction, upon all vessels wherever located flying its flag or registered with it, and by its own citizens and habitual residents wherever located, in accordance with its national legal system.

This treaty does not exclude any criminal jurisdiction exercisable in accordance with a party’s national law or international law.

⁴² James Crawford Brownlie’s *Principles of Public International Law* (9th ed.) (Oxford University Press 2019) 484-5.

⁴³ Individual State representatives are not immune in the International Criminal Court (ICC), see: ‘Jordan Referral re Al-Bashir’ in *Prosecutor v. Omar Hassan Ahmad Al-Bashir*, No. ICC-02/05-01/09 OA2 (ICC Appeals Chamber, 6 May 2019). For a critique of this ICC exception, see: Christa-Gaye Kerr, ‘Sovereign Immunity, the AU, and the ICC: Legitimacy Undermined’, 41 *Michigan Journal of International Law* (2020) 195.

The foregoing steps harmonise national criminal laws concerning environmental terrorism through a treaty mechanism. Harmonisation of national laws establishes common understandings between States of the basic elements of crimes, which is a pre-requisite to international law enforcement cooperation. The mechanisms of law enforcement cooperation are a separate step that follows upon harmonisation of laws.

United Nations counterterrorism treaties do therefore require that their parties assist each other through law enforcement cooperation. Essential formal features of law enforcement cooperation are arrests and extraditions, and mutual legal assistance in prosecutions. These formal law enforcement cooperation activities are supported informally by criminal intelligence sharing, whether bilaterally or through intergovernmental organisations, such as Interpol. Mutual legal assistance takes many forms, including collection and provision of witness statements, visual pictures, samples and documentation, as well as official certification of documents and evidence so that the evidence gathered can be relied upon in foreign court procedures. Thus, an environmental counterterrorism terrorism treaty might provide that:

Upon request by another State for extradition of an alleged offender present within its jurisdiction, and upon being satisfied that the circumstances so warrant, a party shall take into custody an alleged offender or take other measures under its laws to enable extradition proceedings to be instituted.

In the absence of any extradition treaty provisions applicable between them, this treaty shall serve as legal basis for extradition proceedings in accordance with international legal standards.

Upon request by another State for legal assistance in investigation and prosecution of an alleged offender for commission of an act of environmental terrorism under this treaty, the requested party shall take all necessary measures to assist the requesting party enable its criminal proceedings.

The foregoing suggested model of provisions for an environmental terrorism treaty are merely an outline of rudimentary provisions for consideration. More research and extensive consultation is required to formulate and to refine provisions proposed for a new treaty for suppression of terrorist acts against the environment. An international research initiative would be useful to address that challenge.

5. War Crimes or Terrorism against the Environment?

Acts of environmental terrorism are legally distinct from war crimes. War crimes occur during armed conflict and are committed by armed forces or their auxiliaries. For example, in January 1991 during the Gulf War between Iraq and Kuwaiti allies, Iraqi forces caused two deliberate spills and detonated an estimated 1,250 Kuwaiti oil wells of which nearly 600 were engulfed in flames, thereby spilling three million barrels of crude oil into the Persian Gulf.⁴⁴ This sabotage of Kuwaiti oil wells was deliberately inflicted environmental harm unnecessary to legitimate military goals.⁴⁵ In contrast, terrorism is not directly attributable to State armed forces or agencies and occurs outside the context of international armed conflict.

In 1991, there was no international judicial procedure to prosecute Iraqi armed forces war crimes. Since that time, a series of temporary international criminal tribunals were established, specific to sub-regional situations, and a permanent International Criminal Court (ICC) with broad general and global jurisdiction has been established.⁴⁶ Thus, international laws and judicial processes are in place to address environmental war crimes, as follows.

Article 8(2) (b(iv) of the *Rome Statute of the International Criminal Court (Rome Statute)* defines as a war crime:

Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural

44 For a description of the ignition of the oil wells and their aftermath, see: Jessica E Seacor ‘Environmental Terrorism Lessons from the Oil Fires of Kuwait’ 10.1 *American University International Law Review* (1994) 481. (Although the title refers to terrorism, its content addresses war crimes.)

45 Bernard H. Oxman ‘Environmental Warfare’, 22 *Ocean Development and International Law* (1991) 433-437.

46 ICC; available at: <https://www.icc-cpi.int/> (accessed on 15 March 2022).

environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.⁴⁷

The *Rome Statute* is complemented by elaborations set out in the *Elements of Crimes* adopted by its Assembly of States Parties.⁴⁸ The *Elements of Crimes* for Article 8(2)b(iv) specify that the ‘conduct took place in the context of and was associated with an international armed conflict’ and that the ‘perpetrator was aware of factual circumstances that established the existence of an armed conflict’.⁴⁹ Further, the attack was such that and the ‘perpetrator knew that the attack would cause’ the clearly excessive destruction.⁵⁰ Other provisions of the *Rome Statute* that could be taken to apply to war crimes against the environment include ‘extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly’⁵¹ and ‘intentionally directing attacks against civilian objects, that is, objects which are not military objectives’.⁵² These provisions apply in situations of armed conflict, both international and non-international.

Decades prior to the establishment of the ICC, the ‘principle of proportionality’ in international armed conflict prohibited attacks ‘which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be *excessive in relation to the concrete and direct military advantage anticipated*’.⁵³ This principle of proportionality prohibits attacks that would cause disproportionate harm to the environment,⁵⁴ requiring belligerent forces in international armed conflicts to make assessments and take preventative precautions.⁵⁵

Questions arise in non-international armed conflicts, however, such as those involving internal or transnational rebel forces, as to the applicability of the principle of proportionality and of environmental safeguards. They are not specified in Article 3 on non-international armed conflicts, which is a provision common to the four 1949 Geneva Conventions,⁵⁶ nor in the second Additional Protocol to the Geneva Conventions.⁵⁷ Nevertheless, proportionality is argued to form customary international humanitarian law with universal applicability to non-State actors.⁵⁸ Thus, war crimes committed against the environment are prohibited in international armed conflict and any tribunal prosecuting a perpetrator alleged to have caused disproportionate and excessive environmental damage in a non-international armed conflict is likely also to consider that such conduct is prohibited.

A novel crime of ‘ecocide’ is proposed by some legal scholars for incorporation in the *Rome Statute*, as a unique international crime distinct from Article 7 War Crimes and Article 8 Crimes Against Humanity.⁵⁹ If adopted, this proposal would give the ICC a new jurisdiction over

⁴⁷ *Rome Statute of the International Criminal Court* (1998) 2187 UNTS 91, Art 8(2)b(iv), using phrasing drawn from the *Environmental Modification Convention*, n. 38.

⁴⁸ ICC *Elements of Crimes*; available at: <https://www.icc-cpi.int/Publications/Elements-of-Crimes.pdf> (accessed on 15 March 2022).

⁴⁹ ICC *Elements of Crimes* Article 8(2)b(iv) Elements 4 and 5.

⁵⁰ ICC *Elements of Crimes* Article 8(2)b(iv) Elements 2 and 3.

⁵¹ *Rome Statute*, n 47, Art. 8 (2)(a)(iv). In this situation, the environment might be considered as property; see International Committee of the Red Cross ('ICRC') *Guidelines on the Protection of the Natural Environment in Armed Conflict* (2020) 172.

⁵² *Rome Statute*, n. 47, Art. 8 (2)(b)(ii). In this situation, the environment might be considered as a civilian object; see: ICRC *ibid* 17-19.

⁵³ *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts ('Additional Protocol I')* (1977) 1125 UNTS 1, Art. 51(5)(b). Article 54 prohibits the destruction of ‘objects indispensable to the survival of the civilian population’.

⁵⁴ ICRC, n. 51, 53.

⁵⁵ *Additional Protocol I*, n. 53, Art. 57.

⁵⁶ Common Article 3 provides that parties to the Geneva Conventions are not to harm persons taking no active part in the hostilities and are to care for the wounded and sick.

⁵⁷ *Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of non-international armed conflicts ('Additional Protocol II')* (1977) 1125 UNTS 609, Art. 14 prohibits only the destruction of ‘objects indispensable to the survival of the civilian population’.

⁵⁸ ICRC n 51, 19; Jean-Marie Henckaerts and Louise Doswald-Beck (ed.s) *ICRC Study on Customary International Humanitarian Law* Vol 1, (2009 Cambridge University Press) Rule 43, p 143.

⁵⁹ STOP Ecocide Foundation *Independent expert panel for the legal definition of ecocide: commentary and context* (2021), Art. 8ter ‘Ecocide’; available at: <https://www.stopecocide.earth/> (accessed 15 March 2022).

'unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.'⁶⁰

The ecocide proposal can apply outside of armed conflict but does not adequately cover the phenomenon of environmental terrorism. Its threshold for the environmental harm ('severe and either widespread or long-term'),⁶¹ is too high to capture merely 'significant' environmental harm that occurs at the scale of environmental terrorism, and is comparable to the high thresholds for war crimes discussed above, or for crimes against humanity ('widespread or systematic attack directed against any civilian population').⁶² Its notion of 'wanton' acts is inapposite to deliberate coercive harm.⁶³ The ecocide proposal is mentioned here to demonstrate that it is distinct from war crimes and that its threshold, like that for crimes against humanity, is inapposite and too high to cover environmental terrorism in the majority of instances.

6. Conclusion

The ease with which harms can be deliberately inflicted upon nature and the major significance of those harms combine to present huge environmental risks in the contemporary world. The case study of environmental terrorism in Israel has sought to demonstrate that these risks are real. Deliberately inflicted to coerce political behaviour, environmental terrorism is also a threat to participatory democracy and social stability.

There is a grave lack of international law to criminalise environmental terrorism. This lacuna could be remedied in part by the formulation and adoption of a new treaty. It could define and criminalise the emergent environmental terror phenomenon. A useful priority for future international law research would be the deeper exploration of the legal intricacies and political compromises necessary to formulate a new treaty for the suppression of terrorist acts against the environment.

Endorsement by the United Nations Environment Assembly of the environmental relevance of environmental terrorism could give momentum to negotiation of a new treaty. The Assembly has universal United Nations participation and serves as a forum to catalyse new international environmental initiatives. The United Nations Office on Drugs and Crime facilitates international cooperation to suppress transnational crime and it would normally provide expert support for negotiations to formulate a new treaty for the suppression of terrorism and would provide subsequent secretariat support services to the parties. New United Nations initiatives in international environmental or criminal law typically rely upon financial sponsorship and political support given by benefactor governments, organisations or foundations. Benefactors for the international legal project to suppress environmental terrorism would need to be identified for a new treaty to go forward. Crimes of deliberate destruction committed against nature are reprehensible. Their commission as political coercion is repugnant. International law is lacking but a new treaty to suppress environmental terrorism is an achievable remedy.

60 Id. n.39, Art. 8ter 'Ecocide',

61 'Severe' means damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural cultural or economic resources; 'Widespread' means damage which extends beyond a limited geographic area, crosses State boundaries or is suffered by an entire ecosystem or species or large number of human beings; 'Long term' means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time. Id.

62 'Wanton' means with reckless disregard for damage which would be clearly excessive in relation to the social and economic benefits anticipated.

63 *Rome Statute*, n. 47, Art. 7(1). An 'attack directed against any civilian population' is defined as conduct involving 'multiple commission of acts' ... 'in furtherance of a State or organisational policy' (Art. 7(2)(a)), where those acts are violence against people causing them great suffering or serious injury.